Magic Quadrant for DevOps Platforms

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Initiatives: Software Engineering Technologies; Adopt Modern Architectures and Technologies; Build and Deliver New Digital Products/Experiences to Drive Business Results

> DevOps platforms are emerging as a simpler alternative to DevOps toolchains, providing organizations with a consolidated set of integrated capabilities. Software engineering leaders should evaluate DevOps platforms as a means to accelerate delivery of customer value.

This Magic Quadrant is related to other research:

Critical Capabilities for DevOps Platforms

View All Magic Quadrants and Critical Capabilities

Additional Perspectives

- Summary Translation: Magic Quadrant for DevOps Platforms (12 July 2023)

Strategic Planning Assumption

By 2027, 75% of organizations will have switched from multiple point solutions to DevOps platforms to streamline application delivery, up from 25% in 2023.

Market Definition/Description

This Magic Quadrant for DevOps Platforms is the first version of this Magic Quadrant. It replaces the Market Guide for Value Stream Delivery Platforms.

Gartner defines DevOps platforms as those that provide fully integrated capabilities to enable continuous delivery of software using Agile and DevOps practices. These capabilities run the gamut of the software development life cycle (SDLC) and include product planning, version control, continuous integration, test automation, continuous deployment, release orchestration, automating security and compliance policies, monitoring, and observability. DevOps platforms support team collaboration, secure software development and measurement of software delivery metrics.

DevOps platforms simplify creation, maintenance and management of the components required for delivery of modern software applications. The prebuilt integration between different components of the platform reduces cognitive load and leads to improved visibility, auditability and traceability into the software development value stream. This end-to-end view encourages a systems thinking mindset and accelerates feedback loops.

Organizations use DevOps platforms to minimize tool friction resulting from complex toolchains, manual handoffs and lack of consistent visibility throughout the SDLC. This enables product teams to deliver faster customer value without compromising quality. The DevOps platforms market reflects the consolidation of technologies across development, security, infrastructure and operations to streamline software delivery.

DevOps platforms support multiple use cases, including, but not limited to:

- Agile software delivery — operationalize Agile development practices
- Mobile app delivery — build/test/deliver native mobile and mobile web applications
- Edge computing scenarios — support for secure delivery/update for IoT/edge devices
- Regulatory requirements — support for compliance, auditing, traceability and governance
- Cloud-native application delivery — build and deliver cloud-native applications across hybrid and multicloud environments
- Platform engineering — provide self-service, internal developer platforms to scale DevOps and software engineering practices

The standard capabilities for this market include:

- Continuous integration — native support for continuously building code, orchestrating verification and validation functions (test automation, security and compliance scans)
- Continuous delivery and release orchestration — continuous deployment (no gates) as well as release orchestration with gated approval mechanisms (e.g., to meet regulatory requirements or organizations transitioning from ITIL)
- Integrated platform for secure development, team collaboration and visualization of development workflows with a unified dashboard across multiple user personas
- Value stream analytics to measure the flow of work as well as the flow of value across the complete software delivery value stream (e.g., flow metrics, DORA metrics)
- Secure software delivery — support for orchestrating security functions as an integral part of the SDLC

The optional capabilities for this market include:

- Product planning — managing features and defects, roadmapping, and backlog management, including Agile development methods such as Kanban and Scrum.
- Source control repository, artifact registry, internal developer portal and integrated development environments (IDEs)
- Software test automation — support for executing functional and nonfunctional tests, test case management, code coverage analysis, performance testing, chaos testing, fuzz testing, penetration testing, and automated acceptance testing
- Configuration automation — support for environment management, including infrastructure provisioning, configuration management and drift detection
- Application monitoring and observability — support for monitoring and observability to improve service-level objectives; gathering production telemetry (logs, metrics, events, traces) and support for automated incident response

Magic Quadrant

Figure 1: Magic Quadrant for DevOps Platforms

Vendor Strengths and Cautions

Amazon Web Services

Amazon Web Services (AWS) is a Visionary in this Magic Quadrant. Its DevOps platform is called AWS Code Services and comprises AWS CodeArtifact, AWS CodeBuild, AWS CodeCommit, AWS CodeDeploy, AWS CodePipeline and AWS CodeStar.

In 2022, AWS launched Amazon CodeCatalyst as a unified software development service that includes work management, code collaboration and CI/CD capabilities. CodeCatalyst also includes project blueprints to spawn projects with preconfigured resources and cloud development environments. AWS announced the general availability of Amazon CodeCatalyst in April 2023.

AWS Code Services are a good fit for organizations seeking DevOps tools with native integrations for other AWS services.

Strengths

- **Integration With AWS Cloud Services:** AWS Code Services natively integrate with a broad array of other AWS services. Developers can use CodeBuild to package and deploy serverless functions to AWS Lambda, integrate AWS Device Farm as a CodePipeline step to test mobile apps and use AWS Fault Injection Simulator to integrate chaos testing into the CI pipeline.

- **Platform Engineering:** Amazon CodeCatalyst provides the capabilities that platform teams need to scale DevOps, and it enables product teams to innovate faster using templatized workflows. CodeCatalyst supports project blueprints, cloud development environments and preconfigured CI/CD pipelines for different types of applications and runtimes.

- **Cloud-hosted Arm Builds:** AWS CodeBuild supports Arm-based workloads using AWS Graviton2, so customers can build and test on Arm without cross-compiling between architectures. This helps customers avoid self-hosting Arm runners and take advantage of lower price-per-build-minute rates compared to other AWS compute instance types.

Cautions

- **Limited Support for Value Stream Metrics:** AWS Code Services lack out-of-the-box support for flow metrics such as lead time, cycle time, throughput, work in progress and flow efficiency. AWS Code Services does not natively support metrics for code quality, product quality, customer satisfaction or velocity. However, customers can automate the process of ingesting, analyzing and visualizing some of these metrics in AWS QuickSight or AWS CloudWatch.

- **No On-Premises Version of AWS Code Services:** AWS Code Services are managed, cloud-hosted services and do not support on-premises installation. This delivery model can be a constraint for some organizations, such as defense or government agencies in select markets, that are not ready to expose their source code to cloud-based tools.

- **Limited Support for Built-In Application Security Capabilities:** AWS Code Services lack built-in security capabilities for static application security testing (SAST), dynamic application security testing (DAST), fuzz testing, secrets scanning, software composition analysis (SCA), software bill of materials (SBOM) processing and application security posture management (ASPM). It supports these capabilities via partner integrations from the AWS Marketplace.

Atlassian

Atlassian is a Leader in this Magic Quadrant. Its DevOps platform comprises capabilities from Bitbucket, Confluence, Jira Software, Jira Service Management and Opsgenie. It supports product discovery, project management and issue tracking, source code management, release orchestration and CD, internal developer portal, incident management, change management, and collaboration.

Since 2022, Atlassian built out its DevOps platform by launching Jira Product Discovery (to support product ideation and roadmapping) and an early access version of Compass (an internal developer portal to improve developer experience).

Atlassian is a good fit for organizations looking for a DevOps platform with service management and incident response automation capabilities.

Strengths

- **Planning and Content Collaboration:** Jira Software and Confluence work well together. Jira Software is the most widely deployed planning tool, and it satisfies all the agile planning requirements in this Magic Quadrant evaluation. Confluence enables content collaboration, and its tight integration with Jira provides additional context. Confluence is often used to manage knowledge sprawl across teams, making it one of the hardest tools to replace.

- **Multiple Personas:** Atlassian's product portfolio — from Jira Product Discovery to Jira Service Management — addresses the needs of multiple personas across IT and business. This includes software engineering leaders, developers, product and marketing managers, platform and security engineers, ITOps and site reliability engineers.

- **Platform Ecosystem:** Atlassian has built a robust platform ecosystem supported by a vibrant Marketplace. The Atlassian Marketplace enables customers to discover, try and buy apps that help tailor Atlassian's DevOps platform to meet organization-specific needs such as planning, reporting, collaboration, automation and ideation. The Marketplace has more than 5,300 apps and integrations from more than 1,250 Marketplace partners.

Cautions

- **Lack of Native Application Security Capabilities:** Atlassian's platform lacks native support for most application security capabilities. It relies on integrations with external partners such as Snyk, Sonatype and Synopsys to plug gaps in application security testing and software supply chain security.

- **Low Adoption of CI/CD:** Atlassian's built-in CI/CD capabilities have low adoption among its customers. Its CI/CD capabilities for on-premises and cloud are offered via two separate products: Bitbucket Pipelines for cloud and Bamboo Data Center for on-premises. Progressive delivery using feature flags requires integrations with external tools.

- **Server End of Support:** Atlassian and Marketplace Partners will end technical support, security updates or bug fixes for self-managed servers after 15 February 2024. While Atlassian provides a migration path to help its customers move to Cloud and Data Center editions, some affected customers have expressed concerns about migration costs and price increases.

Bitrise

Bitrise is a Niche Player in this Magic Quadrant. Its SaaS-based mobile DevOps platform helps automate the mobile application development process. Bitrise includes a collaborative workspace to build, test, sign, manage secrets and deploy apps to public and private app stores.

In 2022, Bitrise acquired Flare Build Systems, a provider of Bazel build infrastructure. The acquisition brings remote caching and content delivery network (CDN) capabilities to mobile app development. Bitrise also added support for virtualized Apple silicon (M1 processor chips) in its cloud development environment.

Bitrise is a good fit for organizations looking to adopt or scale DevOps practices for both native and cross-platform mobile app development.

Strengths

- **Customer Experience:** Bitrise customers report high satisfaction with the quality and efficacy of customer support. Gartner Peer Insights and customer reference surveys provide evidence of high customer satisfaction. Bitrise has several customer success programs to measure and improve customer satisfaction by collecting and acting on customer feedback. Examples include dedicated onboarding, custom consultation and enablement programs to provide tailored guidance.

- **Cloud Development Environment:** Bitrise launched a hosted service that provides virtual M1 instances for iOS development. Customers planning to transition to Apple silicon for performance improvements can benefit from the hosted infrastructure. Bitrise's Step Library provides a transition path to migrating builds from Intel architecture to Apple M1 for iOS apps.

- **Bitrise Build Caching:** Through the acquisition of Flare Build Systems, Bitrise is advancing its build and test caching capabilities with low latency build CDN infrastructure. The Bitrise Build Cache is compatible with Bazel, Gradle and Tuist build systems. This solution is designed to cache build and test artifacts across multiple CI build runs.

Cautions

- **Limited to Mobile Use Cases:** Bitrise is primarily designed to be a mobile-specific DevOps platform, and it does not support an on-premises installation. Bitrise's recent acquisition of Flare Build Systems could expand the use cases for its platform.

- **Nascent Support for Release Management:** Bitrise's release management capabilities are nascent and are in beta at the time of this writing. Release management is currently limited to iOS and is not available for Android.

- **Lack of Built-In Feature Management:** Bitrise does not offer native support for feature management. It relies on external tools such as ConfigCat for feature flag management. This capability is particularly important for mobile apps deployed to public app stores, since reverting or redeploying any change can be time-consuming.

CircleCI

CircleCI is a Challenger in this Magic Quadrant. Its SaaS-based DevOps platform with support for self-hosted runners includes continuous integration, continuous delivery, test automation and insights into build performance.

In 2022, CircleCI acquired the test intelligence platform Ponicode. The acquisition reduces the toil associated with writing automated unit tests and improving test coverage. It also launched a Visual Studio (VS) Code extension to visualize and manage CircleCI pipelines from the integrated development environment (IDE). CircleCI introduced support for Apple M1-based runners to speed up iOS build times.

CircleCI is a good fit for organizations looking for a scalable DevOps platform with continuous integration and deployment automation for diverse use cases.

Strengths

- **FedRAMP and SOC 2 Type II Compliance:** CircleCI is one of the few DevOps platform providers with FedRAMP-tailored authorization and SOC 2 Type II certification, making the platform an attractive option for customers in highly regulated industries.

- **Broad Platform Support:** CircleCI supports a diverse development environment, with multiple resource classes for build runners in SaaS, self-hosted and on-premises modes. The resource classes span Docker, Linux VMs, Arm (Linux VM), macOS (Apple M1 and Intel), Windows and GPUs. A resource class is defined by instance type, CPU performance, amount of RAM and credits consumed per minute.

- **Easy to Implement:** Customers report satisfaction with the ease of deployment, administration, configuration, debugging support and overall usability of the platform. CircleCI uses the construct of “orbs” to create reusable and modular configuration for build pipelines. For example, developers can use prebuilt and pretested orbs to integrate popular testing tools into build pipelines.

Cautions

- **Coarse Permissions Model:** CircleCI customers cite the need for more granular permission scopes with GitHub integration. CircleCI integrates with GitHub using OAuth API, so it is bound by specific permissions available via GitHub’s OAuth scopes. As a result, CircleCI’s permissions model is coarse rather than fine-grained. Support for GitHub Apps as the authentication layer for CircleCI is currently underway to enable granular permissions for GitHub users.

- **Lack of Built-in Application Security Capabilities:** CircleCI lacks built-in security capabilities for SAST, DAST, fuzz testing, secrets scanning, container scanning, software composition analysis, SBOM processing and multifactor authentication. It supports these capabilities via third-party and open-source integrations.

- **Limited Software Delivery Metrics:** CircleCI Insights dashboard does not provide adequate support for DevOps Research and Assessment (DORA) metrics to assess software delivery performance. For example, it lacks metrics to determine cycle time from code commit to deployment, and it does not have operational efficiency metrics such as change failure rate and mean time to restore service. It also lacks value stream metrics to connect software delivery performance to customer value.

CloudBees

CloudBees is a Challenger in this Magic Quadrant. Its DevOps platform comprises CloudBees CI, CloudBees CD/RO (Continuous Delivery and Release Orchestration), CloudBees Feature Management and CloudBees Compliance.

In 2022, CloudBees launched the CloudBees Compliance product and has expanded the ecosystem around it. It includes a marketplace with integrations and plugins to ensure compliance across multiple layers of the application stack. CloudBees also enhanced its CD/RO product to simplify the building and running of release pipelines by adding support for YAML syntax and Groovy.

CloudBees is a good fit for organizations in highly regulated industries looking for a DevOps platform with built-in controls and guardrails to ensure compliance with regulatory standards.

Strengths

- **Continuous Compliance:** CloudBees has an established clientele in regulated industries. CloudBees Compliance helps organizations in regulated verticals comply with security and compliance standards (e.g., CIS, NIST, FedRAMP, PCI-DSS, HIPAA, CSA) and minimize exposure to security vulnerabilities. The CD component provides auditors with real-time access to audit reports that links deployments to approvals, work items, code quality scans and feature flags.

- **Feature Management:** CloudBees Feature Management is a native capability that enables product teams to adopt progressive delivery. The native capability may remove the need for a dedicated, third-party tool for feature management. It supports management of feature configuration as code, detailed audit logs and approval workflows for changes to feature flags.

- **Enterprise-Supported Jenkins:** CloudBees CI is built on top of Jenkins, a popular open-source automation tool used to implement CI/CD workflows. It offers enterprise-grade features to manage Jenkins at scale. CloudBees Assurance Program vets, tests and verifies that plugins are secure and stable for enterprise use. CloudBees offers Beekeeper Upgrade Assistant to manage plugin versions and enforce compliance.

Cautions

- **Lack of a Fully Managed SaaS Solution:** Except for the Feature Management tool, CloudBees does not have a fully managed SaaS version. CloudBees CI, CD/RO and Compliance support on-premises and cloud-hosted deployments, but customers have to operate and manage deployments themselves.

- **Perception of Jenkins:** CloudBees CI is built on top of Jenkins, so the perception of Jenkins in an organization will inform their decision to adopt CloudBees CI. Organizations trying to move away from Jenkins and adopt modern open-source, container-native CI tools such as Tekton may find that CloudBees CI is not best-suited to their needs.

- **Lack of Built-In Application Security Capabilities:** CloudBees lacks built-in security capabilities for SAST, DAST, fuzz testing, secrets scanning, container scanning, SCA, SBOM processing and multifactor authentication. It supports these capabilities via third-party and open-source integrations.

Codefresh

Codefresh is a Niche Player in this Magic Quadrant. Its Kubernetes-native DevOps platform helps automate containerized application development life cycles. The Codefresh platform comprises CI/CD, artifact management and GitOps features powered by Argo.

In 2022, Codefresh launched a fully hosted version of their GitOps tooling built on Argo CD that makes it easier for organizations to adopt an opinionated GitOps style for continuous delivery. It also added support for DevOps Research and Assessment (DORA) metrics: deployment frequency, lead time for changes, change failure rate and time to restore service.

Codefresh is a good fit for organizations looking to scale, secure and simplify their Kubernetes application development workflows.

Strengths

- **GitOps Enablement:** The Codefresh platform enables organizations to adopt GitOps practices for delivering containerized applications. With the choice of hosted, hybrid or managed on-premises GitOps service, Codefresh reduces the toil associated with managing and operating the infrastructure for Argo components such as Argo CD, Argo Workflows, Argo Rollouts and Argo Events.
- **Argo Expertise:** Codefresh is an active maintainer of and contributor to Argo projects. Organizations adopting Argo as their open-source tool for continuous deployment and progressive delivery will benefit from Codefresh's expertise and experience with the project. Argo is a top-three Cloud Native Computing Foundation (CNCF) project in terms of development velocity.
- **Continuous Integration:** Codefresh customers cited that the platform improved developer productivity by accelerating build times. This benefit is driven by the platform's built-in capabilities for caching build outputs, parallel execution, live debugging of build steps and reusable pipelines. The platform also includes dashboards that enable traceability and provenance of build artifacts.

Cautions

- **Optimized for Building Kubernetes-Native Applications:** Although Codefresh can be used to deploy infrastructure and VMs, the platform is optimized to support Kubernetes applications and life cycle. It is less amenable to traditional applications that cannot be built using Kubernetes-based pipelines. Codefresh uses container images with the necessary build tools to execute steps in the CI pipeline.

- **Scale of Operations:** Codefresh has a relatively small customer support team for solution architecture, postsales and professional services. This can be an impediment for organizations looking for immediate, on-call support to mitigate the risk of potential business disruption. Codefresh customers cite the need for improved and quick customer support.

- **Fewer Implementation Partners:** Codefresh has fewer implementation partners globally, compared to other vendors in this Magic Quadrant. Customers looking for partner support to deploy the platform and drive long-term application modernization may not find a suitable partner with Codefresh expertise.

GitLab

GitLab is a Leader in this Magic Quadrant. Its DevOps platform is a single product that includes capabilities for planning, source code management, continuous integration, deployment automation, observability, application security testing, software supply chain security, compliance reporting, value stream analytics and incident management.

In 2022, GitLab added support for DORA metrics as part of the value stream dashboard. It also launched GitLab Dedicated, a single-tenant SaaS edition to support data residency needs. Both these capabilities are in private preview as of this writing.

GitLab is a good fit for organizations looking for a comprehensive DevOps platform with security built into software development workflows.

Strengths

- **Built-In Security Capabilities:** GitLab provides full visibility and traceability into the software delivery pipeline, from work items to code commit to applications running in production. GitLab expanded its software supply chain security capabilities, including SBOM generation (CycloneDX), build artifact attestation and verified code commits to align with the Supply-Chain Levels for Software Artifacts (SLSA) framework.

- **Open Platform:** GitLab follows an open-core business model that enables customers and contributors to add functionality to the core platform. It adopts an open, transparent approach to building the platform by publicly sharing the issue tracker, product roadmap and strategic direction documents that explain the rationale behind product decisions.

- **Single Platform:** GitLab provides a single, fully integrated application for streamlining the software development life cycle (SDLC), with the same capabilities in both self-hosted and SaaS editions. The single platform approach aims to help customers to consolidate vendors, minimize operational complexity and reduce integration efforts between disparate tools.

Cautions

- **Lagging Content Collaboration Capabilities:** GitLab lacks strong support for content collaboration and knowledge management. Customers have stated that the collaboration capabilities and editing user experience of GitLab Wikis are limiting for nondeveloper personas compared to other tools.

- **Lack of Licensing Flexibility:** GitLab does not support mixed licenses or multiple subscriptions for a single GitLab instance or GitLab.com group, so customers can only use one license per instance or group namespace at a time. GitLab also does not provide tiered pricing based on user personas.

- **Limited Support for Environment Management:** The platform lacks strong support for environment management use cases such as cloud (remote) development environments, on-demand environment creation and teardown, and providing visibility into cloud environment costs. GitLab does include a Web IDE, but it is distinct from the working pattern of launching a new workspace from a code repository.

Google Cloud Platform

Google Cloud Platform (GCP) is a Niche Player in this Magic Quadrant. Its DevOps platform comprises Artifact Registry, Binary Authorization, Cloud Build, Cloud Deploy, Cloud Operations suite, Cloud Source Repositories, Container Analysis and Firebase.

In 2022, Google launched Cloud Workstations, a service to help organizations set up development environments in the cloud. Google also launched Assured Open Source Software, a service that provides organizations with the same OSS packages that Google uses in its internal development workflows. Both services are in preview as of this writing.

GCP is a good fit for organizations using Google Cloud and trying to adopt continuous delivery practices for cloud-native applications.

Strengths

- **Strong Supply Chain Security:** GCP includes robust capabilities to build security into the software delivery pipeline. Its software delivery shield is a collection of services that helps secure the use of OSS and provide verifiable metadata for build provenance and traceability. GCP was among the first DevOps platforms to support policy-based deployment controls that ensure only trusted container images are deployed to production environments.

- **Tight Integration With GCP Runtimes:** Google Cloud Build, Cloud Deploy and Artifact Registry tightly integrate with runtime platform services, including Google Kubernetes Engine (GKE), Anthos and Google Cloud Run. This integration improves scalability, simplicity and security when used with other GCP services, such as Google Cloud Operations, for monitoring and logging.

- **Adherence to Open Standards:** GCP customers benefit from its adherence to open standards and use of open-source technologies in its DevOps platform. Google created and contributed sigstore (an OSS project for signing and verifying artifacts) and SLSA (an open specification to strengthen the security posture of build pipelines) to the Open Source Security Foundation (OpenSSF).

Cautions

- **Limited Support for Value Stream Metrics:** GCP lacks out-of-the-box support for flow metrics such as lead time, cycle time, throughput, work in progress and flow efficiency. The DevOps tools within GCP track deployment frequency and deployment failure rate, but do not provide native visibility into lead time for changes and mean time to restore service.

- **Catching Up in Delivering Advanced CI/CD Capabilities:** GCP lags the competition in supporting CI capabilities for workflow visualization, reusable task templates and parameterized pipelines. Its platform currently lacks intelligent workflows to reduce repetitive work for developers. These specific capabilities are on the GCP roadmap for 2023. The support for canary deployment and parallel deployment in Google Cloud Deploy is in public preview at the time of this writing.

- **Cannot Be Licensed as a Single Platform:** GCP does not include a provision to procure the DevOps capabilities of its platform via a single license. Customers need to separately adopt discrete components of the platform.

Harness

Harness is a Visionary in this Magic Quadrant. Its DevOps platform includes capabilities for continuous integration, deployment automation (including a GitOps approach to continuous delivery), feature management, cloud cost management, application security posture management, monitoring service reliability, chaos engineering and software engineering intelligence.

In 2022, Harness added new modules powered by its acquisitions of ZeroNorth, OverOps, ChaosNative and Propelo. It also launched an Argo CD-based GitOps-as-a-service product.

Harness is a good fit for organizations looking for a cloud-native DevOps platform with the ability to minimize application security and reliability risks and to analyze software engineering productivity.

Strengths

- **Strong Cloud-Native Capabilities:** Harness differentiates itself by focusing on platform engineering and site reliability engineering needs for cloud-native environments. Platform teams can leverage Harness' expanded set of cloud-native capabilities, such as cloud cost optimization, security and compliance guardrails using policy-as-code (with Open Policy Agent [OPA]), reliability monitoring and progressive delivery.

- **Market Responsiveness:** Harness demonstrates a rapid pace of innovation in responding to market needs. It blends in-house developments such as GitOps-as-a-service and Harness Test Intelligence with capabilities obtained via acquisitions. Harness has made more DevOps-specific acquisitions in the past year than any other vendor in this Magic Quadrant.

- **Intelligent Workflows:** Harness' software delivery platform embeds intelligent workflows into multiple aspects of CD. The platform can intelligently select a subset of unit tests and identify which unit tests can run in parallel to make CI more efficient. In addition, its service reliability monitoring and cloud cost management capabilities adopt anomaly detection techniques instead of rules-based alerting to enable early detection of issues.

Cautions

- **Weak Inner-Loop Capabilities:** The platform has limited support for inner-loop development activities that take place before CI — coding, compiling, testing and refactoring. For example, it lacks native support for source code management, internal developer portal, code quality analysis in the IDE, scaffolding templates and cloud development environments.

- **Lack of Data Residency for SaaS Outside the U.S.:** The Harness SaaS platform is hosted and serviced from cloud data centers within the U.S. Although Harness maintains a robust data privacy program and a documented privacy policy, customers outside the U.S. cannot choose a local cloud data center to meet data residency requirements.

- **Optimized for Building Cloud-Native Applications:** Harness' software delivery platform is optimized for helping organizations move to container-native and cloud-native architectures. Its support for VM-based build infrastructure is relatively new compared to its support for containerized runners — technology that the company acquired via the Drone.io acquisition.

JetBrains

JetBrains is a Visionary in this Magic Quadrant. Its DevOps platform comprises JetBrains Space, JetBrains TeamCity and JetBrains YouTrack. JetBrains Space is a recent addition that aims to provide an all-in-one solution. It includes Git-based source code management, code review, cloud development environments, CI/CD, artifact repository, project management, planning and issue tracking, and team collaboration with messaging, notifications and document sharing.

In January 2023, JetBrains launched an on-premises version of Space and added support for a plugins marketplace.

JetBrains is a good fit for organizations looking for a DevOps platform with built-in workstream collaboration and integrated cloud development environments.

Strengths

- **Team-Centric Experience:** JetBrains differentiates its Space platform by creating team-centric dashboards. It provides users with quick visibility into their team, their availability, project status, daily schedules and pending activities such as code reviews and upcoming meetings.

- **Workstream Collaboration:** JetBrains provides native workspace collaboration capabilities such as channels, notifications, threaded conversations, polling, feeds, blog posts and document sharing, calendars, and meetings. JetBrains Space has dedicated mobile apps on iOS and Android to support remote collaboration.

- **Cloud Development Environment:** JetBrains Space Cloud supports a cloud development environment that integrates with popular JetBrains IDEs, such as IntelliJ IDEA and PyCharm. Teams can specify the tools and libraries that should be preinstalled on the remote development environment to make it faster and easier for onboarding new developers.

Cautions

- **Limited Regulatory Security and Compliance Certifications:** The Space platform does not support multifactor authentication methods, which are in-demand for regulated verticals. JetBrains has not pursued government- or industry-specific regulatory certifications such as ISO, PCI, HIPAA, FINRA, FedRAMP and SOC 2/3 for its platform. Space Cloud is currently served from a single cloud region (EU Ireland eu-west-1), which limits adoption due to data residency concerns.

- **Lack of Software Delivery Performance Metrics:** JetBrains currently lacks support for software delivery performance metrics such as lead time for changes, change failure rate, deployment frequency and mean time to restore service. It also lacks metrics to assess the effectiveness of the software delivery value stream across velocity, quality, customer satisfaction and developer experience.

- **Lagging Operations Capabilities:** JetBrains has a relatively low mind share and adoption for operations use cases, such as configuration automation, compliance automation, infrastructure automation and automated incident response. JetBrains does not provide visibility into the application security posture (e.g., missing SBOM generation, application security orchestration and correlation [ASOC] and ASPM capabilities).

JFrog

JFrog is a Challenger in this Magic Quadrant. Its DevOps platform includes JFrog Artifactory, JFrog Connect, JFrog Distribution, JFrog Insight, JFrog Mission Control, JFrog Pipelines and JFrog Xray.

In 2022 and 2023, JFrog added new capabilities for secrets detection, container scanning with contextual analysis alongside infrastructure as code (IaC) scanning. It also released Conan 2.0 in 2023, an open-source package manager for C/C++. JFrog Xray also added support for Software Package Data Exchange (SPDX) and CycloneDX SBOM formats.

JFrog is a good fit for organizations looking for a DevOps platform with built-in software supply chain security and scalable management and distribution of binary artifacts.

Strengths

- **Robust Artifact Management and Distribution:** JFrog Artifactory enables secure, scalable management and distribution of binary artifacts, using differentiated capabilities such as private distribution network and federated repositories. It supports about 30 package formats, including container images, and is available in both SaaS and self-hosted deployment modes. It is the most-used artifact registry among large enterprises across all verticals.

- **Strong Edge Capabilities:** JFrog Connect (formerly Upswift) enables teams to deploy over-the-air (OTA) software updates to edge and IoT devices, and to monitor device state and roll back updates if necessary. The integration of JFrog Connect with JFrog Artifactory and JFrog Pipelines can help organizations adapt CD practices to their edge and IoT use cases.

- **Strong Software Supply Chain Security:** The JFrog Platform has built-in capabilities to harden build pipelines. JFrog Signed Pipelines ensures artifact integrity, traceability and provenance using cryptographic signing and verification. As an SCA tool, JFrog Xray provides security and compliance assurance for OSS artifacts stored in JFrog Artifactory.

Cautions

- **Low Adoption of Built-In CI/CD:** Most JFrog customers use JFrog Artifactory, rather than the built-in CI/CD capabilities offered via JFrog Pipelines, with the majority of companies integrating the JFrog Platform with existing CI/CD solutions.

- **Limited Visibility Into Software Delivery Performance Metrics:** JFrog Insights does not provide comprehensive metrics to assess software delivery performance. For example, it lacks metrics to determine cycle time from code commit to deployment, or operational efficiency metrics such as change failure rate and mean time to restore service.

- **Lacking a Curated Catalog:** Although Artifactory serves as the hub for binary artifacts in many organizations, JFrog currently does not support a curated catalog for approved open-source software to enable greater governance.

Microsoft

Microsoft is a Leader in this Magic Quadrant. It offers two independent DevOps platforms, GitHub and Azure DevOps, which can be jointly procured via a single license. They have multiple points of integration. GitHub includes Dependabot, GitHub Actions, GitHub Discussions, GitHub Issues & Projects, GitHub Packages, GitHub Repositories and GitHub Advisory Database, along with GitHub add-ons. Azure DevOps includes Azure Artifacts, Azure Boards, Azure Monitor, Azure Pipelines, Azure Repos and Azure Test Plans.

In 2022, Microsoft made GitHub Advanced Security functionality available in Azure DevOps. This functionality is currently in public preview.

Microsoft is a good fit for organizations looking for a developer-friendly DevOps platform.

Strengths

- **Strong Developer Community:** Microsoft has a huge mind share and market share of development tools. More than 100 million developers use GitHub, and about 75% of developers report using VS Code, which makes it the most popular IDE. This widespread usage makes GitHub workflows and associated tooling easier to adopt. Its strong developer community enables GitHub to better understand user needs, test new capabilities, incorporate feedback and iterate faster.

- **AI-Augmented Development:** GitHub Copilot for Business complements GitHub Enterprise as an intelligent code completion tool. GitHub's AI augmentation can convert comments to code (and code to comments), transpile code, autocreate pull requests, automate code reviews, create documentation and suggest CLI commands. Gartner has seen a sharp uptick in client interest around GitHub Copilot.

- **Cloud Development Environments:** GitHub Codespaces provides a collaborative cloud development environment with configurable compute and preconfigured containers. This helps to onboard developers more quickly and create custom configurations that would otherwise be difficult to provision on local laptops.

Cautions

- **Market Confusion:** GitHub and Microsoft Azure DevOps are two independent platforms with duplicate features in some areas and feature gaps in other areas. This has created confusion in the market that makes it difficult for customers to choose the right product. The functional differences between GitHub and Azure DevOps are further compounded by functional gaps between their respective on-premises and cloud editions.

- **Limited Data Residency:** While GitHub Enterprise Server and Azure DevOps meet international data residency requirements, GitHub Enterprise Cloud does not. This limits customers who wish to take advantage of the latest innovations in GitHub's cloud service, but cannot use these features in their region.

- **Limited Software Delivery Metrics:** GitHub lacks native support for flow metrics and software delivery performance metrics, including flow efficiency, work-in-progress, deployment frequency, lead time, change failure rate and time to restore service. Azure Boards does include widgets to display charts for tracking software delivery metrics.

Red Hat

Red Hat is a Challenger in this Magic Quadrant. Its DevOps platform delivers capabilities via Red Hat Ansible Automation Platform and Red Hat OpenShift. It provides cloud development environments, developer portal, Kubernetes-native CI/CD pipelines, container security, infrastructure and configuration automation, container registry, observability and multicluster management.

In 2022 Red Hat upgraded capabilities in OpenShift GitOps for workload monitoring and progressive rollouts. It launched a preview of Event-Driven Ansible to handle real-time automation scenarios and reduce toil.

Red Hat is a good fit for organizations that are considering OpenShift as a container management platform with built-in DevOps capabilities.

Strengths

- **Open-Source:** Red Hat is an established provider of open-source systems and tools across the technology stack and actively contributes to open-source projects. It extends the same open-source approach to DevOps by offering Argo CD (OpenShift GitOps) and Tekton (OpenShift Pipelines) as fully supported capabilities in OpenShift. Red Hat is currently working on adding a developer portal to OpenShift based on Backstage.io, an open-source CNCF project.

- **Hybrid and Multicloud:** Red Hat OpenShift enables platform governance and reliability (SLA of 99.95% uptime) for cloud services consumption options and provides a consistent experience across on-premises, hybrid and public cloud environments. With built-in support for modern language frameworks and Kubernetes-native DevOps capabilities, OpenShift is well-suited for organizations modernizing their applications and infrastructure.

- **Platform Engineering:** Red Hat OpenShift provides self-service capabilities through a built-in internal developer portal with software catalog, scaffolds and templates for quick developer onboarding. Platform teams can tailor the content in the catalog for project- and language-specific needs.

Cautions

- **Bundled as Part of OpenShift:** Much of Red Hat's DevOps capabilities, apart from Ansible, are bundled as part of OpenShift. Organizations that are not considering OpenShift for container management cannot take advantage of the bundled DevOps capabilities.

- **Lack of Software Delivery Metrics:** Red Hat currently lacks built-in support for software delivery performance metrics such as cycle time, deployment frequency, time to restore and change failure rate. It also lacks support for quality metrics such as code coverage, defect escape rates and business outcome metrics that assess customer value. However, Red Hat developed Pelorus as an open-source operator to track software delivery metrics, which integrates with other source code repositories and issue trackers.

- **Lack of Built-In Test Automation:** Red Hat currently lacks native support for automated testing as part of OpenShift Pipelines. It does not provide static code analysis, UI test automation, code coverage analysis, performance, chaos and fuzz testing. These capabilities require integrations with third-party and open-source tools.

VMware

VMware is a Challenger in this Magic Quadrant. Its DevOps platform delivers capabilities via Tanzu Application Platform, Tanzu Application Service, Azure Spring Apps Enterprise and VMware/Bitnami Application Catalogs. The capabilities include application blueprints, CI, deployment automation (including GitOps), Spring support, software catalog, container registry, software supply chain security and container management.

In 2022, VMware enhanced Tanzu's capabilities for templated paths to production, rapid onboarding, and application and API compliance.

VMware is a good fit for organizations looking for versatile DevOps platform capabilities to build, secure and deploy traditional and cloud-native applications to hybrid, multicloud and edge environments.

Broadcom announced its intention to acquire VMware in May 2022. At the date of publication, VMware met the inclusion criteria for this Magic Quadrant and continued to operate as an independent entity. Gartner will provide additional insight and research to clients as more details become available regarding the acquisition (see Quick Answer: How Should VMware Customers Prepare for the Broadcom Acquisition?).

Strengths

- **Flexibility and Choice:** VMware's platform offers flexibility and choice at multiple layers of the technology stack. It supports virtualized and containerized software delivery and deployments to private, hybrid and public clouds. The platform is extensible and integrates with multiple open-source and third-party commercial tools while providing a consistent developer experience across multiple IDEs, programming languages and frameworks.

- **Secure Paved Paths:** VMware Tanzu Application Platform has three components that help create secure "paved paths to production." Cartographer Conventions is a way for platform teams to create opinionated workflows and apply standard configurations to fleets of applications. Application accelerators provide ready-made application blueprints that conform to security and compliance requirements. Supply Chain Choreographer enables platform teams to create preapproved paths to production by integrating Kubernetes resources with their existing toolchains.

- **Established Client Base:** VMware has a large, established client base for its virtualization solutions. This prominent market presence provides VMware with a deep understanding of organizational challenges around application and infrastructure modernization. Gartner clients cite preexisting relationships with VMware as one of the key factors in selecting the Tanzu Application Platform.

Cautions

- **Rapid Updates on Kubernetes-Native Platform:** Tanzu Application Platform is relatively new compared to competing DevOps platforms. Customers have cited some growing pains as VMware enhances the Tanzu Application Platform, including instances of components being renamed, being deprecated in favor of other components, and lacking adequate documentation and training material.

- **Lack of the Four DORA Software Delivery Performance Metrics:** VMware Tanzu Application Platform currently lacks built-in support for software delivery performance metrics such lead time for changes, deployment frequency, mean time to restore and change failure rate. It also lacks support for quality metrics, such as code coverage, defect escape rates and business outcome metrics, that assess customer value. VMware has communicated that these additions are on the roadmap.

- **Pending Acquisition:** Broadcom's pending acquisition of VMware has been a topic of concern for numerous Gartner clients. Some VMware customers are worried about the potential for price increases, reduced investment in VMware products or impacts to support agreements.

Inclusion and Exclusion Criteria

For a Magic Quadrant, Gartner analyzes the most relevant providers in a market. Gartner sets an upper limit of 20 vendors per Magic Quadrant to focus on the most relevant vendors in the market.

The following inclusion criteria represent the specific attributes that Gartner analysts deemed necessary for a vendor to be evaluated in this Magic Quadrant.

Inclusion Criteria

DevOps platform vendors included in this Magic Quadrant met the following criteria as of 1 January 2023:

Market Participation Inclusion Criteria

- Provide a dedicated, generally available (GA) DevOps platform as of 1 January 2023. General Availability means the product or service is available on a public-facing price sheet/card for purchase directly by clients. Providers must be able to furnish the link to a pricing page for their DevOps platform.
- Sell the solution directly to paying customers without requiring them to engage professional services. The vendor must provide at least first-line support for these capabilities, including the use of bundled open-source software. This includes, but is not limited to, comprehensive product documentation, installation guidance (e.g., build runners, Kubernetes cluster setup) and reference examples (e.g., in the case of pipelines-as-code).
- Demonstrate an active product roadmap, go-to-market and selling strategy for the solution.
- Have phone, email and/or web customer support. They must offer contract, console/portal, technical documentation and customer support in English (either as the product's default language or as an optional localization).

Platform Capabilities Inclusion Criteria

The DevOps platforms must offer native support for the following standard capabilities as described in the market definition:

1. Continuous integration — Native support for continuously building code, orchestrating verification and validation functions (test automation, security and compliance scans).

2. Continuous delivery and release orchestration — Continuous deployment (no gates) as well as gated approval mechanisms (e.g., to meet regulatory requirements or organizations transitioning from ITIL)

3. Integrated solution for secure development, team collaboration and visualization of development workflows, with a unified dashboard across multiple user personas.

4. Provide value stream metrics to measure flow of work, as well as flow of value across the complete software delivery value stream (e.g., flow metrics, DORA metrics).

5. Secure software delivery — Support for orchestrating security functions as an integral part of the software development life cycle.

Performance Inclusion Criteria

The vendor is required to meet the following financial performance criteria (reported in U.S. dollars). The default accounting standard is generally accepted accounting principles (GAAP).

- The DevOps platform offering must have generated at least $40 million in annual GAAP revenue during the 12 calendar months prior to January 2023. The DevOps platform must have at least 100 paying, production (non-beta-test) customers (excluding sales to managed service providers), with at least 50 seats per customer on average.

OR

- The DevOps platform offering must have generated a minimum of $10 million in annual revenue and gained 25 net-new customers in calendar year 2022 when compared to calendar year 2021.

In addition, the vendor must rank among the top 20 organizations in the Market Momentum Index defined by Gartner for this Magic Quadrant. The Market Momentum Index for this Magic Quadrant was calculated using a balanced set of measures, including:

- Gartner customer search, inquiry volume or pricing requests.
- Frequency of mentions as a competitor to other vendors in the Magic Quadrant for DevOps Platforms in reviews for similar use cases on Gartner's Peer Insights forum as of 1 January 2023.
- Scores and frequency of mentions, as measured in Gartner Peer Insights.
- Significant innovations in the market, as noted by major publications, product enhancements or introductions, or industry awards.
- Other significant developments in corporate posture (e.g., M&A activity).
- Volume of job listings specifying the DevOps platform on a range of employment websites in the Americas, Europe and APAC.

Exclusion Criteria

We excluded vendors from the analysis if:

- The primary use case for the DevOps platform is delivery of low-code applications, packaged business applications or SaaS-based applications (i.e., developing, extending, configuring or customizing applications such as Salesforce, Dynamics 365, Oracle, SAP or ServiceNow). The market needs and expected platform capabilities for these use cases differ from the market definition of this Magic Quadrant.
- The platform is only sold as part of custom software development or professional services engagements (e.g., professional services providers using a custom solution for their clients).

Honorable Mentions

Alauda: Alauda offers a Kubernetes-based DevOps platform called Alauda Container Platform (ACP). ACP leverages open-source components to deliver a fully managed, integrated set of capabilities for cloud-native development and delivery. Additional capabilities include container management, cluster management, API management, service mesh, and hybrid and multicloud management. Alauda primarily serves customers in China, but is looking to expand globally. It did not meet Gartner's market momentum index criteria for inclusion in this Magic Quadrant.

CodeNOW: CodeNOW is a DevOps platform that enables cloud-native continuous delivery using open-source components. It offers an internal developer portal with scaffolding templates, Git integration, and visibility into service mesh configuration, cluster management and environment management. It includes release and configuration management features and supports multicloud and hybrid-cloud deployment models. CodeNOW did not meet the minimum revenue- and growth-related inclusion criteria for this Magic Quadrant.

Opsera: Opsera's DevOps platform includes toolchain orchestration across the SDLC. Opsera supports preconfigured software delivery workflows using an opinionated set of open-source components, and it integrates with commercial tools that customers may already use. Opsera Unified Insights provides a high-level overview and granular visibility of software delivery performance metrics, with persona-based dashboards from planning to deployment. Opsera did not meet the minimum revenue- and growth-related inclusion criteria for this Magic Quadrant.

Evaluation Criteria

Ability to Execute

Table 1: Ability to Execute Evaluation Criteria

Evaluation Criteria ↓	*Weighting* ↓
Product or Service	High
Overall Viability	Medium
Sales Execution/Pricing	High
Market Responsiveness/Record	High
Marketing Execution	Low
Customer Experience	High
Operations	Low

Source: Gartner (May 2023)

Completeness of Vision

Table 2: Completeness of Vision Evaluation Criteria

Evaluation Criteria ↓	*Weighting* ↓
Market Understanding	High
Marketing Strategy	Low
Sales Strategy	Medium
Offering (Product) Strategy	High
Business Model	Low
Vertical/Industry Strategy	Medium
Innovation	High
Geographic Strategy	Medium

Source: Gartner (May 2023)

Quadrant Descriptions

Leaders

Leaders have a deep understanding of the DevOps platform market. They have a record of strong execution and can influence the market's direction with their thought leadership and resources.

Leaders also have a clear vision and well-defined product roadmap. They continuously expand their capabilities to deliver functionally rich platforms with robust capabilities at all stages of the SDLC. These vendors stand out in a highly competitive, global market, and serve a wide range of organizations and use cases.

The most distinctive attribute of Leaders in this market is their versatility across multiple dimensions. These dimensions include native support for a range of critical capabilities across the SDLC, as well as support for diverse use cases. Leaders should also have the ability to meet the needs of multiple personas across different teams (such as development, operations and site reliability engineering). They should also have a strong market penetration across geographies, verticals and organizations of all sizes, and possess a vibrant developer community and thriving partner ecosystem.

Leaders are well-positioned to remain dominant as the DevOps platform market evolves. In this rapidly changing market, however, vendors that lose focus could fall out of the Leaders quadrant.

Challengers

Challengers offer competitive DevOps platforms that deliver value for certain industries or use cases. These vendors have shown strong execution in their respective focus areas and are expanding their customer base.

Although Challengers demonstrate the financial strength and commitment to compete in the DevOps platform market, they have not demonstrated the vision required to expand their offering beyond their core customer base to serve different types of buyers and needs.

To become Leaders, Challengers must improve upon their specific areas of caution and match the Leaders' ability to establish a compelling product roadmap and a clear vision for the future.

Visionaries

Visionaries focus on innovating their platform technologies and go-to-market strategies based on emerging technology and business trends. They offer a clear product roadmap that demonstrates a strong understanding of market demands.

Despite having a clear vision, Visionaries currently lack visibility or credibility outside of their existing customer base or domain. Further, they may lack the resources or expertise to build awareness of their offerings beyond their respective focus area.

To become Leaders, Visionaries must build stronger recognition of their platforms in new market segments and improve their sales and marketing execution.

Niche Players

Niche Players typically specialize in one segment of the DevOps platform market or have a relatively limited geographic footprint. They may be startups or small companies just starting to succeed, or vendors focused on a specific subset of use cases, such as container-native or mobile applications. In some cases, Niche Players may not consider DevOps platforms as strategically significant in their broader portfolio of product offerings.

While Niche Players have not demonstrated the strongest vision or ability to execute relative to other vendors in this Magic Quadrant, qualifying for inclusion is quite an accomplishment in this highly competitive, global market.

Niche Players may be suitable for organizations that require local presence and support or need a platform that addresses specific industry use cases and functional requirements. These benefits can offset the viability risks that are often associated with smaller vendors.

Context

The DevOps platforms market represents a convergence of multiple complementary technologies spanning the entire SDLC as part of an integrated platform. These platforms aim to preserve context, reduce cognitive load and provide traceability as developers switch between CI, automated testing and CD workflows. According to the 2022 Stack Overflow Developer Survey, a significant percentage of professional developers report having CI/CD (69.79%), DevOps function (59.35%), and automated testing (58.09%) available at their organization. [1]

This market reflects the consolidation of technologies across development, security, infrastructure and operations to help streamline software delivery via a single, integrated platform. Due to the overlap in capabilities between platforms, a few vendors in this Magic Quadrant also feature in others. See Magic Quadrant for Application Security Testing and Magic Quadrant for Enterprise Agile Planning Tools.

In addition to providing a consolidated set of integrated capabilities, DevOps platforms provide numerous other benefits when compared to traditional DevOps toolchains. DevOps platforms can better enable software engineering leaders to:

- **Improve software security.** DevOps platforms integrate and automate security, compliance and governance as part of the development and delivery process. A few DevOps platform providers natively support application security capabilities in their offerings, including GitHub, GitLab and JFrog. See How Software Engineering Leaders Can Mitigate Software Supply Chain Security Risks and How to Select DevSecOps Tools for Secure Software Delivery.

- **Enhance developer experience.** DevOps platforms minimize context switching across multiple tools by providing a cohesive, integrated set of capabilities. See A Software Engineering Leader's Guide to Improving Developer Experience and Adopt Platform Engineering to Improve the Developer Experience.

- **Modernize application architectures.** DevOps platforms provide a strong foundation that enables software engineering teams to take advantage of cloud-native architectures. See 2023 Planning Guide for Application Development and How to Scale DevOps Workflows in Multicluster Kubernetes Environments.

- **Gain greater visibility into the flow of work.** DevOps platforms provide a clear view into software delivery pipelines — from ideation to production — especially when used in conjunction with value stream management platforms. This visibility reduces friction and manual handoffs. See Market Guide for Value Stream Management Platforms and How Software Engineering Leaders Can Use Value Stream Metrics to Improve Agile Effectiveness.

Software engineering leaders should use our analysis of the DevOps platforms market to make a buying decision, or to make the business case for modernizing their current toolchain.

Market Overview

In 2020 and 2021, Gartner published a Market Guide for Value Stream Delivery Platforms. In response to growing client demand for a more thorough evaluation of this market, we have created this Magic Quadrant for DevOps Platforms to replace the Market Guide.

Software engineering leaders have traditionally used a set of specialized DevOps tools for each individual phase of the application delivery value stream. A fragmented DevOps toolchain is difficult to integrate, manage and orchestrate. These time-consuming tasks detract from work that delivers value to customers. DevOps platform vendors aim to accelerate delivery of customer value by offering a managed, fully integrated set of capabilities with native support for orchestration.

A growing number of software engineering leaders are modernizing their DevOps toolchains by adopting DevOps platforms. Several trends are driving rapid adoption of DevOps platforms, including:

Digital transformation initiatives: Digital business continues to spur the demand for mobile and cloud-native applications. This demand requires organizations to modernize application architectures, which requires a fundamental change to underlying tools. DevOps platforms will become even more in-demand as organizations adopt agile and DevOps practices to deliver a diverse array of applications, including cloud-native, mobile, edge, IoT and web apps.

Related research: 2023 Planning Guide for Application Development

Rise of platform engineering: Platform engineering teams use DevOps platforms as a core building block for internal developer platforms and, in some cases, to orchestrate platform capabilities. Platform teams enable stream-aligned and complicated-subsystem teams to focus on creating customer value by externalizing cross-cutting DevOps capabilities.

Related research: Organize for Agility With Team Topologies

Need to reduce technical debt in DevOps toolchains: Organizations are looking to minimize toolchain-related technical debt. A fragmented toolchain results in redundant tools, duplicated spend and increased operational overhead. This makes it difficult to ensure governance and negatively impacts developer experience.

Related research: Beware the DevOps Toolchain Debt Collector

Prevalence of DevOps engineers as an established role: According to the 2022 Gartner Software Engineering Leaders Role Survey, 87% of respondents reported currently having DevOps engineers in their organization. In addition, 47% have plans to increase the number of DevOps engineers in the next year. [2] This makes it easier to adopt and implement DevOps platforms in organizations.

Need to reduce cognitive load for developers: The demand for consistent, unified experience across multiple phases of the SDLC has led vendors to consolidate capabilities across planning, development, security, infrastructure and operations.

In response to the surge in customer demand, vendors are rapidly innovating and expanding their capabilities to provide more comprehensive solutions. As a result, the DevOps platform market has become increasingly competitive and consolidated.

Evidence

As part of our analysis, we have collected information from Gartner Peer Insights, client inquiries and publicly available sources to supplement the information provided by participating vendors.

[1] 2022 Developer Survey, Stack Overflow.

[2] **2022 Gartner Software Engineering Leaders Role Survey:** This survey was conducted to understand how organizations attract, hire and retain software engineering talent; improve and modernize developer skills; improve developer productivity; establish platform engineering teams; create platform teams; and incorporate design into software engineering. The survey was conducted online from November through December 2022. In total, 300 respondents were interviewed from the United States. Qualifying organizations operated in multiple industries (excluding IT software and public sector) and reported enterprisewide revenue for fiscal year 2021 of at least $250 million or equivalent, with 60% over $1 billion in revenue. Qualified participants were highly involved in managing software engineering/application development teams and the activities they perform. Disclaimer: Results of this survey do not represent global findings or the market as a whole, but reflect the sentiments of the respondents and companies surveyed.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability: Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

Market Responsiveness/Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

Recommended by the Authors

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How Markets and Vendors Are Evaluated in Gartner Magic Quadrants

Beware the DevOps Toolchain Debt Collector

Infographic: Platforms and Tools to Scale the Delivery of High-Quality Software

Market Guide for Value Stream Management Platforms

Market Guide for Continuous Compliance Automation Tools in DevOps

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