



Market Insight Report Reprint

DevOps continues to evolve, with user experience among top priorities – Highlights from VotE: DevOps

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Enterprise DevOps continues to evolve and expand in the enterprise, with user experience, analytics, AI and ML among top priorities, along with faster releases, efficiency and security.

451 Research

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Introduction

Our latest Voice of the Enterprise: DevOps, Organizational Dynamics survey highlights how DevOps continues to move toward mainstream software development and deployment. Nearly all organizations surveyed are implementing DevOps either fully or partially across their IT organization to deploy software to production. The research also highlights how the ongoing COVID-19 pandemic is fueling DevOps adoption.

THE 451 TAKE

Our most recent DevOps research highlights that while faster software releases are still ranked as the top current benefit of enterprise DevOps (58%), there is an emerging transformational focus on end users and their experiences. For the first time in our surveys, improving the quality of user experience for applications and services is the number one outcome companies are trying to achieve through DevOps (53%), ahead of organizational agility (46%) and speeding time to market (44%). This highlights how business outcomes and metrics have become increasingly important to enterprises leveraging DevOps for benefits beyond speed and efficiency. Security remains a priority in DevOps workflows, but our survey again uncovers persisting silos, with 30% of organizations indicating that DevOps and IT security teams work independently on DevSecOps requirements. Another growing priority for today's enterprise DevOps teams is analytics, AI and ML, which are ranked the most important tools for DevOps (34%), along with monitoring, logging and alerting (31%) and public clouds (30%). We believe this signals more analytics- and business-driven DevOps to come, with optimization, business outcomes and security garnering as much focus as DevOps hallmarks such as speed and efficiency.

Summary of Findings

Enterprise DevOps has evolved and expanded to the point that it is now synonymous with software releases.

Of companies that have released applications to production in the last year, 53% say DevOps is deployed fully across their IT organization and another 44% indicate DevOps is deployed across some teams. DevOps is also accounting for more of enterprise software portfolios, with 73% of organizations reporting half or more of their applications are released in a DevOps manner today and 92% expecting half or more of their applications will be deployed via DevOps in two years.

The COVID-19 pandemic continues to be a driver of DevOps, which is tightly linked to digital transformation.

Consistent with our findings a year ago, there are still more organizations accelerating (34%) or starting DevOps initiatives (18%) compared to those that are delaying (24%) or canceling (2%). Another 21% of organizations are continuing on their original timeline with DevOps. The impact of COVID-19 illustrates why organizations must be agile and flexible to respond to changes in the market, whether from new technology such as cloud native, security issues or a global pandemic.

Improving the quality of user experience for applications and services tops the list of outcomes that enterprises are pursuing via DevOps (53%).

Other leading desired outcomes from DevOps include organizational agility/flexibility (46%), speeding time to market (44%), increasing revenue through new/enhanced products and services (40%), and lowering overall costs (40%). Regarding measurement of success, our surveys highlight the consistent and growing importance of business outcomes (50%), along with quality (60%) and application performance (57%).

The biggest barriers to enterprise DevOps adoption are technical complexity (41%), governance, security and compliance (36%), and cost (35%). Much of the complexity centers on compelling, but new, technology such as Kubernetes. Governance, security and compliance issues have long been a challenge for DevOps teams seeking to move faster and more efficiently, but to do so in a sanctioned, secure and compliant manner rather than through shadow IT deployments. Cost is always a concern and includes both budget allocation and staffing challenges. It is also important for organizations to address typical cultural challenges, such as overcoming resistance to change (44%), competing or conflicting priorities and resources (36%), and promoting communication between teams not accustomed to working together (33%).

Primary DevOps benefits – faster software releases (58%), flexibility to quickly respond to changes (57%) and more efficient use of personnel (52%) – highlight traditional DevOps tenets such as speed and efficiency, but also now include flexibility to respond to changes, which became even more critical amid the COVID-19 pandemic. We have seen less priority on faster software releases in previous surveys, but the most recent findings reiterate the fact that in many cases, DevOps is still about going faster.

Automation has always been a core part of DevOps and continues to expand across nearly all subsegments and tooling. Fully automated deployment is most widely used for cloud services provisioning (43%), storage provisioning (38%) and network provisioning (36%), with functions such as compute and security (both 33%) in the middle of the pack. Software release process (32%), remediation (30%) and configuration (27%) have lower rates of fully automated deployment. Respondents expect even higher rates of full automation in the top categories in one year: cloud services provisioning at 54%, network provisioning at 48% and storage provisioning at 46%.

The DevSecOps trend continues to evolve with more security elements going into more DevOps workflows, but silos can persist. While 45% of organizations report that security and DevOps teams collaborate on DevSecOps requirements, another 30% indicate that these teams work independently. Very few organizations (2%) have dedicated DevSecOps teams, highlighting how the majority of companies leverage existing teams, even for new initiatives.

Analytics, AI and ML tools are ranked the most important for DevOps (34%), ahead of monitoring, logging and alerting (31%) and public clouds (30%). This again highlights how analytics and AIOps are playing a greater role in DevOps, both to improve internal processes and to achieve business outcomes. Data processing, analytics and business intelligence software is also among the top types of DevOps applications (66%), second only to IT/infrastructure optimization functions (81%).

Serverless functions are expanding well beyond compute, which now ranks in the middle of the pack. Storage (51%), database (50%), networking (46%) and monitoring (42%) are the most-used serverless functions. Compute (32%) is below those, as are data streaming (37%), IoT platform (37%) and API gateway (33%). Other serverless functions in use include identity and access control (29%), provisioning (25%), query service (23%) and data lake (22%). This illustrates how cloud-native initiatives such as serverless typically expand to more parts of IT and the organization as use matures.

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