INTRODUCTION TO DEVOPS ARCHITECTURE

DevOps is all the rage. If you've had your ear to the ground, even a little bit, in the technology community, you've heard of DevOps. In software and web development, you'd practically have to be living in a cave to not know, at least, a little about it. You can probably define it as "the bridge between development and operations," but do you really know what it's all about?

At the end of the day, DevOps helps businesses to ensure the frequent and continuous release of quality tested and user approved software for their organization or a larger audience of users. To do that, enterprises with a DevOps approach have dumped other, clunkier models of development for what is arguably the most agile way to release new software.

DevOps architecture companies have learned to produce software releases better and faster. In the following article, we are going to explore what DevOps architecture is and how it may benefit your enterprise business.

(This article is part of our [DevOps Guide](#). Use the right-hand menu to navigate.)

What is DevOps

DevOps is a practice that ensures collaboration and communication between operations and development to extremely productive ends. If you ask people in the field to tell you about DevOps, you'll likely get a few variations of that line. However, the phrase "to extremely productive ends" is the vague part of the definition. DevOps is governed by certain practices that make up the landscape of DevOps architecture, a method with proven results leading to increased production speed.

The thing that makes DevOps hard to describe in specific terms is there's no single toolset that can

be used to define DevOps architecture. There are, however, practices that make up a DevOps model which organizations can apply as they see fit. Within each company, that may look a little different, but in the end, the result will be the same. A better working relationship between development and operations that leads to increased productivity.

DevOps Architecture 101

Need a DevOps architecture primer? In the following section, we will cover the DevOps model, DevOps architecture platforms and the vital topic of continuous delivery.

DevOps Model

The DevOps model goes through several phases governed by cross-discipline teams. Those phases are as follows:

Planning, Identify, and Track
Using the latest in project management tools and agile practices, track ideas and workflows visually. This gives all important stakeholders a clear pathway to prioritization and better results. With better oversight, project managers can ensure teams are on the right track and aware of potential obstacles and pitfalls. All applicable teams can better work together to solve any problems in the development process.

Development Phase
Version control systems help developers continuously code, ensuring one patch connects seamlessly with the master branch. Each complete feature triggers the developer to submit a request that, if approved, allows the changes to replace existing code. Development is ongoing.

Testing Phase
After a build is completed in development, it is sent to QA testing. Catching bugs is important to the user experience, in DevOps bug testing happens early and often. Practices like continuous integration allow developers to use automation to build and test as a cornerstone of continuous development.

Deployment Phase
In the deployment phase, most businesses strive to achieve continuous delivery. This means enterprises have mastered the art of manual deployment. After bugs have been detected and resolved, and the user experience has been perfected, a final team is responsible for the manual deployment. By contrast, continuous deployment is a DevOps approach that automates deployment after QA testing has been completed.

Management Phase
During the post-deployment management phase, organizations monitor and maintain the DevOps architecture in place. This is achieved by reading and interpreting data from users, ensuring [security](#), availability and more.

Start with a Platform

If you haven't already made the switch to DevOps, a reasonable first step is to select a platform on which to approach this model. Several foundational frameworks exist to assist with infrastructure and configuration management. These include:

- Amazon Web Services (AWS)
- Microsoft Azure
- Red Hat OpenShift
- Chef Automation for Web-Scale IT
- Ubuntu Cloud

Finding the right platform for you could be as easy as speaking to the experts at BMC for DevOps solutions.

Continuous Delivery

Finally, DevOps architecture is created on the premise of continuous delivery. That is, any practices set in play to foster communication and collaboration between teams should be working toward the frequent and routine delivery of quality tested software. This can be automated, as in the case of continuous deployment as described above.

DevOps: Architecture Best Practices

You've probably come to realize that DevOps is treated differently from company to company. That's partly because of its ability to scale for both large and small organizations. But there are a couple of best practices that can be applied universally:

DevOps Should be Agile

A traditional approach to development might look something like the waterfall method of project management, whereas one team completes a project and then the next team picks up the torch, and so on and so forth until you reach the base of the waterfall. DevOps chucks that concept out the window.

In DevOps architecture, all necessary teams work simultaneously and cyclically providing a tracked feedback loop along the way. The DevOps project management approach is based on a foundation of achieving greater agility through communication and collaboration.

Hiring the Right People

The outlook for DevOps jobs is excellent right now, as it should be. Enterprises looking to implement this approach effectively should ensure they have the right people in the right positions to do so.

Here are a few positions enterprises should seek to fill if they are making a switch to DevOps architecture for software releases:

1. DevOps Architect
2. Release Manager
3. Automation Specialist
4. Integration Specialist
5. Software Developer
6. QA Tester
7. Database Engineer
8. Project Manager

These are just a few important roles that aid the DevOps process. The needs of each organization will dictate which roles are the most critical to overall success.

Benefits of DevOps Architecture

A properly implemented DevOps approach comes with a number of benefits. These include the following that we selected to highlight:

Decrease Cost
Of primary concern for businesses is operational cost, DevOps helps organizations keep their costs low. Because efficiency gets a boost with DevOps practices, software production increases and businesses see decreases in overall cost for production.

Increased Productivity and Release Time
With shorter development cycles and streamlined processes, teams are more productive and software is deployed more quickly.

Customers are Served
User experience, and by design, user feedback is important to the DevOps process. By gathering information from clients and acting on it, those who practice DevOps ensure that clients wants and needs get honored, and customer satisfaction reaches new highs.

It Gets More Efficient with Time
DevOps simplifies the development lifecycle, which in previous iterations had been increasingly complex. This ensures greater efficiency throughout a DevOps organization, as does the fact that gathering requirements also gets easier. In DevOps, requirements gathering is a streamlined process, a culture of accountability, collaboration and transparency makes requirements gathering a smooth going team effort where no stone is left unturned.

DevOps Architecture and Your Business

In a perfect world, DevOps architecture creates a high collaboration, silo-free environment for operations and development to thrive and build on requirements obtained with relative ease. However, we all know that no two DevOps organizations are the same, and things rarely go perfectly.

Still, building your organization on the principles of DevOps architecture is proven to make your business more productive with better delivery along with more frequent and consistent results to your customers. For these reasons, implementing a DevOps approach to software design has become an instrumental trend in enterprise businesses that is not likely to go away.

As more and more businesses achieve the benefits of an agile, collaborative approach to software development, BMC is here to help guide them to the right tools and techniques. If you're considering DevOps for your organization, BMC has solutions that could help you. Contact us today to learn more about how BMC can assist your DevOps organization.