COLLABORATION AND COMMUNICATION: KEYS TO ENTERPRISE DEVOPS SUCCESS



BASED ON REAL USER REVIEWS OF MICRO FOCUS SOLUTIONS



ABSTRACT

DevOps, a software development and delivery methodology that blends the previously separate development and IT operations functions, offers many potential benefits across business and IT. With DevOps, the whole software delivery process works faster, enabling rapid rollouts of new features and apps. At the enterprise level, doing DevOps right requires a carefully constructed, connected, and orchestrated mix of tools and processes. It works best when there is strong collaboration and communication between team members and their respective toolsets. Here, IT Central Station members discuss what they view as keys to success in enterprise DevOps. Their insights are based on their experiences with Micro Focus solutions.

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INTRODUCTION

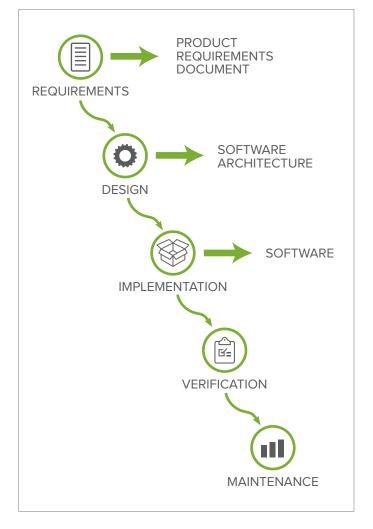
DevOps is a software development and delivery methodology that blends the previously separate development and IT operations functions. It offers many potential benefits across business and IT. With DevOps, the whole software delivery process works faster, enabling rapid rollouts of new features and apps.

Doing DevOps right requires a carefully constructed, connected and orchestrated mix of tools and processes. There must be efficient communication between DevOps team members and their respective toolsets. Collaboration is critical. In this paper, IT Central Station members who work in software delivery discuss what they view as keys to success with communications and collaboration in enterprise DevOps. Their insights are based on their experiences with Micro Focus solutions.

Enterprise DevOps Overview

Businesses like DevOps. As a DevOps QA Manager at a tech services company with over 1,000 employees explained, the new approach to software releasing "means shorter cycle times, quicker releases." He is a user of Micro Focus enterprise DevOps solutions. However, DevOps represents much more than just the merging of two separate departments and work streams. It's nothing less than a cultural transformation for both sets of people involved. Previously, one was either a "dev" or "in ops." Depending on the organization, the relationship between these two groups ranged from civil and professional to indifferent and even hostile. Developers develop. With the incentive to drive change, they like to deliver software to users as quickly as possible. Ops people do the distinctly different work of preparing apps for production. They have an incentive to provide a stable user experience with minimal downtime.

Thus, there has traditionally been conflict between



The traditional software release cycle involved two separate processes performed by two different teams. Software development ("Dev") gathered requirements, wrote the code and then "threw it over the wall" to testing and then to IT operations ("Ops"). Ops oversaw the process of deploying the application in production and managing it until it was retired and replaced by new code, freshly "thrown over the wall". This methodology is often called 'Waterfall development'.

Dev and Ops. Ops people will push back on new updates from Dev, as they are likely to destabilize the system. On their side, Dev wants to get its changes out quickly and frequently. If there was a problem, the traditional solution was to "throw it over the wall" back to Dev, or Ops, depending on where the problem originated. Then, the team that did the throwing could sit back and wait for the answer to come back "over the wall."

Now, with DevOps, that wall is gone. Both Dev and Ops, working on the same team, are responsible for speed

and quality. It goes further. It's not enough merely to merge the Dev and Ops teams. The best practice, management-wise, is to merge their respective goals as well. Dev and Ops staff must collaborate and communicate in order to achieve their common goals of continuous planning, development and delivery. From there, it's possible to evolve from this simple team-level DevOps to enterprise DevOps, where many teams work together using these principles.

Keys to Success with Enterprise DevOps

What does it take to succeed with enterprise DevOps? As IT Central Station members reveal, tearing down the wall between Dev and Ops is about way more than moving boxes around an org chart and handing out new workflow diagrams. It's about communication and collaboration—between people who haven't been used to working together. The challenges include integrating toolsets used for the Dev and Ops sides of the workflow and ensuring that everyone involved can communicate efficiently. It should be an inclusive process, one that can scale and adapt as the business inevitably evolves over time.

For example, there can be siloes like QA that must be broken down even within the Development side. With Agile and DevOps, testers become part of the 'agile team,' which also includes developers, rather than having a 'dev' team and a 'QA' team. Even when the Dev and QA people are in the same team, they must be able to communicate and collaborate through the different toolsets they are likely to be using.

CONNECTING AND INTEGRATING DEVOPS TOOLSETS

DevOps leverages a variety of toolsets. To get DevOps working right, therefore, it's necessary to connect and integrate them. Collaboration and cooperation between toolsets can then follow. For example, a <u>Technical Lead</u> at a tech services company with over 1,000 employees uses the Fortify On Demand security solution to integrate his DevOps tools into his Continuous Integration (CI) and Continuous Delivery (CD) processes. The <u>QA Manager</u> at the tech services company likes ALM Octane for its integration capabilities, saying, "The fact that it works on all the different browsers, it easily integrates into all the other tools, and that it looks like it will work with our pipeline 2.0 with a kind of DevOps in mind."

He then added, "It helps us go to the true DevOps model, which means we can do shorter cycle times. Go from releasing every month, to every day. It's got a nice clean interface that people don't mind using. It integrates into the developers IDEs, like IntelliJ, which means that everybody gets to work in the tool they want to work in. Then it easily integrates across, so everybody can see the information in any place they want to see it."

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DevOps tools should ideally integrate easily with existing enterprise platforms. For instance, a <u>Manager</u> of <u>Application Development</u> at a healthcare company with more than 10,000 employees, who uses Micro Focus PPM for enterprise DevOps noted, "We're using all of it, and we integrate it with other systems. We migrate code for PeopleSoft, creating purchase orders, etc. So we're using the application for all kinds of crazy things." This capability may rely on supporting different message formats and transports, as an <u>IT Manager</u>, <u>EAD QE CoE Lifecycle Virtualization</u> at a pharma/ biotech company pointed out on IT Central Station.

Similarly, an <u>IT Services Operations Director</u> at a comms service provider with more than 10,000 employees was pleased that Mobile Center provided an integrated view of his main solution stack. His view held insights into the services and recently developed apps developed. He described it as "a powerful tool enabling multi-platform and multi-site testing, application performance monitoring, and user experience assessment of mobile apps."

An <u>Enterprise DevOps Leader, Program Manager</u> at a media company with over 1,000 employees concurred, commenting how it was helpful that his UFT (QTP) DevOps solution integrated with third party products and his primary mobile solution. This was important to him because open source tools like Selenium did not have easy integration into other mobile solutions.

EMBRACING OPEN SOURCE TOOLS AND OTHER TECHNOLOGIES

Introducing a DevOps program is sufficiently challenging that it pays to avoid a "rip and replace" approach to tooling. If an open source tool is working in one area of the process, for example, it may be optimal to leave it in place and integrate to it. After all, the team chose it for a reason. Thus, IT Central Station members recommend embracing open source tools and other technologies.

A <u>Program Manager - Performance Engineering</u> at a media company with over 1,000 employees suggested using existing enterprise tools. His use case involves testing on real devices as well as on emulators. He shared, "Even if you want to go open source, you can use them [existing enterprise tools] and it's real user functional [and] performance."

For a Lead Performance Architect at a tech company with over 1,000 employees, the open source use case is JMeter script integration. He commented, "This integration feature is a good approach. Sometimes, we need to run scripts developed in an open source tool like JMeter. Instead of spending time on creating new scripts, the scripts developed in JMeter can be uploaded and based on the protocol license because it is a Dev user protocol, it provides a valuable feature when integrated with StormRunner [Load]." A <u>Senior Performance Engineer</u> at a retailer similarly appreciated StormRunner Load for accepting and adapting to open source tools.

REMOVING BOTTLENECKS THROUGH IMPROVED COMMUNICATIONS BETWEEN EXISTING TOOLS

A typical DevOps team collaborates with different parts of the organization, each of which are using separate tools. Each group wants to configure its own pipelines. This is an expensive proposition, in terms of time, effort and errors. It is a scenario that can arise even within the same team. The best practice is to continue using existing tools, but use connected toolsets such as those offered by Micro Focus to communicate and remove bottlenecks in the DevOps pipeline.

Continuous Integration (CI) in the DevOps pipeline offers another example. CI is the main focus for an <u>ALM Platform Architect</u> at a transportation company. It's part of a broader struggle he's experienced in bringing development teams directly into the full ALM process. He expressed interest in ALM Octane "to bring us into the DevOps potential," adding, "That's the biggest draw right now. Octane fits that niche that we never had... we didn't have an approved standard. Octane gives us that. It's awesome."

Understanding bottlenecks is critical to effective DevOps project management. According to an Application Security Specialist at a tech services company with over 5,000 employees, "In large software development teams, the most important issue related to software and application security is to identify vulnerabilities and weaknesses quickly and accurately, then to gather those findings on a common platform so they can be distributed and tracked by teams and developers." Their solution was to choose Micro Focus WebInspect and Fortify, which are "fully integrated with SSC portals and can instantly register to error tracking systems, like TFS and JIRA." This facilitates error and vulnerability management and makes the "Secure Software Development Lifecycle work well."

Reducing bottlenecks requires gathering data about where they are and why they're causing problems. A <u>Senior Consultant</u> at a tech services company with over 50 employees uses the Micro Focus PPM solution for enterprise DevOps to analyze where his bottlenecks are occurring. With awareness of bottlenecks, he is able to make more accurate decisions about DevOps workflows. An <u>Engineer</u> at a tech services company with over 1,000 employees added that he "performed performance testing for a number of clients using LoadRunner." He observed, "It has helped them in finding the performance bottlenecks, capacity issues before deployment."

IMPLEMENTING DEVOPS THAT'S CONNECTED AND INCLUSIVE

DevOps necessarily connects many different types of people. It should be inclusive. It should connect a diverse set of people, tools and processes. To illustrate this idea, an <u>Application Delivery CTO</u> at a financial services firm with over 1,000 employees noted how the most valuable features of his UFT (QTP) toolset involved integration with DevOps and "accessibility to people without a lot of technical skill."

A <u>Sr. Manager - Technology Office</u> at a tech company with over 1,000 employees echoed this sentiment, remarking, "The industry is moving towards Agile and DevOps. The most important thing is that each and every individual in your company is not thinking of themselves as individuals, but rather as if they are the end consumer, or running the business themselves."

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To make this happen, DevOps staff should focus on connecting Portfolio and Project Management (PPM), time and resource management, demand management and workflow automation toolsets and processes. This is the approach taken by the <u>Senior Consultant</u> at the tech services company. As he explained, these modules working together "can make the PPM usage successful." He noted, "These are connected to each other. These modules are the base for a successful PPM usage. If you use these modules properly (with industry best practices), you will get the most out of it. If [you] want to do PPM, you cannot say 'I will not manage demands', nor can you say, 'I will not do resource management,' etc."

ENSURING SCALABLE DEVOPS

A successful DevOps program will inevitably grow. The ability to scale appears as a standard requirement for DevOps toolsets. For example, the <u>Manager of</u> Application Development at the healthcare company discussed how he originally purchased Micro Focus PPM for 80 users. "Now," he said, "We have almost 2300 to 2400 users. So, it's been very scalable; very easy to scale." A <u>Senior Systems Engineer</u> at a financial services firm with over 1,000 employees commended LoadRunner's scalability, while a <u>Principal</u> <u>consultant</u> at a tech vendor with over 50 employees shared, "It's highly scalable. LoadRunner can connect to any number of agents, and you can have multiple controllers." DevOps tools have to adapt to project-based scaling requirements, such as a large test. A <u>Lead Solution</u> <u>Architect</u> at a consumer goods company with more than 10,000 employees shared, "In my previous experience with previous employers working with some retailers, we had to run some extremely large tests, and even at my current company, we go up to about 3000 content users. I think it's fairly scalable."

CONCLUSION

DevOps is a discipline built on communication and collaboration. As IT Central Station members point out, doing DevOps right requires integrating toolsets so team members can work together. To get the faster release cycles and improved agility inherent in DevOps, there has to be an inclusive approach to the processes. This might mean using open source tools when they best serve DevOps requirements. Everyone has a role to play, and each team members might be using different tools, which means that it is critical that the tools are integrated with each other as well as with the DevOps pipeline. Otherwise they won't be able to share information effectively. Success comes from scalability as well as the ability to overcome bottlenecks in the DevOps workflows. With effective communication, collaboration and integration, DevOps is able to deliver on its promise to business.

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