Are You in Right Cloud-DevOps Approach?

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Success means adopting a fresh approach & letting go of legacy IT mindsets

We've all heard the success stories: Amazon deploys new code at least once every second. Netflix leverages its Simian Army for nearly indestructible streaming. Capital One touts its cleanroom accountability for continuous delivery.

Everywhere you turn, proponents of cloud DevOps are making headlines.

But, for every positive outcome, as many (or more) businesses struggle. Even companies born in the cloud are revisiting their initial roll-outs.

Why? Legacy thinking is one of the biggest culprits.

Yes, it takes an amazing platform, talented IT staff and a lot of hard work to realize the full potential of cloud DevOps. But what true leaders in the space recognize is that it also requires a new mindset. Nothing dooms a cloud DevOps initiative more than framing it with the same controls, workflows, budgets and processes the organization uses for traditional, on-premises development and IT operations.

Cloud DevOps benefits all sectors of the business

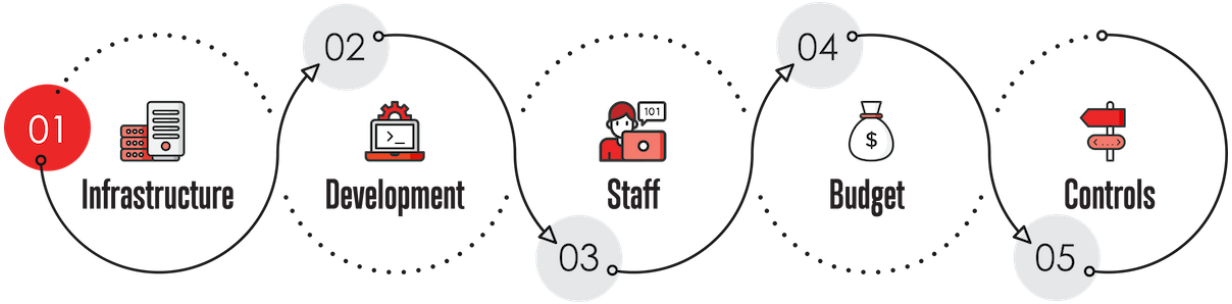
- **Empowers developers** to move efficiently from requirements to coding, testing and release of new functionality, with less stress on the organization.
- **Propels businesses** to lead in their field with swift and timely deployments of new functionality.
- **Delights customers** with the "on-demand" capabilities and sleek experience that today's users expect.

Industry analysts see the same promise. Worldwide, Gartner reports cloud investments growing at three times the rate of any other IT category. They project cloud spending to top $331 billion by 2022.

Rethink these five IT areas for cloud DevOps success

As your organization considers cloud DevOps, how can you avoid the trap of legacy thinking? It starts by clearly understanding the key differences between a traditional IT environment and one that's maximizing cloud DevOps.

Here are five areas we recommend exploring:



Infrastructure

As the backbone of any IT organization, infrastructure shows one of the biggest improvements when moved to a cloud environment.

In the past, companies had little choice except the capital expense of servers and physical hardware. Capacity planning occurred annually, with IT and the business struggling to forecast their needs for the coming year. Overspend now to ensure adequate space? Or buy cost-effectively and risk limiting growth?

Cloud infrastructure revolutionized the process, giving companies the ability to scale up or down in an instant, as business needs require.

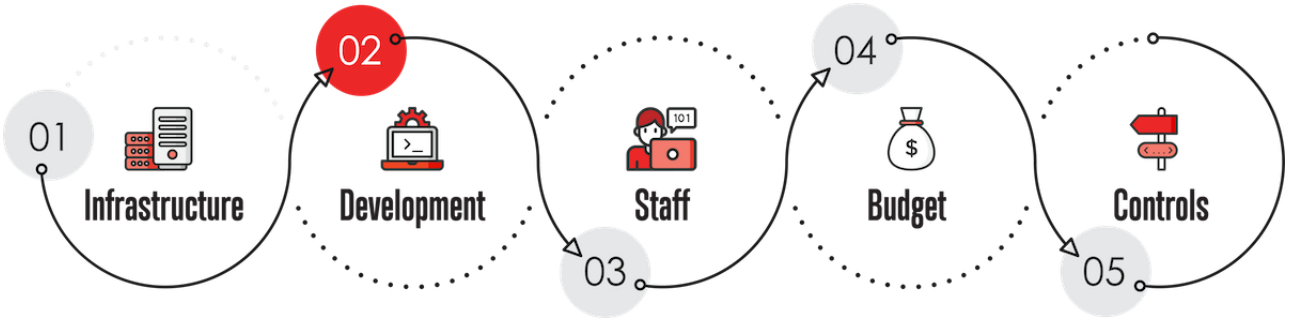
Cloud DevOps takes these efficiencies to the next level, because the development and operations teams no longer function in separate silos, but as a single, collaborative team. That means new thinking: Capacity is no longer the sole responsibility of the operations team, but a shared accountability. Ops staff must learn to relinquish sole control; developers must understand the impact of build cycles with fewer checkpoints.

Both groups must also move beyond legacy concepts of space, computing power and virtual machines. With cloud DevOps, capacity is no longer equivalent to physical space or even permanence. Developers can scale up hundreds of ephemeral cloud servers for a short duration, perform work quickly, and then disappear the capacity entirely, paying only for what they need.

The new DevOps team must recast its planning processes, expense allocation and controls for a completely new model.

Legacy mindset: Permanent, physical hardware with manual capacity planning

New thinking: Unlimited, temporal space with automated provisioning and scaling



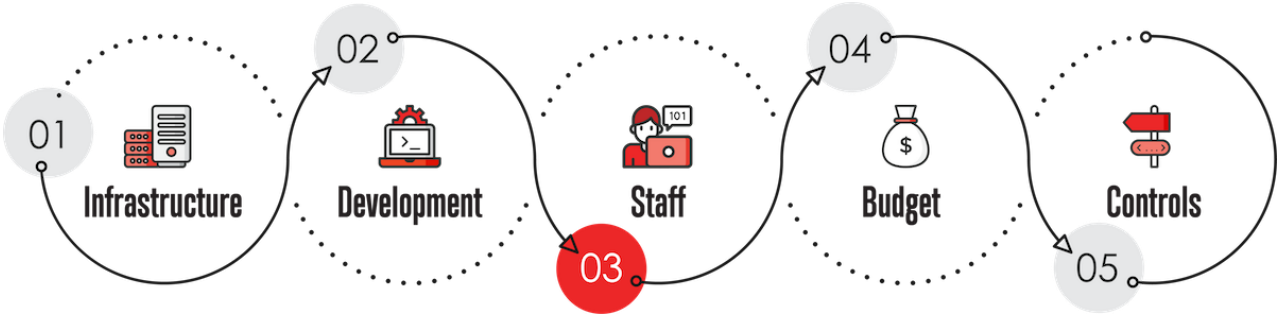
Development

Developers arguably see the most tangible benefit from a cloud DevOps transformation. With infrastructure in the cloud, there's no waiting for operations to finish provisioning; no running up against server limits when executing a build. Developers can focus on their core task—creating new features and applications—and get their releases to market faster and with less effort.

It changes the model from one-at-a-time, sequential activities to developer self-service and high-velocity deployments. Developers can do more in less time. They can take a proactive approach that improves their accountability and ends finger-pointing at operations.

Legacy mindset: Limited release capabilities with clear stage-gates between development and operations teams

New thinking: Rapid releases by empowered developers



Staff

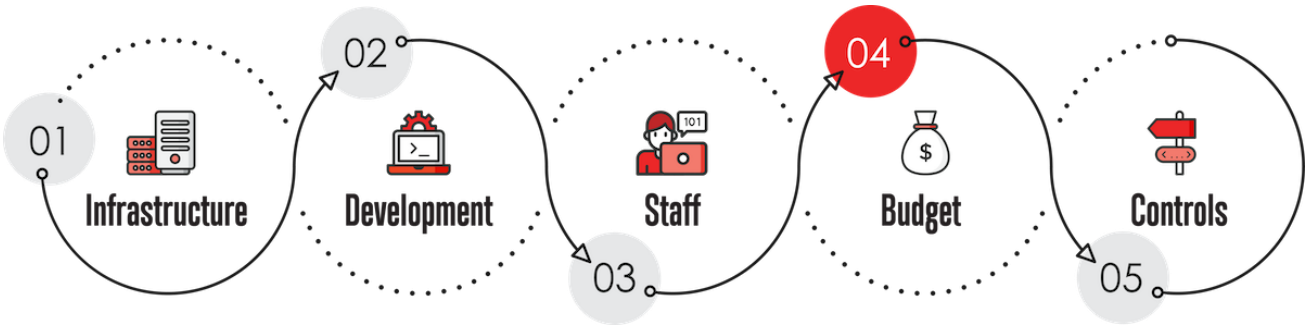
Much has been written about the impact of DevOps on IT. We'll reiterate that it's critical to prepare for more than just different technology; it's a fundamental cultural shift for the IT organization. Be sure to acknowledge this change with staff, provide information and invest in retraining.

By bringing together development and operations, the goal of DevOps is to create a collaborative and streamlined environment. But, reconciling two very different teams won't happen overnight. Consider: Development's mission is change and innovation; a push for speed and new ideas to keep pace with ever-changing user expectations, competitors and business goals. Operations, on the other hand, strives for consistency and reliability; a good infrastructure is one with stable performance, low risk and few surprises. A combined group needs to maintain a balance of both worlds.

You'll also need new skillsets and/or retraining for key staff, in order to develop deep in-house expertise with whichever cloud platform you select. A Center of Excellence (CoE) is a smart way to move forward. In a CoE model, a dedicated team stays current on cloud platform capabilities, which evolve quickly. This group manages change and educates the rest of the organization.

Legacy mindset: Silo'd teams for development and operations; a full-time job to manage IT infrastructure

New thinking: Integrated DevOps roles; new talent needed for cloud architecture, but no need to manage infrastructure



Budget

Today's IT budget includes everything from physical hardware and legacy systems to cloud storage, SaaS applications and machine learning tools. Each of these areas has its own business model and expense cycle—but most corporate budgets still function on an annual basis. Especially in disruptive, high-growth industries, it's tricky to know today how much bandwidth you'll need to accommodate next year's releases.

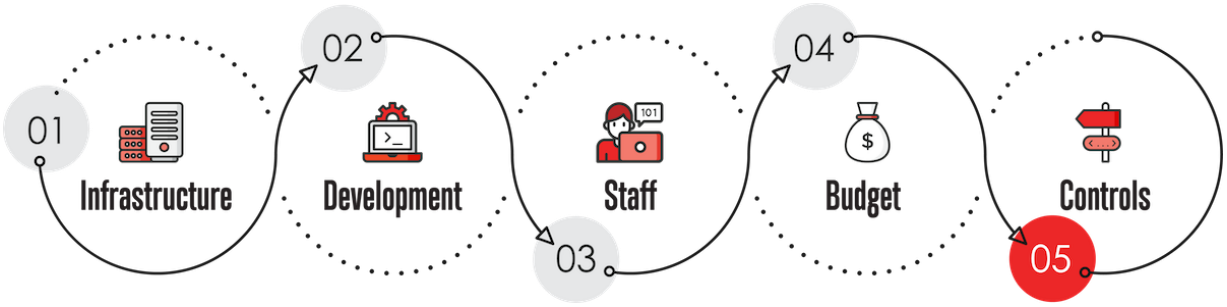
Cloud DevOps soothes much of this pain, by eliminating the need for "one and done" purchases like servers or cloud storage. However, that means rethinking both the department's expense forecast and the approval process for making purchases.

For example, with on-premises development or cloud storage, it's easy to forecast an annual expense because costs are typically fixed. But cloud DevOps lets you scale up or down as the business needs, using a pay-as-you-go model. That makes internal planning and communication essential, to avoid unpleasant financial surprises. Cloud DevOps also empowers front-line staff; developers may request more computing power to build a release quickly—without understanding the impact to the budget.

In the long run, these are small hurdles, but organizations that start fresh with an appropriate process can avoid unexpected costs and the blame game.

Legacy mindset: Central control, annual planning and fixed capital expenses

New thinking: Flexible, pay-as-you-need model with decentralized accountability



Control

One of the biggest fears associated with DevOps is quality and compliance—will today's built-in checks and balances for quality, version control and other compliance tasks be lost in a more fluid organization?

Cloud DevOps eliminates the need for many of the cumbersome, manual activities that support the typical build and release process. Because there's no longer a need to manage infrastructure in-house, operations plays less of a role. That means creating new control and compliance structures.

A smart way to insert necessary controls into a cloud DevOps environment is to create policy as code. This approach automates in-house policies by storing them within the code library, where every new release can access these important standards. Policy as code supports automated testing and continuous improvement.

Legacy mindset: Documented procedures and manual check-points

New thinking: Automated controls with policy embedded into code

Get started in cloud DevOps with these best practices

Once the organization embraces the benefits of starting fresh, it's time to get started. Follow these best practices to align your development, operations and line of business teams for success.

1. **Establish your vision.**

Moving to cloud DevOps means embarking on a journey. Sharing your vision gives the rest of the organization a clear picture of the desired destination. It fuels excitement and momentum, and ensures everyone ends up in the same place. Consider: Why are you making the move? What are your goals? How will the organization as a whole—and individual members of the IT and business teams—recognize success? In this step, companies usually earmark the systems they're planning to move to the cloud. It's equally important to evaluate any applications or platforms that will remain on-premises. Theoretically, you can move everything to the cloud; in reality, most organizations find a few projects where the investment simply doesn't make sense. It could be the amount of data, a system with low usage, or a database where industry regulations still require local hosting. Now is the time to be objective and define criteria that make sense for your business. This will remove subjectivity (and expensive mistakes) from future decision-making.

2. **Choose your platform.**

Next, evaluate your options for a cloud platform. With numerous tools available, each with different capabilities, it's a significant decision. Two factors we recommend researching are security and network reach. Can your business operate in a public cloud environment, or will you require a private cloud? Once you've made your decision, consider your platform's structure for permissions and user access. These vital elements are often overlooked in the buying phase, leading to issues once companies launch their first cloud DevOps project. Your platform's network is also worth evaluating. Even if you run a regional operation today, the ability to expand globally—in an instant—is a great way to future-proof your business. Google operates one of the world's largest private fiber networks on behalf of its DevOps clients.

3. **Convene a Center of Excellence (CoE).**

No matter which cloud platform you select, it will take time to learn its capabilities and embed best practices across your organization. The same goes for the new DevOps culture of collaboration. A CoE helps ease the learning curve. For best results, the team should report directly to the CIO or most senior IT leader in the company. Select a small and versatile core group to staff the CoE—a combination of legacy IT operations and developers, as well as senior representatives from the line of business. A good working number at most companies is 5-8 individuals. The CoE's mission is to become your company's experts on DevOps methodologies and your cloud platform. In short, be the innovation and information hub for the rest of the IT group and their business partners. Look for participants who are eager to learn, good at communication and excited about the positive opportunities that cloud DevOps can bring. These are the front-line evangelists who will help "sell" cloud DevOps to the rest of the organization.

4. **Establish user permissions.**

Setting up your cloud DevOps security structure is a great first project for the CoE. Taking the time upfront to establish the right roles, permissions and policies will pay off quickly, with efficient deployment and reduced risk; it should never be an afterthought. This is another area where it's best to take a ground-up approach and start fresh, rather than trying to adopt your legacy rules to a cloud environment. Instead, take a systematic approach, looking at every touchpoint in the cloud DevOps cycle and creating the right protocols. Just as a building maintains its structural integrity through a solid foundation, permissions set your cloud DevOps program up for success. It's far less work to invest time upfront, than to try and fix issues once your "house" is fully built. Look for cloud platforms that offer a true hierarchy in their permission structure.

5. **Launch a proof of concept (POC) project.**

Finally, activate your cloud DevOps team with a pilot project. A structured POC lets you test and learn on a small scale, giving the new team and the cloud platform a full test drive. Choose one meaningful idea, put the CoE into the lead and measure the wins and issues at every stage. This approach provides a smart way to show stakeholders the potential of cloud DevOps, and minimize risk.

Outside experts can provide tremendous value at any stage in your cloud DevOps initiative. These trained resources can share examples from peer companies, help craft overall strategy or support specific implementation activities. It's never too early (or too late) to call in reinforcements.

Get started with cloud DevOps. You've read our point of view, now talk to us about how Agosto can help you move forward in your cloud DevOps journey.

Reference:

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