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▶ # Managing Cloud Infrastructure for Test and Development Teams

5 CLOUD OPERATIONS TIPS

Speed. Agility. Flexibility. These are the big drivers behind most organizations' move to the cloud for their test/dev environments. Freed from the shackles of physical, on-premises infrastructures means test/dev teams can be incredibly fast both in standing up and tearing down test beds. They can manage version control. And they can share work between teams faster than ever before. Ultimately, this means the business can respond faster to the rapidly changing needs of customers.

"The cloud is quickly growing… to becoming a real production-level environment," says Phil Goodwin, Research Director at IDC. "That transition requires cost-effective and efficient access, through the type of capabilities Commvault® is debuting, to accelerate data cloud recovery and migration."

Here are five ways in which the cloud makes sense for test/dev.

▶ ONE: SHARING ENVIRONMENTS

To develop and test software for particular environments, programmers need access to a wide variety of development, staging, and production environments. These may require different kinds of processors, multiple operating systems and other software, different kinds and amounts of storage, and so on.

But in an organization with many programmers – particularly if the programmers are global – it can be challenging, not to mention expensive, to provide identical development and test beds around the world for all the programmers who might be working on them. The problem is, if the programmers aren't working on identical environments, it becomes difficult to track down bugs and accurately test performance.

The cloud can have all the resources that the programmers need, and they can get access to it from anywhere. Not to mention, as businesses increasingly move to the cloud, developers and testers need to make sure their applications run on various vendors' implementation of the cloud as well. And with cloud locations all over the world, developers worldwide can ensure that they're running on hardware close to them, to reduce latency time and for data sovereignty.

▶ TWO: SHARING RESOURCES

While developers and testers need access to many kinds of resources, especially when they're testing the scalability of an application, they don't always need all of them all of the time. That means a lot of expensive hardware and software has to be bought to have around for when the programmers do need it. But the rest of the time, it means unused capacity is often sitting around going to waste – all of it also needing regular maintenance and updates.

The cloud gives programmers access to a centralized pool of resources when they need them. That way, other programmers use them when they're not needed, without having to fight for limited resources, and you only pay for the resources your team is actually using.

THREE: CONSISTENT, FAST SETUP

Surveys[1] indicate that one of the big bottlenecks in development and testing projects are in getting the dev/test environment set up in the first place – on the order of weeks or even months. Then, someone has to remember to make notes on all aspects of the configuration to ensure that it's the same each time, and manually set it up – a time-consuming, error-prone process. In today's fast-paced, agile market, companies just don't have the time for that.

With the cloud, automated provisioning and configuration processes can be defined through a single interface into a standard template. That sets up the dev/test environment in a matter of minutes so it's right each time and makes sure that everyone on the team is using the same setup. This reduces cycle time associated with new applications and dramatically reduces the amount of administrative overhead spent on managing the cloud resources associated with development and test projects.

Best of all, you don't have to pay expensive, skilled programmers to do the setup themselves. They can focus on their job – developing the application – rather than on IT or infrastructure. Instead, they can rapidly deploy test beds with automated, template-based provisioning tools.

FOUR: RECLAIM AND REUSE RESOURCES

When development or test procedures are complete, access to the resources can automatically expire and power the servers down. That way, your company doesn't have to continue paying for them because someone forgot to shut them off.

Administrators can also use resource optimization tools that automatically determine when a project is considered "complete," whether it's based on a completion date or other criteria. Finally, just to be safe, when the resources expire, a copy of the images can be saved so that the environment can be set up again in the same way should further work need to be done.

FIVE: SOFTWARE-BASED WORKFLOW AUTOMATION

Software based workflow automation tools can dramatically reduce the administrative overhead required to run and manage test and development processes. Automation tools act as the "connective tissue" by connecting the underlying cloud-based resources to processes that drive test bed creation, version control and update processes, QA and audit processes and rollout of applications and updates.

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PHIL GOODWIN
Research Director at IDC

1 "Virtual and Cloud-Based Labs," Voke Research, August 21, 2014.

You should be able to choose from pre-built workflows for typical tasks or create custom workflows for more complex tasks.

To perform dev/test accurately, it's important for programmers and testers to have immediate access to the resources they need, every time. With the cloud, that can become a reality.

▶ RESOURCES

i   commvaultcom.azurewebsites.net/resource-library/5522b12cea866914000001e5/dont-get-lost-in-the-clouds.pdf

To learn more about Cloud Disaster Recovery with Commvault® software, visit **commvault.com/cloud**.

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