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Infrastructure Software

FAQs From DevOps Expert Call

What You Need to Know: Earlier this week we hosted an investor call with Shawn Doyle, the founder and CEO of ReleaseTEAM, a DevOps consulting company. Overall, our conversation highlighted the continued wealth of opportunity within the DevOps market as customers aim to automate and accelerate their software development processes and begin to leverage generative AI technology to drive developer productivity. Key takeaways from the call include:

1. Large enterprises are consolidating around a handful of key DevOps vendors (no single vendor is best of breed across the entire toolset today), while staff-constrained midmarket customers are gravitating to end-to-end platforms from GitHub and GitLab (GTLB $45.88; Outperform) (the only true "platform" vendors today);

2. GitHub offers the best overall value for developers but is still working on adding more elements of the platform, especially on the right side of the toolchain (in areas like security);

3. GitLab checks the most boxes on end-to-end DevOps today (its Ultimate tier particularly appeals to smaller customers that lack in-house ops and security expertise) and is seeing only modest pushback from enterprises on its recent Premium tier price increase;

4. Atlassian's (TEAM $190.60; Outperform) Jira remains best of breed in the DevOps project management category (the moat here is tied mainly to its marketplace) but over time will be vulnerable to disruption from platform vendors like GitHub and GitLab that offer "good enough" tools in this space—unless Atlassian develops an end-to-end platform itself (which it still could do);

5. JFrog (FROG $23.02; Outperform) is an important vendor and is also pushing a platform vision, but does not check enough boxes on the left side of the toolchain to be considered a full platform (still needs to be married with another platform);

6. While the DevOps pendulum is swinging from best of breed toward platform approaches, a near-term focus on costs is delaying tool consolidation for some customers (it is expensive to change toolsets, especially when factoring in professional services costs);

7. The right side of the DevOps toolchain (ops-centric) tends to be more complex and customer/use-case specific, which makes it harder to integrate the tools here into a full platform—this should continue to support best-of-breed right-side DevOps players like Snyk in security, HashiCorp (HCP $21.41; Outperform) in infrastructure as code, and Datadog (DDOG $87.86; Outperform) in observability; and

8. Generative AI will accelerate software development release cycles and lead to more rather than fewer developer jobs; coding assistants are just the beginning—gen AI will soon be applied across the full toolchain (e.g., security, deployment, runtime), with GitLab's Duo (now GA) the first example of this potential.

Key Investor Questions

Q: How are enterprises thinking about best-of-breed versus end-to-end platforms within DevOps today?

A: The pendulum is clearly swinging toward consolidated DevOps platforms, with the two main beneficiaries today being GitHub (Microsoft [MSFT $330.53; Outperform]) and GitLab. The desire for end-to-end DevOps platforms is particularly strong in the midmarket where customers generally lack in-house expertise, especially on the "Ops" side (right side) of the toolchain.

Within larger enterprise accounts, consolidation around a single platform is less realistic as no one vendor today covers all the steps within the DevOps workflow perfectly (a best-of-breed approach requires customers to bolt on additional tools to platforms like GitHub or GitLab). That said, enterprises are coalescing around a handful of key DevOps vendors, which include the SCM-centric platform vendors (GitLab, GitHub), Atlassian, JFrog, Snyk, HashiCorp, and Datadog.

When analyzing the history of software development, it is important to remember that we have seen the pendulum swing toward platform approaches twice before, with IBM's (IBM $137.79) and HP's (HPE $15.29) offerings being disrupted by Atlassian's Jira best-of-breed solution. This portends the possibility that the current platform momentum we are witnessing could be disrupted in the future by new best-of-breed tools.

Despite the trend toward DevOps platforms, tool consolidation/migration for some customers is being put on the back burner due to a hyper-focus on costs. That is, some organizations do not want to spend the time and money to work through a process of tool migration right now, which requires significant investments in professional services.
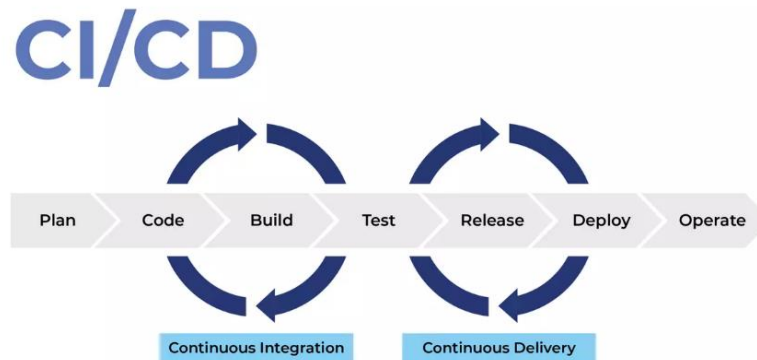
Q: How competitive are the CSP-native DevOps platforms?

A: While in-house CSP platforms offer an end-to-end DevOps tooling option for developers, they are not ideal for multicloud enterprises. Specifically, if customers have any on-premises software development (common in regulated industries), it is a nonstarter to use CSP toolsets because they are solely hosted in the cloud. On top of this, unless an organization is all in on a single cloud, a platform like Azure DevOps is not appropriate (will not work with other clouds) and leads to dreaded lock-in risk. As a result, most customers end up gravitating to cloud-agnostic DevOps solutions from independent vendors like GitLab or GitHub (though GitHub is arguably not fully independent anymore).

Q: What parts of the DevOps toolchain are least mature and where is there the most room for disruption?

A: The major bottlenecks in DevOps continue to be on the ops side (right side) of the toolchain—everything after continuous integration and package management (i.e., continuous delivery, security, infrastructure as code, runtime monitoring). This part of the toolchain has defied standardization given greater complexity and customer/use-case specificity—that is, as you move closer to the runtime there are more customer-specific variables that impact the deployment and running of the application. This is where there is the most potential for disruption and new approaches in DevOps.

For example, within security, one of the factors inhibiting the creation of a single DevOps security platform is that security needs vary greatly depending on the organization and the type of application. GitLab is perhaps the furthest along here in integrating these "right side" steps into a full platform, but still has a fair amount of work to get to best of breed, which many enterprises require (especially in security).

Q: How do you rate Atlassian's positioning in DevOps, and can it still become a consolidated platform vendor?

A: Atlassian is well positioned in the agile planning market with its flagship Jira Software solution. It has a dominant market share and is the best-of-breed vendor in the project management, collaboration, and issue tracking components of the DevOps toolchain. Much of Atlassian's advantage or moat with Jira is tied to its robust marketplace, which is one of the largest in the software ecosystem with nearly 6,000 apps on it. This marketplace helps businesses customize Jira to their specific workflows with plug and play integrations, making it hard for competitors to challenge Jira as a best-of-breed vendor in this market.

As an aside, this is consistent with William Blair's recent work on the DevOps market and our conversations with other Atlassian ecosystem partners (see our recent white paper on the agile market here: On the Ground and In the Cloud: Agile Software Development).

Looking ahead, Atlassian's dominant position with Jira is potentially exposed to disruption given its hold on the market for 20 years and Atlassian's struggles to gain traction in other parts of the DevOps toolchain (source code management, CI/CD, security, etc.). This dynamic has hindered Atlassian's ability to become a true DevOps platform. That said, there is no vendor today that is really capable of disrupting Jira, though over time GitLab and GitHub have the potential to displace Jira with their consolidated platforms (though this is not happening yet).

Moreover, there is nothing stopping Atlassian from investing more in other parts of the DevOps toolchain to become more of an end-to-end DevOps platform, other than the fact that it would be late to market compared to the likes GitLab or GitHub. The biggest areas for investments would need to be in Bitbucket, Bamboo (CI/CD), and security. For Bitbucket specifically, there are two issues that led to market share losses versus the other Git repos. First, many customers have wanted to keep their source code on-premises, which would be served by Atlassian's Data Center Bitbucket offering. While Data Center (on-premises) is still a priority for Atlassian, cloud has been a bigger investment area over the last few years. Second, Atlassian would need to build a binary repository for Bitbucket to become a complete solution. Today, Bitbucket is largely used as a source code repository (not binaries), and customers need to use it in combination with a tool like JFrog or Sonatype for the binary repository, making it an incomplete solution in the repository and CI/CD segments of the DevOps toolchain. This stands in contrast to Gitlab and GitHub, which have both source code repos and binary repos.

Finally, of note, Atlassian has been moving away from only serving the core developer persona to serving many other roles in the enterprise. This includes trying to serve more functions that work collaboratively with the developer group, like product management (with Jira Product Discovery) and other business functions (marketing, design, sales, etc. with Jira Work Management). This shift in focus away from developers may also be impacting Atlassian's ability to resonate as an end-to-end DevOps platform.

Q: What is the impact of generative AI on the DevOps space?

A: Overall, generative AI technology should increase the number of developers and make them more productive. Typically, software development teams achieve about 60% of their product goals (usually behind schedule), and this is the bare minimum required just to keep the lights on. By removing redundant tasks and enabling developers to improve the quality and quantity of their work, DevOps teams should deliver better and faster outcomes.

Importantly, generative AI will be applied across the entire DevOps lifecycle, not just via coding assistants. GitHub Copilot was a great proof point that generative AI can drive up coding productivity, but only speeding up the left side of the SDLC and neglecting the right side (where the bulk of the bottlenecks still exist) will not make DevOps pipelines move much faster. GitLab Duo (the company's now generally available AI add-on SKU) is a step in the right direction, addressing at least 10 different pain points across the SDLC, from helping developers write code faster, to suggesting the right reviewer (reviews are a major bottleneck), to summarizing identified issues, to helping automate test scripts. In addition, JFrog is working on interesting capabilities for runtime security (RASP), which will leverage AI to help identify and remediate issues and thereby reducing the time-consuming, ticket-based system for addressing issues once an application is deployed.

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