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A Custom Technology Adoption Profile Commissioned By Oracle | August 2016

Put The “Ops” In “DevOps”

Improve Speed And Agility Through Better Service Delivery

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Introduction

Agility and speed of application delivery is now a matter of life and death for many companies. Despite previous investment in monitoring and troubleshooting tools, enterprises continue to get blindsided with application instability and outages that are costing them topline revenue and potential brand impact. At the same time, line-of-business (LOB) executives are more interested in understanding how their applications are performing and want to analyze IT data in the context of business events.

To respond to this combination of challenges, infrastructure and operations (I&O) and development teams are rethinking the way they manage applications and services, and it is time for a generational leap in the capabilities that I&O teams should expect from management solutions. Agile and DevOps techniques have pervaded software development, but our study found that an alarming number of organizations still do not have end-to-end visibility. Too often, DevOps is implemented only halfway, focused on improving the upstream communication between dev teams and their business counterparts but failing to adequately loop in the downstream testing and operations teams. Due to organizational and data silos, operations teams often don’t have visibility into rapidly changing application topologies. This lack of visibility makes for a rocky transition from development to production, and means that development and operations teams are often forced to choose between delaying rollouts and going live with buggy code.

In June 2016, Oracle commissioned Forrester Consulting to evaluate the challenges facing development and operations teams, how new customer demands are driving change, and what operations strategies leading DevOps teams are using in order to maximize visibility, speed, and agility.

Geography

› United States

Company size

› Enterprises with 1,000+ employees

Role

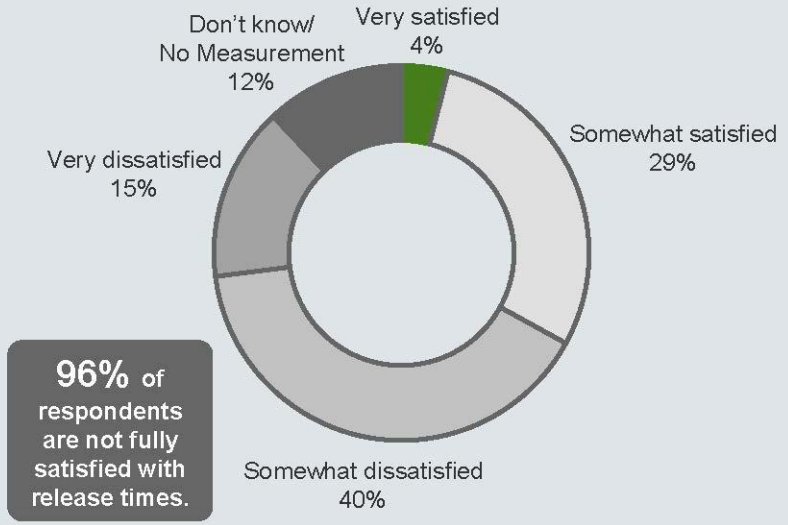
› 107 IT decision-makers with responsibility for DevOps

Development Pace Is Increasing

With the rise of mobile and digital touchpoints (and customer expectations for excellent cross-channel experiences), businesses must create new and better apps at an ever-increasing rate. And they have to work — if they don't, customers will choose a new channel at best and a new brand at worst. Our custom survey found that improving the customer experience across channels is a top priority for 80% of respondents, and accelerating application and delivery is a top priority for 66% of companies.

Unfortunately, IT operations and development teams are struggling to keep up. Forrester's Q1 2016 Global Modern Service Delivery Benchmark Online Survey found that *only 4% of I&O respondents believe that their business is very satisfied with the time it takes to release new features or changes to customer-facing business services and applications*, and only 29% of I&O respondents believe that their business is somewhat satisfied.

How satisfied do you think your business is with the time it takes to release new features or changes to customer-facing business services or applications?



96% of respondents are not fully satisfied with release times.

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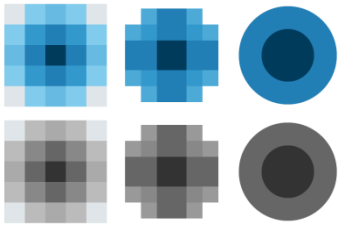
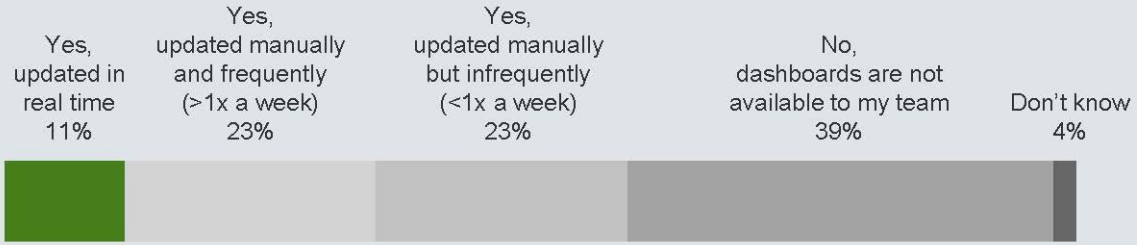
Teams Lack Visibility

In this climate, collaboration and communication between development and operations teams are more important than ever, yet most businesses don’t have the tools or processes in place to facilitate this collaboration. Many organizations have manually updated dashboards that are inherently unreliable — not to mention costly to maintain — and hence not a good choice for companies that have aggressive goals for digital experience and customer satisfaction. *Only 11% of teams have real-time dashboards that show release and change pipelines and updated topologies, and even those dashboards typically are not complete,* leading to a lack of sufficient information to predict and diagnose issues that may arise.



Are dashboards for customer-facing business services and applications available to your team?



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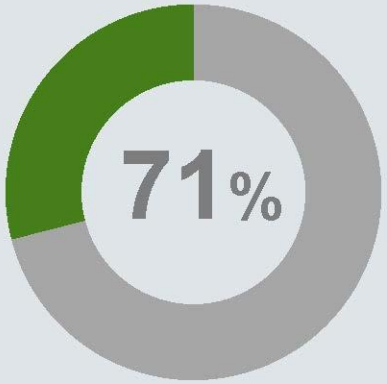
Error Rates Are High

One in three apps is headed for disaster: *32% of production apps have problems that are often only discovered when they are reported by customers.* Thirty-three percent of respondents admitted that customers frequently report an external app problem first, and another 38% said that it happens occasionally. In this age, development teams can't afford to let any errors get past production.

The resulting incidents create lower customer satisfaction, brand damage, lost revenue, and added costs.

Thirty-two percent of applications have bugs or errors, threatening customer loyalty and retention.

How often do customers first discover errors in your external applications?



Base: 107 US enterprise IT decision-makers with responsibility for DevOps
Source: A commissioned study conducted by Forrester Consulting on behalf of Oracle, June 2016

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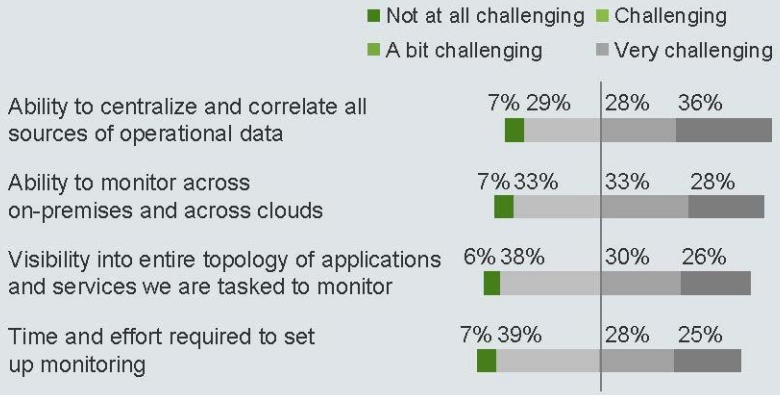
Companies Need Better Monitoring

Integration of previously siloed operational data stores is a key challenge for application developers and I&O teams. Our survey found that 93% to 94% of teams have challenges across a variety of dimensions when it comes to application monitoring in production. When issues arise, I&O and application developers struggle to understand the source. Measurement and analytics tools can provide I&O professionals with the information they need to make crucial decisions or troubleshoot problems, but only if they know where to look, and the act of collecting all the data in the first place can take a very long time. Unfortunately, *only 6% of respondents trust their monitoring strategy all of the time* to support correlation and troubleshoot problems and incidents.

How significant are the following challenges when it comes to application monitoring in production?



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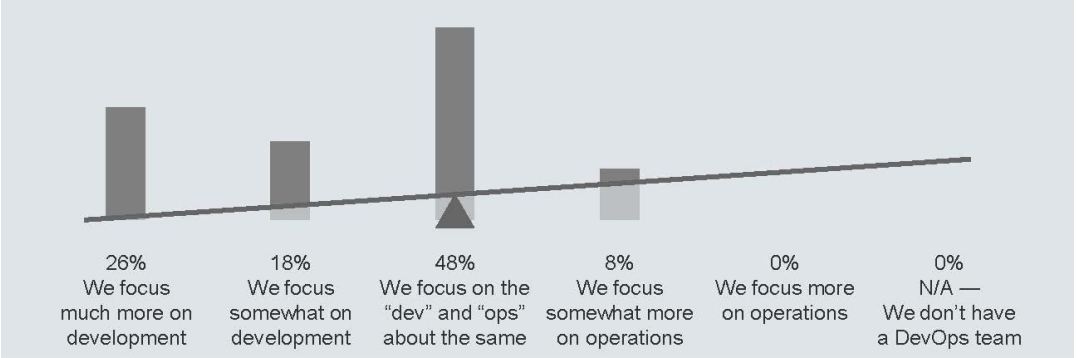
Pay Attention To The “Ops” Side Of DevOps

DevOps teams are focused much more on “dev” and not nearly enough on “ops.” Forrester's Q2 2015 Global Agile Software Application Development Online Survey shows that the lack of Agile downstream is still responsible for the delivery speed gap: *Only 24% of survey respondents use Agile downstream, whereas 51% use it upstream, and only 15% do both.* Companies have refined their ability to automate and integrate apps for instantaneous pushout, but they omit the step of communicating to production teams the changing topology of applications and new services. Many DevOps teams fail to ensure that groups responsible for monitoring, management, compliance, and SLAs are updated and on the same page. Fifty-seven percent of survey respondents said their involvement with the software delivery life cycle for business-consumer-facing business services and applications is sporadic.

To what extent would your DevOps team focus on development efficiencies versus operational/production efficiencies?



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The CALMSS Model For Modern Service Delivery

Forrester developed the CALMSS model for modern service delivery. This model represents competencies that must be built to be successful in DevOps in regards to culture, automation, continuous and rapid/Lean, measurement and management, sharing, and sourcing to improve the speed and quality of releases.

Change type	Traditional service delivery	Modern service delivery
Culture (C)	I&O expertise is applied after release	I&O expertise utilized throughout development process
Automation (A)	Manual processes and handoffs	Driving entire life cycle with automation of processes, tasks, and decisions
Continuous and rapid/Lean (L)	Long development cycles with few releases	Technology and processes optimized for rapid release cycles
Measurement and management (M)	Separate measurement and management of service focus is on "run" portion of development life cycle	Joined measurement and management designed into entire development life cycle with an emphasis on customer experience
Sharing (S)	Linear process from development to release with little or no feedback from production	Feedback loops built into the development life cycle
Sourcing (S)	Sourcing of services with strong client service delivery control	Sourcing of services with distributed service delivery accountabilities and strong service integration

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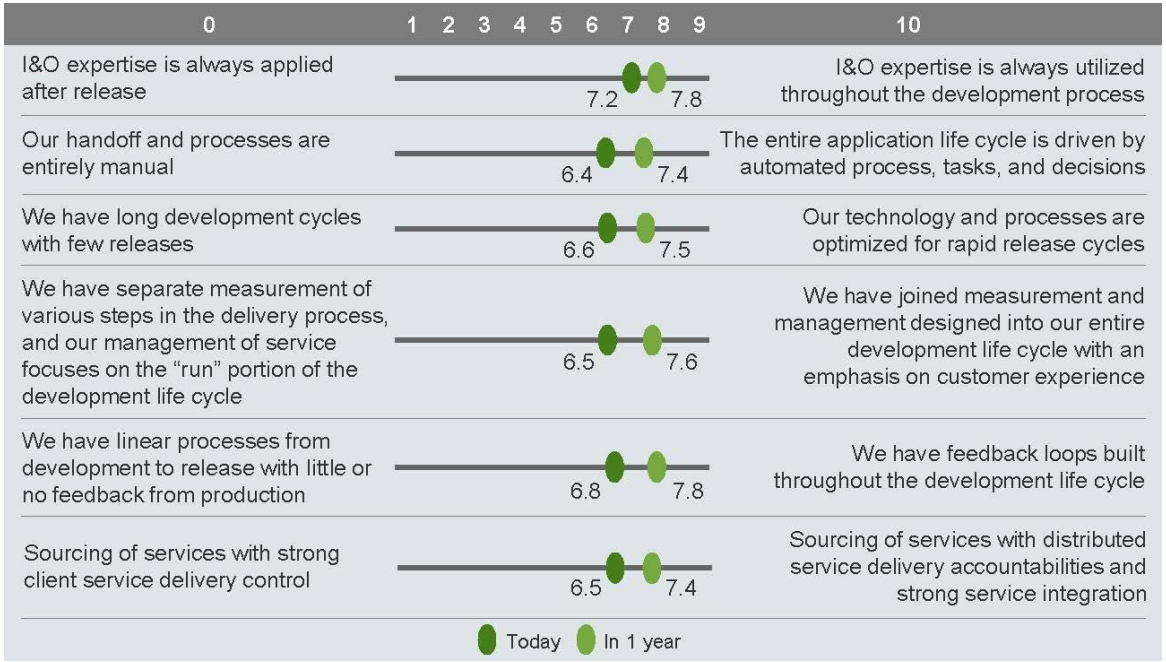
DevOps Teams Recognize That The Time To Act Is Now

Our survey found that companies are working toward maturity from traditional to modern service delivery and expect to improve in the next year, showing understanding that it is time to act.



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Conclusions

More than ever, modern application delivery requires speed and agility, which must be accompanied by visibility. To ensure that both internal and external customers have the best possible experience with production applications, operations teams must be looped in throughout the process, and they must have adequate tools to understand and address changes that are made throughout development. Best practices for this include automation throughout the process, aligned metrics, and single-source-of-truth dashboards that improve communication between application developers and operations teams.

METHODOLOGY

In this study, Forrester Consulting conducted an online survey of 107 US enterprises across industries. Respondents were IT decision-makers at the director level and above with responsibility for DevOps. Respondents were offered cash-equivalent incentives for their participation. Forrester supplemented this survey with data points from Forrester’s Q1 2016 Global Modern Service Delivery Benchmark Online Survey.

Project Director

Mark Brozek
Sr. Market Impact Consultant

Supporting Research

Forrester’s Infrastructure & Operations research team