

HOW THE CLOUD CAN SUPER-CHARGE YOUR BUSINESS'S INFRASTRUCTURE?

Introduction

In the modern business world, there's one thing that organizations seek above all else: flexibility. To be flexible means to be capable of adapting to rapidly changing market conditions; to be flexible means having the necessary resources to approach and surmount any roadblock your organization might face. In the past, this level of flexibility was all-too-often the domain of massive enterprises; large organizations with the capital necessary to spin up new servers and create custom-tooled environments for testing and deployment.

Cloud computing's changed that. Thanks to the advances brought about by this revolutionary technology, any business, no matter how small, can gain direct and immediate access to whatever infrastructure they require. Not surprisingly, this has evened the playing field between market leaders and small businesses a great deal - in some cases, it's actually given startups the necessary means to surpass the top dogs in their industry.

That brings us to our topic for this piece. We're going to look at a few ways Infrastructure-as-a-Service can serve your organization. In short, we're going to tell you precisely why IaaS is a very, very good thing.

Let's start with application development.

Infrastructure-As-A-Service Is The Perfect Load Testing Platform

Load testing. Every developer's worried about it at one point or another. The notion that an otherwise successful application launch might collapse under its own popularity, the idea that an enterprise deployment could fold like a house of cards right when the business needs it most; these are situations developers go out of their way to avoid.

In order to do so, extensive load testing is necessary. Unfortunately, most applications don't actually receive that. At best, they're put against a small portion of real-world load in a simulated environment; one that fails to accurately mirror the real world.

The developers aren't to blame for this, of course. Writing tests that accurately mirror real environments is difficult. It's nigh impossible to write one comprehensive enough to cover all your bases, and all too easy to miss the one scenario where a poorly-optimized code path brings the rest of your application to its knees.

That said, difficulty's no excuse for neglecting load testing - especially now. In the days before the cloud, load testing was expensive. Businesses needed more servers and bandwidth than they usually had access to; a substantial capital investment which rarely - if ever - made financial sense.

As a result, many businesses compromised on load testing. They made their best guess about the resources needed by a production environment, or oversized to ensure nothing could be taken down. Thanks to the cloud, neither route is necessary.



Code changes can be pushed to testing or staging servers, and then load tested using temporary server networks built in the same cloud environment. Once the testing is over, the servers can be spun down and the company only pays for the resources they use. Developers don't have to keep permanent redundant infrastructure for testing purposes.

Thanks to the cloud, the cost of a production failure under load is more expensive than the testing process - which means load testing is now a financially viable option. This is far from the only way infrastructure-as-a-service can help your organization, of course. It's an incredibly powerful tool in the hands of any business - particularly smaller ones.

Infrastructure-As-A-Service Is Ideal For Small Businesses

Of all the narratives concerning the cloud, the one that rings loudest is that involving Infrastructure-as-a-Service. It goes something like this: IaaS is for startups that require networks and servers without capital investment, it's for enterprises which need massive, scalable, redundant, and programmable infrastructure deployments. There's no middle ground - small businesses are better off using SaaS.

This idea is a fallacy, and an absurd one at that.

Although small businesses don't have large infrastructure requirements, many still make use of something known as the 'datacenter in a closet' model of computing. A few PCs shoved in a room somewhere in the office; computers responsible for running payroll processing, customer databases, backups, mission critical software; et-cetera. Most of these organizations don't even have an IT expert on hand - they contract management of their servers and networks to freelance professionals.

This model is risky, financially wasteful, and barely functional. Infrastructure-as-a-Service provides a far better alternative. Part of the reason is because it can be managed remotely, avoiding unnecessary site visits by IT; the majority of maintenance and configuration can be done without having to pay a visit to the office.

There's also the matter of data integrity. If a small business with a data closet suffers an incident that causes their data to be wiped out, they're out of luck until they can access their offsite backups and hardware. With the cloud, no such risk exists - the chance of something catastrophic happening to cloud servers is incredibly small; even if one set of servers ends up damaged, snapshots and backups can bring an identical network online in hours rather than weeks.

Scalability, too, is a significant advantage. Though scaling not often something small businesses need to be concerned with, the ability to effortlessly deploy additional servers is a boon that shouldn't be overlooked. Every business has the odd period where they require a bit of extra computing power - maybe they need to run some tests, speed up payroll processing, or create a staging environment; these tasks that would be onerous with a traditional data closet are made trivial with the cloud.

The cloud is for everyone, not just Silicon Valley startups and Internet giants. Small businesses, too, can enjoy significant gains by making use of IaaS. To believe otherwise is foolish.



Conclusion

Thanks to the cloud, modern organizations are equipped to be more flexible and agile than ever before. As has been demonstrated here, Infrastructure-as-a-Service provides a boost to a business of any size, and in any market. Whether you're a massive, world-spanning corporation or a local business just getting on its feet, basing your infrastructure in the cloud allows you to operate in a manner more efficient than ever before.

