A 2018 Global CIO Report

Speed of Innovation in the Cloud: The Top 5 Challenges

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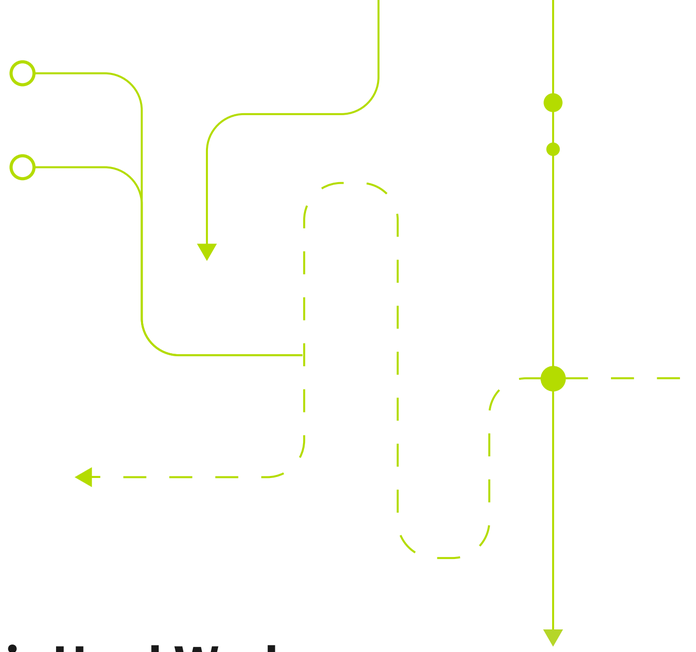

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Intro

Based on a global survey of 800 CIOs, this report examines the challenges organizations face as they strive to keep pace with the demand for ever-faster digital innovation.

Modern organizations succeed or fail based on how rapidly they can innovate in the new enterprise cloud. However, the pace of change has accelerated beyond what anyone had ever imagined even a few years ago. Whereas organizations once delivered quarterly or even annual innovations, the end-users and consumers of today's digital services expect a constant cycle of 'new' – ramping up the pressure on IT to deliver the latest and greatest with increasing regularity. Amazon is widely reported to release a new software update every second; setting the bar exceptionally high for those striving to keep up.

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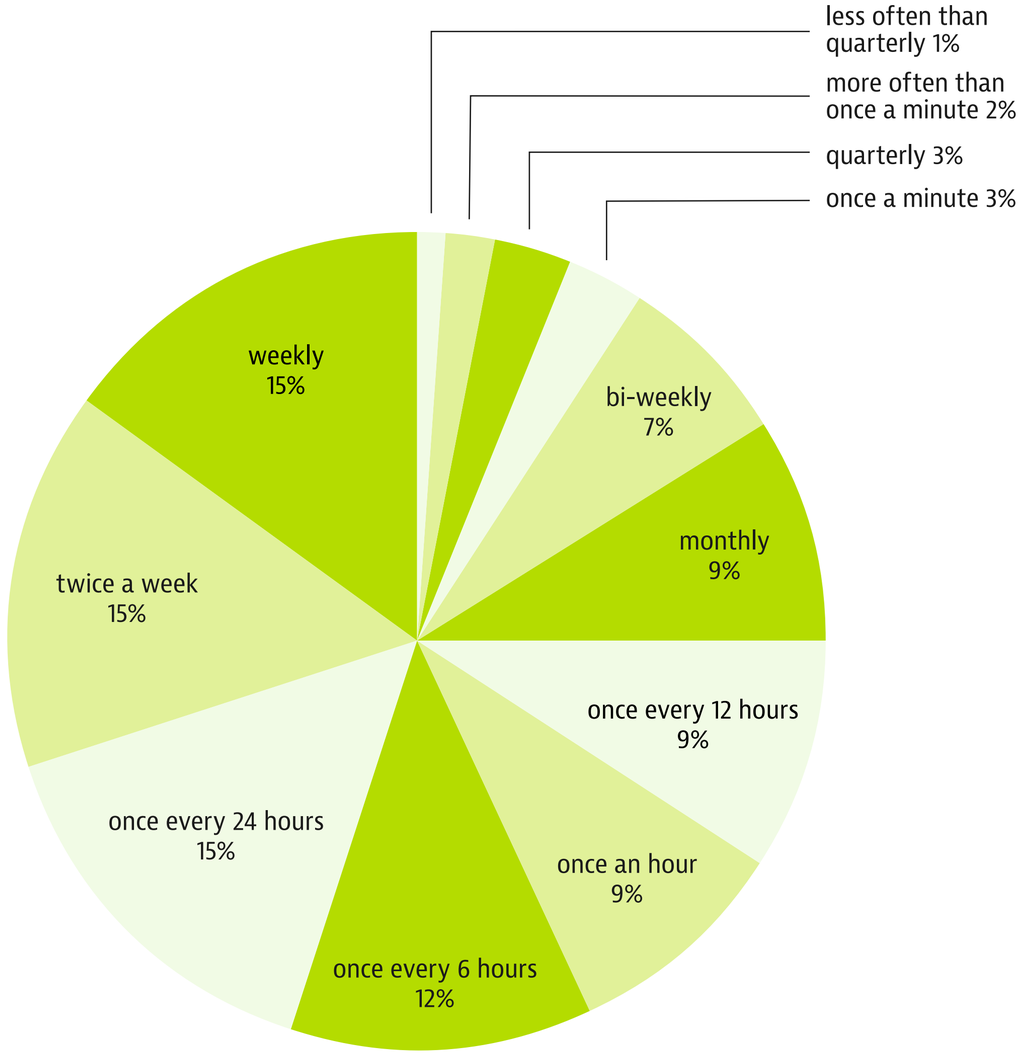
Challenge One: The World Keeps Getting Faster

Today's digital businesses thrive on change, forcing them to pursue an endless cycle of innovation. Constant updates to applications and systems to create new experiences for end users and customers has become the new normal. As new innovations are delivered, our appetite for more just gets bigger. As a result, enterprises today require a new era of software intelligence, backed by AI, to ensure they succeed in the cloud and remain competitive.



Average rate at which organizations release new software updates into production systems and applications

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The World Keeps Getting Faster

89%

Percentage of CIOs who think they will be required to release new updates even faster in the future

3

per working hour

104

per week

Average number of times organizations release new software updates into production systems and applications

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Challenge Two: Customer Experience is Put at Risk

IT departments face mounting pressure to increase the speed of innovation, all the while their hybrid cloud environments are becoming more complex. Compounding this situation is the fact that IT resources remain unchanged. Consequently, CIOs worry that deadlines and user expectations take precedence over quality testing and performance assurance.

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Challenge Three:
Mastering the Cloud and Microservices is Hard Work

Migrating services to hybrid multi-cloud environments has long been recognized as the surest way of achieving the agility needed to accelerate innovation. More recently, businesses have taken a step further and begun re-engineering applications into dynamic microservices and containers to achieve even greater agility and speed. However, these cloud-native architectures and dynamic, distributed environments require a new, all-in-one approach to how we build and deliver software to the end user.

Key challenges that organizations face when moving services to the cloud

Ensuring that application performance is not negatively impacted by the move to the cloud	67%
Identifying whether moving an application to the cloud has delivered on the desired benefits	57%
Understanding whether an application is well-suited to the cloud	55%
Re-architecting legacy applications for the cloud	51%
Ensuring the user experience is not impacted during the migration process	48%

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Challenge Four:
Siloed Tools and Teams Hamper DevOps

Siloed organizational structures frequently limit collaboration between IT functions, with separate teams working towards misaligned goals. This often means that the release of new features and updates is delayed, as code is passed back and forth between development and operations teams; or worse still, customer experience suffers after bad code is launched into production.

There has been rising interest in the potential of DevOps to improve collaboration within IT. Some organizations are even taking this a step further with BizDevOps, creating agile teams with a range of skills from across former siloes within both IT and business functions. However, driving through an organizational and structural change of this magnitude is far from easy.

74%

Percentage of CIOs who say DevOps efforts are often being undermined by the absence of shared data and toolsets, which makes it difficult for IT teams to obtain a single view of 'the truth'

68%

Percentage of organizations that have already implemented, or are starting to explore the possibilities of a DevOps culture, which enables improved collaboration

Biggest barriers CIOs face on the road to DevOps adoption

Differences in priorities between departmental siloes	56%
Teams working with different tools that make it difficult to collaborate	55%
Cultural change/willingness of staff to embrace it	50%
Difficulty in achieving closed feedback loops	40%
Teams speaking different languages or using different success metrics	30%

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Challenge Five:
Unplanned Work is Stifling Innovation

Despite its crucial role in transforming the business, IT is also under intense pressure to 'keep the lights on'. IT faces a constant struggle to deliver innovation whilst resolving performance problems, fixing outages and releasing maintenance updates. Much of this is unplanned work, requiring CIOs to pull resources away from digital transformation projects; creating a drain on their time and stifling innovation. Inefficient development processes are creating further barriers to innovation.

78%

Percentage of CIOs who have experienced IT project delays that could have been prevented if development & operations teams were able to collaborate more easily

Unplanned work that CIOs say most regularly derails digital transformation projects

IT outages caused by external issues	55%
Resolving performance issues caused by database changes	51%
IT outages caused by internal changes	50%
Resolving performance issues introduced by security and compliance changes	49%
Rectifying bad code that has been pushed through the pipeline	45%
Resolving performance issues caused by application changes	38%

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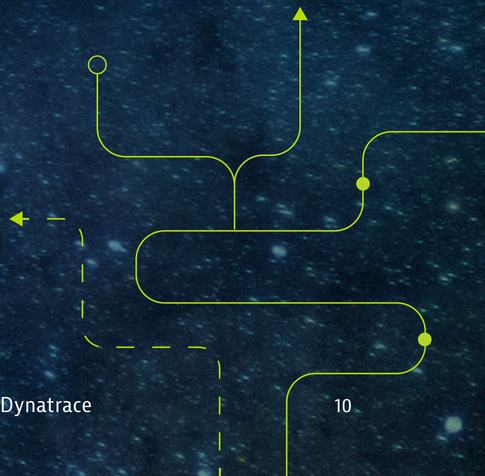
Conclusion

As enterprises strive to accelerate innovation without putting customer experience at risk, it is critical for CIOs to establish a BizDevOps approach that gives IT teams real time feedback, collaborative tools and software intelligence. This information must be democratized to fuel closer collaboration and enable a culture where the teams that build digital services have equal responsibility for running them; allowing them to take pride in the impact their efforts have on the business and its customers.

Methodology

This report is based on a global survey of 800 CIOs in large enterprises with over 1,000 employees, conducted by Vanson Bourne and commissioned by Dynatrace.

The sample included 200 respondents in the U.S., 100 in the UK, France, Germany and China, and 50 in Australia, Singapore, Brazil and Mexico respectively.



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How Can Dynatrace Help?

As the world gets faster and customer expectations continue to increase, Dynatrace is committed to helping organizations deliver faster innovation and perfect software experiences.

With organizations turning to cloud native DevOps to drive faster innovation and agility, there is an exponential increase in the speed, risk and complexity of successful app delivery. Traditional application monitoring tools aren't equipped for this new normal. Dynatrace's software intelligence platform has been built to support innovation at speed, reduce risk and master cloud complexity. Utilizing its AI capabilities, Dynatrace provides real-time, high-fidelity data to BizDevOps teams; laying the foundations for a more collaborative organizational structure and opening the doors to even greater agility and flexibility to innovate at scale through automation and self-driving IT.

To find out more about Dynatrace and DevOps click here.

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Dynatrace has redefined how you monitor today's digital ecosystems. AI-powered, full stack and completely automated, it's the only solution that provides answers, not just data, based on deep insight into every user, every transaction, across every application. The world's leading brands, including, 72 of the Fortune 100, trust Dynatrace to optimize customer experiences, innovate faster and modernize IT operations with absolute confidence.

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