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Analyst Insight

Zoho Democratizes the  
DevOps Tools Market

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## EXECUTIVE SUMMARY

### Key Stakeholders:

CIO, VP of IT, SME (Small and Medium Enterprise) IT directors and managers, IT Business Management directors and managers, DevOps professionals, Business Domain Experts, Software Developers, IT Operations

### Why It Matters:

As the DevOps market heats up, there is a need for more user friendly and cost conscience tools. Small and Medium-sized Enterprises, especially those with companies with development and operations teams that are comprised of less than 50 people, have traditionally been priced out of the market for software developer tools. These companies need to support more personnel than free tools typically allow, but their budgets don't support enterprise DevOps tools or they are forced to use tools that are not designed for professional developers.

### Top Takeaway:

Zoho has entered the market for Agile and DevOps tools with a set of tools that appeal to organizations who want feature parity with existing enterprise DevOps tools at a value-based price point. The Zoho tools are priced lower than rivals in the market, offer a range of products, and are easy to provision and manage. This is a boon for small teams and SME organizations when budgets cannot support existing offerings from vendors currently in the market.

## MARKET CONTEXT

The current market for developers and operations, or DevOps<sup>i</sup>, tools, including tools for Agile<sup>ii</sup> development, has become increasingly dynamic for two reasons. One, organizations look to IT to both automate business processes and boost interactions with customers. To do that, IT has to move at the pace of business change while driving business change. IT is also expected to provide insights into internal and external factors affecting organizations including customer behavior, efficacy of marketing and sales efforts, and internal processes that drive business.

Combined, these two factors create a more dynamic and faster paced IT environment that expects higher development velocity with much fewer errors and downtime episodes. These expectations are, in turn, driving adoption of Agile development methodologies, DevOps team structures, and new tools to support both.

From a tools perspective DevOps teams have three major needs:

- **Plan and Manage Projects.** In the past, project management was a discipline that operated outside core development. IT employed specialized project managers to keep projects on track and report progress upward. Even if professional project managers were not in place – in small organizations for example – managers were tasked with project management. The adoption of Agile has changed that scenario as everyone in a team is expected to participate in project planning and management. DevOps team members now need tools to provide visibility into projects and to communicate status to others.
- **Write and Collaborate Over Code.** Obviously, developers write code. Writing code, however, is not as simple typing a computer language into a text editor. Instead, developers need to be able to prototype user interfaces, integrate system components, manage APIs, and, especially, collaborate with other developers. In addition, DevOps teams have to write code for CI/CD<sup>iii</sup> (Continuous Integration and Continuous Delivery), IaC<sup>v</sup> (Infrastructure as Code), and platform configuration such as for Kubernetes<sup>v</sup>. Skills that used to be primarily developer-centric are now necessary across the DevOps team. No developer or operations professional works in a vacuum; Making tools that help them to communicate and share ideas essential. A text editor or IDE<sup>vi</sup> is no longer enough.
- **Deploy Easily to A Multitude of Environments.** DevOps teams are responsible for the deployment of code from the moment the code is committed until deployment to various production environments. Team members play a role in developing and managing these DevOps pipelines. Tools to automate these processes save time and effort across the DevOps team.

Overall, DevOps teams have influence over development, operations, and platforms, as well as their traditional role of writing code or maintaining systems. This is driving a change in the tools that they need to be successful and creating openings in the market for new vendors to supply them.

## THE EMERGING MARKET FOR DEVOPS TOOLS

It's easy to look at the plethora of companies in the DevOps tools market and think that it is already too crowded. Yet new companies are constantly entering this market. Why? The simple answer is that demand is still increasing. There is a clear transition from traditional n-tier applications<sup>vii</sup> to distributed microservices<sup>viii</sup> but most organizations have yet to fully embrace it. That transition will require new tools and new methodologies.

Businesses expect greater development velocity to meet their needs. This increase in velocity requires new tools that can help develop and deploy code much more quickly. Even as velocity increases, the appetite for downtime and errors has decreased. Most business cannot accept the negative effects on brand and revenue that accompany major system failures. This has created a need for tools that accelerate any type of development while increasing resiliency and reducing human error. Finally, the market for DevOps tools is still nascent. Many vendors are new and large vendors are just entering into this market. Without a dominant market driver, IT professionals still have the luxury of choosing tools that fit their specifications in terms of size of the enterprise, type of industry, and level of expertise.

## SME DEVOPS TOOLS

A good example of the current market opportunity is seen in the SME<sup>ix</sup> (Small-to-Medium Enterprise) segment for developer and DevOps tools. Most DevOps tools have been designed for large enterprise. Many DevOps toolchains require significant configuration and extensive programming in order create meaningful environments. It is not uncommon to find large enterprises deploying specialized platforms and DevOps teams to build out and maintain the development and deployment toolchains. For a large enterprise with an extensive portfolio of software that is being constantly updated and deployed, this makes sense. They can afford the human and software resources that accommodate the scale of their enterprises. SMEs cannot afford conventional enterprise DevOps solutions. Even if they could, it would be a waste of resources.

While SME needs are just as robust as those of a typical large enterprise, they typically lack the scale necessary to take full advantage of enterprise DevOps tools and services. This is a hole in the market that begs to be filled.

## THE COST OF DEVOPS TOOLS

Another problem with DevOps tools is the cost. Many organizations are still creating DIY solutions from multiple vendors. Not only is this complex, it is costly with project management, Agile, CI/CD, artifact repositories<sup>x</sup>, cloud services, and collaboration tools each charging their own fees. In addition, there are user enablement tools such as no code/low code options for business users and for developer prototyping. Add to that the cost of the private or public cloud services that the code will run on and a full DevOps and application stack is outside the range of many SME customers.

The irony of the situation is that Agile, DevOps, and Cloud were all supposed to reduce costs, among other goals. It is clear that while goals such as greater resilience and increased development velocity are being achieved, cost reductions are more fleeting. The cost of the tools plus the cost of complexity have reduced the potential savings that

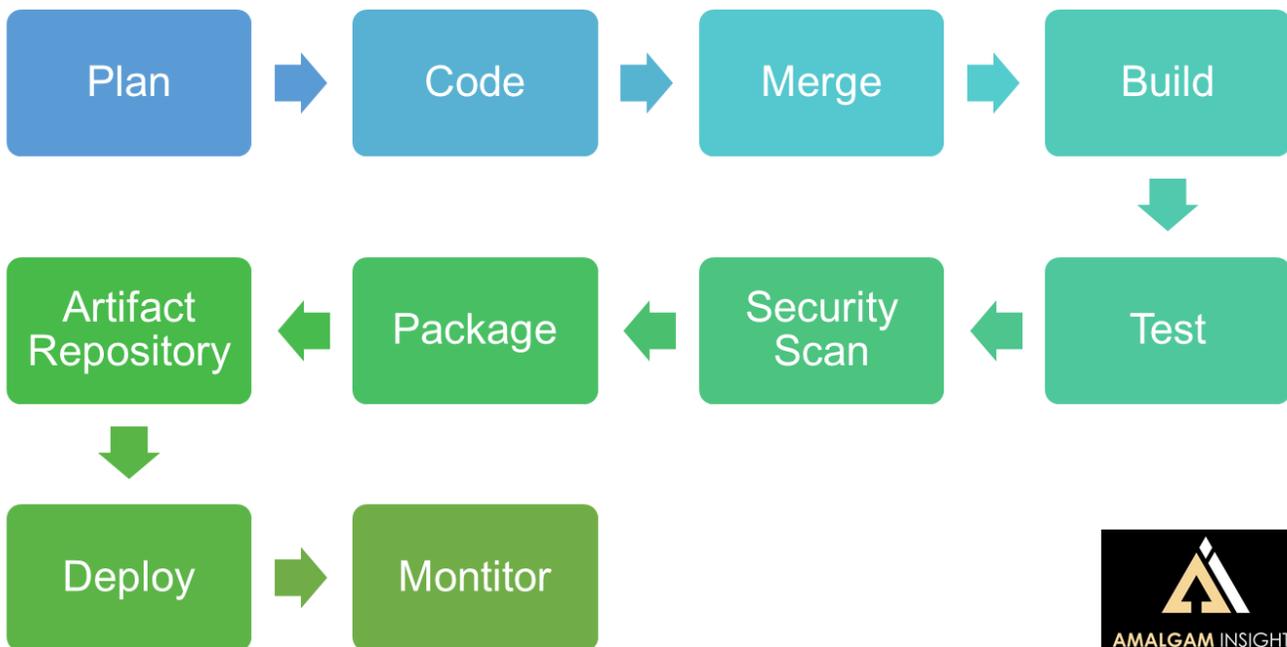
these processes, methodologies, and automation were supposed to bring to IT. Ultimately, a full stack DevOps environment is often out of reach for traditional<sup>xi</sup> SME organizations.

## THE EVOLVING MARKET

The market for DevOps tools is continuing to evolve. At present, business user enablement (low code/no code Development), Agile development tools, DevOps delivery pipelines, and platforms are separate market segments with different vendors filling in the various niches. This is changing rapidly as organizations embrace a comprehensive view of development and deployment that stresses rapidity, security, and resiliency.

To realize this vision, IT is combining all of its individual application development processes into one mega-process that starts with end-user business requirements and extend through coding, build, deployment, and analysis of the process and tool functions (analytics) after deployment.

FIGURE 1: SAMPLE EXTENDED CI/CD PIPELINE<sup>xii</sup>



This end-to-end automation is the only way to meet the needs of rapidly changing business environment while controlling recurring personnel costs.

## ZOHO JOINS THE MARKET

Given the growth in the DevOps market and market segments left underserved, it's no surprise that we are continuing to see more vendors entering the market. One of the new entries is Zoho. Zoho is best known for its large suite of value priced SaaS applications such as CRM, Finance, collaboration, and other business apps. Value priced in this context means that the ratio of features to price is favorable to the customer. In the case of Zoho, their applications tend to have near feature parity with expensive enterprise cloud applications and yet sell for prices common in the SME range. This is in contrast to inexpensive applications that typically have a limited set of features compared to enterprise applications.

"New" here is a bit of a misnomer. Zoho has previously released a number of applications that address DevOps needs, especially project management. In the past year, however, Zoho has filled out the DevOps portfolio to include apps in a number of core categories. These include business user enablement and prototyping, collaboration, and Agile project management. Moving forward, Amalgam Insights expects that Zoho will continue to build out the DevOps portfolio.

## ZOHO DEVOP TOOLS

DevOps toolchains are typically a set of applications that meet a variety of DevOps team needs. Zoho offers products in three categories of tools that are designed for DevOps. These include:

- **Project Management.** Zoho has both a traditional project management product called Projects, and an Agile project management product, Sprints. While developers may use Agile for development, operations teams also need to manage more conventional hardware and infrastructure projects using typical waterfall methods. Zoho provides for both.
- **Collaboration.** The entire reason for DevOps is to ensure that developers, operations, and business users collaborate on software development and deployment. To that end, Zoho has a suite of mature collaboration tools. These include Wiki, a Wiki software product, Notebook which enables individual team members to gather and manage both individual and shared data related to projects, and Cliq, a group chat application akin to Slack or Microsoft Teams.
- **Business User Enablement.** Including business users in the development process allows DevOps teams to better understand requirements and enables fast prototyping. There are also components to many systems that are better left to a business user who has specific domain knowledge. For these types of projects, Zoho offers three low code/no code products that can be used to either create small applications, components of applications, or prototype interfaces and workflows. These three applications are Creator, a low code/no code development environment, Flow, an integration workflow tool, and Orchestly, a business process management tool. Flow is also useful by DevOps teams to provide integration between Zoho products and customer components for larger applications.



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Business user enablement and development tools are not typically considered part of the DevOps market. However, a significant number of internal applications are being created by domain experts with guidance and help from IT using low-code/no-code software. In some cases, business user enablement tools are part of a wider application or based on a common platform as IT developed applications. These tools, therefore, play a part in the extended DevOps toolbox even if they are not commonly thought of as “DevOps.”

### A SERVERLESS AND WEBSITE PLATFORM

In addition to typical DevOps tools, Zoho has also provides customers with a serverless platform. A serverless platform is any computer system that abstracts the infrastructure for the developer, employs an event driven model, and only consumes resources when needed. The Zoho version, called Catalyst, allows developers to upload code into an environment capable of running common development languages. At present, Catalyst supports Java, server side Javascript<sup>xiii</sup>, Client-side JavaScript methods for use in Web applications, and mobile code for Android and iOS.

Catalyst is not the only application target environment that Zoho offers. Zoho’s Sites provides hosting for Web sites. In many applications today, a web site represents the front-end UI<sup>xiv</sup> of an application. Site plus Catalyst with Creator and Flow provide a platform for complex custom applications at low cost and low effort.

Not only can Catalyst run custom code, but it is capable of accessing the services of the Zoho platform including databases and file stores, analytics, and search. Even more important, Catalyst customers can access business objects within the Zoho portfolio. This provides opportunities for developing applications that interact directly with common business applications such as Finance and CRM. Catalyst plus Sites makes Zoho more akin to a full DevOps stack offered by a Cloud Service Provider such as AWS or Google Cloud Services.

This integration with the back-end services of the Zoho platform and the Zoho SaaS portfolio makes Catalyst a richer deployment and development environment than many serverless platforms.

## THE ZOHO VALUE PROPOSITION

Though Zoho enters a crowded market, it has a unique value proposition that will appeal to DevOps teams. Zoho, throughout its history, has always produced *value priced products that have user feature parity with large enterprise products at significantly lower price points*. By tightly controlling their own costs and building their own backend, cloud and tools, Zoho has brought otherwise expensive applications such as CRM, HR, and Finance applications to more cost sensitive organizations. They have helped to *democratize* SaaS applications by lowering the cost of these most expensive applications. This has made them especially popular in the SME segment of the market.

This unique value, where *lower cost meets enterprise feature*, is now being brought into the DevOps market. For cost-conscious IT professionals, Zoho presents a middle ground between expensive and resource intensive DevOps and Agile tools and simple text editors, spreadsheets, and manual processes.



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Zoho DevOps tools are also easy to provision and deploy. This translates into faster time-to-deployment and lower resource overhead. Instead of having to build a team to deploy, configure, and manage the DevOps tools set, DevOps teams themselves can provision and configure users and resources.

### COMPARISON TO ATLISSIAN

To understand the Zoho value proposition, it's best to compare two of their offerings, Sprints and Wiki, to similar Atlassian products. For example, Atlassian Jira for 20 users costs approximately US\$140 per month<sup>xv</sup>. Zoho's equivalent, Sprints, is \$43.60 per 20 users per month. That places Sprints in range of many more organizations than Jira, especially for smaller organizations with more limited development budgets. Zoho also offers a Wiki, not surprisingly called Wiki. Wikis are typically used by DevOps teams to build requirements, manage communications both within and between teams, and create documentation. Confluence, the Atlassian Wiki product, costs \$100 per 20 users per month for the standard edition<sup>xvi</sup>. Zoho's Wiki is only \$32.40 for the same DevOps team size.

Table 1: A Cost Comparison of Zoho and Atlassian DevOps Products

Zoho	Zoho Cost for 20 Users Per Month	Atlassian Product	Atlassian Cost: 20 Users Per Month	Difference Per Month
<b>Sprints</b>	US\$43.60	Jira	US\$140	US\$ 94.40
<b>Wiki</b>	US\$32.40	Confluence	US\$100	US\$ 32.40
<b>Monthly Total</b>	US\$76		US\$240	US\$ 164.00
<b>Savings per year</b>				US\$ 1968.00

While Zoho does not yet match all Atlassian DevOps products, especially Bitbucket and Bitbucket Pipelines, this is likely to change in the future and is expected to be equally competitive.

### COMPARISON TO SLACK

A similar comparison can be made with a key developer collaboration tool, chat. Most development organizations lean heavily on chat applications to communicate simultaneously asynchronously and synchronously, to keep team members knowledge about projects, share code and ideas, and form and document decisions. The most common chat application among developers is Slack.

For a 20 person SME team, Slack would cost US\$6.67 per month per user, or US\$133.40 per month. Zoho Cliq, on the other hand, would cost US\$2.25 per user per month for a 20-person team. That means that the Cliq would cost US\$45 per month for a feature comparative product. This is a difference of US\$88.40 per month, a 66% savings.



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Table 2: A Cost Comparison of Zoho Cliq and Slack Products

Zoho	Zoho Cliq Cost for 20 Users Per Month	Slack Cost: 20 Users Per Month	Difference Per Month
Monthly Cost	US\$45	US\$133.40	US\$88.40
Annual Cost	US\$540	US\$1600.80	US\$1060.80

It should be noted that Atlassian has been deprecating its chat applications. A comparison of Atlassian HipChat or Stride with Cliq would not be fair since the Atlassian platforms are disappearing.

### CATALYST COMPARISON TO OTHER SERVERLESS PRODUCTS

A price comparison cannot yet be made between Catalyst and AWS Lambda or similar serverless offerings at this time since Catalyst pricing is not final. *Preliminary* pricing, however, suggests Catalyst will offer more functionality, with business object access, at a significantly lower cost. Catalyst promises a richer environment with less than Lambda pricing.

### WHO BENEFITS THE MOST?

For DevOps tools, there are three types of organization that will want to consider the Zoho DevOps tools. The most obvious are **existing Zoho customers**. Customers who have a Zoho One subscription will already have access to these tools (except Catalyst) without additional cost. These organizations are already looking to use Zoho as their business platform and it makes sense that they would center much of their development on Zoho products. This development is often an extension to the existing products or new internal applications that interact with them. Another common use is in supporting customer facing applications that interact with Zoho backend products such as CRM and marketing applications. This last type of application is the obvious target for Catalyst, along with Sites.

Another likely customer would be **organizations that want to adopt DevOps and Agile tools but have been inhibited by the cost of existing offerings**. This is especially true of the SME segment of the IT market. Zoho offers a lower price point coupled with low stress entry into DevOps and Agile tools that suits these smaller and more resource constrained teams.

Cost control or restricted budgets are not only the domain of the SME market. There are a number of **small teams in larger organizations that find DevOps and Agile tool adoption out of reach because of cost**. This is especially true where entrenched methods prevent allocating large amounts of money to new methodologies. Zoho offers them a chance to level-up beyond limited feature products, such as Trello, with less financial pressure or risk.



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## CONCLUSION

As the market for DevOps tools continues to change over time, there are opportunities to deliver DevOps tools to underserved markets with different levels of complexity and at lower price points. The SME market, especially companies with development and operations teams that are comprised of less than 50 people, are an underserved market. These companies have more needs and need to support more personnel than free tools typically allow. At the same time, they are often priced out of the market for DevOps tools or forced to use tools that are not designed for professional developers. The same is true for forward-looking teams in larger enterprises whose needs exceed their organization's current tools that were designed for more traditional architectures and methodologies.

Zoho is in a unique position to address these markets. They have comprehensive, but value-priced, tools that can meet the needs of SME developers and small teams within larger IT organizations. Zoho, like most vendors in the DevOps space, needs to fill out the portfolio of products to meet the complete needs of customers. This means the addition of two capabilities that they do not currently offer in the extended DevOps pipeline, a Software Version Control system (SVC) and CI/CD suite. At present, Zoho can interface with other products in this space such as GitHub and GitLab, and Flow can be used to develop something akin to a DevOps pipeline. Having their own products will allow them to offer an end-to-end solution that is more appropriate for the SME market as well as smaller teams in large enterprises. Amalgam Insights expects that Zoho will address these deficits in the future.

DevOps is no longer a big organization idea. Developers and operations in many different types of organizations are looking to adopt DevOps plus Agile development methodologies. The tools they have available are, unfortunately, too expensive or complex for many SME companies. Zoho has an opportunity to change this situation and provide affordable DevOps technologies for small and mid-market enterprises. They can drive the democratization of DevOps and have made a good start in that direction. There is room in the DevOps market, and they are taking advantage of that space, to the benefit of their current and future customers.



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## ABOUT AMALGAM INSIGHTS

### AMALGAM INSIGHTS

Is a leading research and advisory firm focused the financial, programmatic, and cognitive tools that multiply the value of enterprise technology including the following research practices: Technology Expense and IT Subscription Management, Accounting and Business Planning Technologies, Data Science and Machine Learning, DevOps and Open Source Development, Talent Management, Learning & Development, and Extended Reality.

### TOM PETROCELLI, RESEARCH FELLOW

Tom Petrocelli is a Research Fellow with Amalgam Insights. His area of interest is developer tools, IT project efficiency, governance, and methodologies, and DevOps. He also looks at how large regulated companies, especially financial services companies, manage IT projects. Tom has over 35 years of experience in the IT industry.



Prior to Amalgam Insights, Tom:

- ◆ Worked for a large, global, banking corporation.
- ◆ Was the research director for Enterprise Social, Mobile and Cloud Applications at Neuralytix.
- ◆ Before Neuralytix, Tom was the senior analyst, Social Enterprise at Enterprise Strategy Group.
- ◆ Before becoming an analyst, Tom held various senior and executive management positions.



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This paper is sponsored by Zoho. All comments, projections, and analysis are those of Amalgam Insights based on information that is publicly available or privately supplied by Zoho.

## ENDNOTES

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- <sup>i</sup> DevOps is a portmanteau of Developer and Operations. It is a team-oriented approach to development that melds the development team and operations team into one unit for purposes of writing and deploying software.
- <sup>ii</sup> Agile is a development philosophy or strategy that advocates short development cycles and integrated business-technical teams. The most common implementation of Agile is called Scrum. Agile is a project management methodology based on the Agile philosophy.
- <sup>iii</sup> Continuous Integration (CI) is the process of merging all committed code into the main code base of an application or service. Continuous Delivery (CD) is the process of examining, conditioning, building, and preparing this code for deployment to a server, virtual machine, or container(s). Together they comprise of the CI/CD process.
- <sup>iv</sup> Infrastructure as Code, or IaC, is the practice of writing code, usually YAML or JSON to represent the software and hardware infrastructure configuration in a system. An automation server then executes the code and creates the system configuration. IaC may use a declarative or imperative design.
- <sup>v</sup> Kubernetes is an orchestrator for containers. It is emerging as the base for new application architectures deploying container clusters.
- <sup>vi</sup> IDE, or Integrated Development Environment is a platform for developing code that includes a smart text editor for writing code as well as tools that run, debug, and perform other developer centric tasks.
- <sup>vii</sup> n-Tier applications are systems that include different layers for various functions within the application. These can include the client-side user interface, messaging, data layer, and business logic.
- <sup>viii</sup> A microservice is a small service, typically deployed in a container, that provides one or a limited number of functions to a system.
- <sup>ix</sup> For purposes of this paper, a small-to-medium enterprise, or SME, is an organization with under 1000 employees.
- <sup>x</sup> An artifact repository is a place to store build artifacts. Build artifacts, or just artifacts, are anything produced when a code is built. That could be object or bytecode, configuration files, SQL database configuration files, graphics, or anything necessary to have the final code run correctly in its environment. Artifact repositories differ from code repositories in that the latter holds and manages raw code and not built objects.
- <sup>xi</sup> In this context, traditional means SME companies that are not venture backed startups. There are a number of small companies that are able to afford a full stack Agile/DevOps environment because of venture capital investment. The average SME doesn't have this capital and needs to fund new toolchains from revenue.
- <sup>xii</sup> Source: Market Landscape: The 2020 Guide to Continuous Integration and Continuous Delivery: Process, Projects, and Products, Tom Petrocelli, Amalgam Insights, November 2019
- <sup>xiii</sup> Catalyst supports the Node.js variant of server-side JavaScript.
- <sup>xiv</sup> A UI, or user interface, the primary method for end-users to access the functions of an applications.
- <sup>xv</sup> Source: Online cost calculator at <https://www.atlassian.com/software/jira/pricing>
- <sup>xvi</sup> Source: Online cost calculator at <https://www.atlassian.com/software/confluence/pricing>