

DevOps READY™ Infrastructure

DevOps is a movement in IT focused on fostering better communications and processes across operations and development teams, with the primary goal of faster, more agile software delivery.

Infrastructure management is a fundamental building block for any organization striving to achieve a DevOps method. Catalogic Software's ECX delivers a management platform that makes DevOps possible using existing enterprise storage.

A Brief DevOps Primer

DevOps is an idea. The goal of DevOps, at least according to most accounts, is to meld operations and developer teams into a single cohesive unit working in concert with other parts of the business in order to reduce or eliminate delays due to change management or related to the provisioning of new IT resources.

In other words: IT has become to be seen as the "department of no." Every time someone wants something done – especially if they want it done right now – IT says "no." This has been a problem for so long that an entire international movement has arisen to change how businesses do IT.

When done properly, copy data management software, such as Catalogic ECX, is the key to making this work. With ECX, operations teams live in a world of role-based administration, policies and templates. Developers live in a world of self-service IT and infrastructure as code.

Whether the idea of DevOps benefits your organization depends on innumerable factors ranging from the aforementioned "culture" to the tools, business processes and even politics chosen. Catalogic can't guarantee you DevOps success, but we're confident that if you use ECX you'll be choosing a tool that makes the culture shock and politics changes of DevOps a lot easier for IT practitioners to bear.

Practical DevOps

ECX has traditionally been billed as copy data management software and more or less does what it says on the tin. ECX identifies, tracks, creates and destroys copies of data. We know that this doesn't sound particularly ground-breaking, or related to DevOps in any way. The neat bit is that when you look at it in practice ECX and copy data management are, in fact, at the very heart of enabling DevOps.

Let's consider some real world issues facing developers. Developers – or the good ones, at least – do a lot of testing. They create workloads to run their test code that match the environments that run their production code. In a perfect world, every time there was a new patch or other change to the environment that needed to be made, developers would create an entirely new workload with the changes and perform testing against it.

Once an environment was known to be good, that environment would be pushed up to production, data moved into it and life continues apace. This works fine if you're using public cloud providers like IBM's SoftLayer which is the big reason public cloud providers have such a smash hit. Where this falls apart is when workloads exist on premises, or are part of a hybrid cloud solution, in instances where some form of DevOps hasn't already been put in place.

With traditional on-premises IT, operations teams are involved in everything to do with workload lifecycles. That means going through a human. It doesn't work so well when developers have to go back to operations teams to request the creation of new environments, changes to be applied to those environments and environments to be moved into production.

There are very good reasons for this. Operations is responsible for ensuring that developers use infrastructure responsibly. They need to ensure that old or unused workloads are archived or deleted, that idle workloads are

consuming expensive all-flash storage and that data sprawl from abandoned workload instances doesn't consume all the available storage...and the budget along with it.

This is where ECX comes in. ECX allows operations teams to create templates from existing workloads and copy them wherever they need to be. It allows operations teams to create policies around workloads that include items such as replication, snapshotting, backups, storage tier usage and even in which cluster or datacenter a workload runs.

Operations teams can define different policies and, through role based administration, give individual (or groups of) developers access to various policies. Developers can then create, copy, move, and otherwise manipulate their workloads as they choose, but only within the boundaries set by operations. In other words, they have the freedom needed to do their jobs, but not enough power to ruin things for everyone else.

In addition to manipulating workloads, operations and developers can both pull various reports and analytics off

the system, helping them understand infrastructure usage, trends and uncover real time performance bottlenecks.

Infrastructure as Code

Both developers and systems administrators have choices in how they interact with their workloads. An HTML5-based GUI exists for those who prefer the point-and-click approach. The real magic, however, is in the API.

Everything you can do in the main GUI can be done from a script by calling the ECX API. This means that all aspects of workload lifecycle can be scripted, allowing for powerful automated testing setups, triggerable snapshots and backups ahead of major rollouts and automated reporting built into everyday workflows.

ECX is the bridge between developers and operations. The core copy data management functionality allows operations and developers to solve the biggest pain point DevOps seeks to address and does so in a way that doesn't require disruptive changes to either team.

