

Ten Priorities for Hybrid Cloud, Containers, and DevOps in 2017

EMA Research Report and Decision Guide for Enterprise



ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™)
VENDOR RECOMMENDATION REPORT
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IT & DATA MANAGEMENT RESEARCH • INDUSTRY ANALYSIS • CONSULTING

INTRODUCTION

This Enterprise Management Associates® (EMA™) decision guide focuses on how enterprises should manage hybrid cloud, containers, and DevOps to provide their business with an optimal IT environment where innovation can be delivered in the most efficient and effective manner.

Why You Should Read This Research Report

IT and software development decision makers and influencers will learn the following:

TEN PRIORITIES FOR EFFICIENTLY MANAGING HYBRID CLOUD, CONTAINERS, AND DEVOPS.

CONCRETE EMA RECOMMENDATIONS FOR EFFECTIVELY IMPLEMENTING THESE PRIORITIES.

EMA TOP THREE PRODUCTS TO OPTIMALLY IMPLEMENT EACH RECOMMENDATION.

Research Methodology

All research results in this report are based on EMA's survey of 260 randomly-selected North American enterprises with 500 or more employees across all industries. Clustering these survey results by theme led to our ten priorities. EMA analysts examined each of these priorities within the context of today's key challenges of leveraging containers, hybrid cloud, and machine learning to reach the optimal compromise between rapid software releases and reliability of IT operations.

260 enterprises surveyed

87% using private or public cloud

10 key trends identified

IN A NUTSHELL: 2017 TOP PRIORITIES

- Control your hybrid cloud cost.
- Enforce security and compliance.
- Private cloud is coming back.
- Plan for container management.
- Demand single pane of glass monitoring.
- Evaluate hyperconverged systems for your scale-out cloud.
- Focus on integration between cloud and data centers.
- Push your developers toward serverless functions.
- Bring automation and full visibility to your DevOps process.
- Evaluate machine learning for operations management.

INTRODUCTION

What Are the EMA Top Three?

EMA's Top Three products were selected because they enable customers to address the ten key IT operations priorities in 2017 in a convincing and often innovative manner. Please regard this report as a guide to help IT influencers and decision makers in their project planning and vendor selection processes. It is not a feature-by-feature comparison of all included vendors. In certain cases, EMA included products that are still in a late beta or preview stage simply to recognize a vendor's excellent alignment with research results. On the other hand, you may miss more traditional products that did not make it into the report, simply because newcomers took their spot.



EMA TOP THREE VENDORS ADDRESS HYBRID CLOUD, CONTAINER, AND DEVOPS CHALLENGES IN AN INNOVATIVE AND CONVINCING MANNER.

Market Metrics

Based on EMA research, the total market for hybrid cloud and container management tools is currently growing at a fast pace. In 2017, enterprises are becoming serious about moving traditional bread-and-butter applications to private and public clouds. Over the following 12 months, customers will move another 19 percent of their current data center workloads to a public cloud and 12 percent to a private one. Please dive into this report for a wealth of market metrics.

Key Disruptors in 2017: Containers and Machine Learning

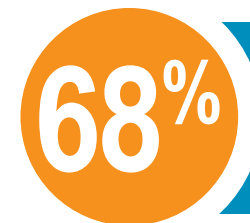
Container management and machine learning are the two fastest-growing hybrid cloud topics in 2017. 68 percent of enterprises are exploring container strategies today. The rapid growth in containers also intensifies the pressure to leverage machine learning-driven IT operations to cope with the added operational complexity, which is caused by applications consisting of short-lived microservices hosted on portable containers and shared between multiple apps. 2017 is the year when machine learning will need to come out of its shell and do much more than just anomaly detection.

From the Software-Defined Data Center to the Business-Defined Hybrid Cloud

Enterprise customers are ready to take the step from a software-defined data center to a state where applications are provisioned and managed in an automated and policy-based manner. Development teams should no longer have to manually specify the exact types of servers and storage infrastructure they require, but the business-defined hybrid cloud needs to “understand” each application’s security, compliance, performance, and cost requirements. They must also make the most efficient placement decision and enable proactive operations management driven by constantly-changing business priorities.



COST OPTIMIZATION IS THE NUMBER ONE PRIORITY IN HYBRID CLOUD OPERATIONS IN 2017



ENTERPRISES EVALUATING CONTAINERS IN 2017

DEVOPS AUTOMATION

KEY PAIN POINTS IN 2017

COST

42%

SPEED

36%

ISSUE
PRIORITIZATION

32%

“AT THE CORE OF TRANSFORMING OUR ORGANIZATION INTO A ‘DIGITAL ATTACKER’ WAS THE REALIZATION THAT WE NEED TO FOCUS ON BUSINESS OBJECTIVES, INSTEAD OF TECHNOLOGY CHALLENGES. THIS NEW TOP DOWN APPROACH TURNS EVERY DEVELOPER AND OPERATOR INTO A BUSINESS CONSULTANT CONSTANTLY THINKING ABOUT HOW TO DELIVER AN IMPROVED END USER EXPERIENCE IN A MORE EFFICIENT MANNER.”

– CTO, MAJOR U.S. REAL ESTATE DEVELOPMENT FIRM

EMA TOP THREE BY CATEGORY



IT AUTOMATION FOR DEVOPS



CHEF™ Automate

Electric Cloud
ElectricFlow

Red Hat Ansible Tower



EMA MARKET METRICS

Size: >\$1 Billion
Saturation: Low
Growth Rate: Fast
Maturity: Low
Key Trends: Containers, Multi-Cloud, DevOps, IoT
Risk of Disruption: Low

TOTAL MARKET: DEVOPS AUTOMATION

Size: >\$1.6 Billion
Saturation: Low
Growth Rate: Fast
Maturity: Low
Key Trends: Containers, Multi-Cloud, DevOps, IoT
Risk of Disruption: Low

DEVOPS SECURITY, COMPLIANCE, AND COST CONTROL



CHEF™ Automate with InSpec

IBM Cloud
Automation Manager

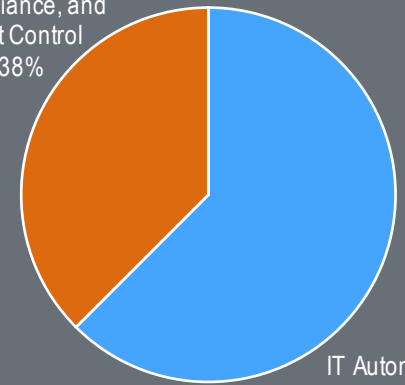
Quali CloudShell



EMA MARKET METRICS

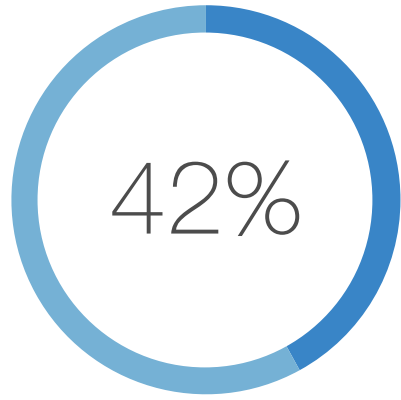
Size: >\$600 Million
Saturation: Low
Growth Rate: Fast
Maturity: Low
Key Trends: Containers, Multi-Cloud, DevOps, IoT
Risk of Disruption: Low

DevOps Security, Compliance, and Cost Control
38%

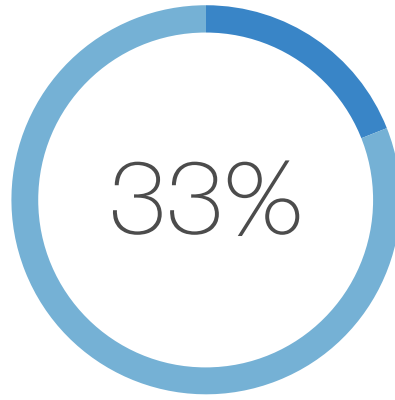


IT Automation for DevOps
63%

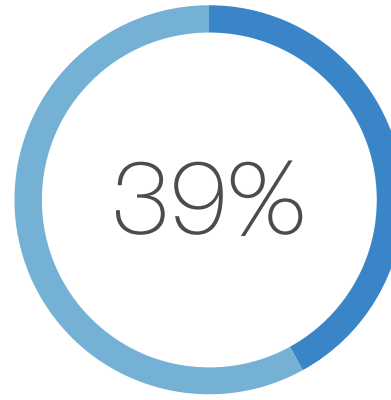
DEVOPS TODAY: A SHIFT TOWARD AN OUTCOME-CENTRIC IT PARADIGM



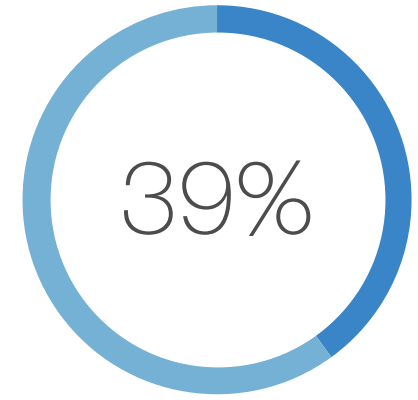
ENTERPRISES COMPLAINING ABOUT HOW LONG IT TAKES TO BUILD DEVELOPMENT AND TEST ENVIRONMENTS



NO AUTOMATIC DEPLOYMENT CAPABILITIES IN PLACE



SUFFER FROM INCONSISTENCIES BETWEEN DEV/TEST AND PRODUCTION



CONCERNED ABOUT REGULATORY COMPLIANCE

While DevOps today is household term for almost any enterprise, EMA research continues to find significant gaps in most organizations' DevOps story. These gaps can be separated into cultural challenges originating from the inability to accept operational risk as a necessary evil when planning the organizational transformation toward a "digital attacker." Digital attackers have successfully created the capabilities required to rapidly and permanently adjust to new market demands by optimizing efficiency, speed, and risk, all at the same time. This was achieved by addressing the following three critical IT-related challenges: automation, visibility, and understanding of application requirements and deployment infrastructure.

DEVOPS TODAY: A SHIFT TOWARD AN OUTCOME-CENTRIC IT PARADIGM

Automation & Abstraction

Automation is the foundation for the successful introduction of DevOps. This EMA end user research project found that almost any organization is affected by a lack of automation and the consequences this brings in terms of software release frequency, efficiency loss, software quality issues, and cost overruns. “Infrastructure Provisioning speed” is the number two overall investment priority in IT operations for enterprises over the next 12 months (right after cost control). This is needed as 38% of enterprises complain about the time it takes to build development and test environments and an additional 33% does not have any automation capabilities in place to move application code from dev/test environments into production. 39% suffer from inconsistencies between dev, test, and production environments and again 39% encounter software bugs due to a lack of communication between different development groups.

Visibility

Enterprises name “a single pane of glass” to optimize cross-company collaboration as the number one goal to make cloud management in general and specifically DevOps more efficient. 37% mention that they do not have full visibility into their DevOps pipeline, leading to redundancy in tooling and inefficiencies when it comes to release coordination and compliance management.

Understanding Application Requirements and Deployment Infrastructure

Nearly 50% of enterprises admit to significant gaps in terms of understanding performance requirements of their applications during standard usage, peak times, or other typical usage patterns. 39% are not sure about the applicable regulatory requirements of these apps. This situation is made worse by about as many enterprises indicating at least incomplete understanding of the performance and compliance characteristics of their deployment options.



IN A NUTSHELL – DEVOPS NEEDS CENTRALIZED AUTOMATION

A lack of centralized and application-centric automation is the root of all evil in DevOps. Almost half of enterprises today are still deeply entrenched in siloed automation that often relies on scripts by different authors and in multiple languages. Replacing these automation silos with a centralized and application-centric automation approach is the key pre-condition for continuous development and integration. Centralized automation that abstracts deployment and management instructions from the data center, cloud, or container level also enables enterprises to achieve full visibility from a compliance, security, cost, and performance perspective. This visibility is key for optimizing the efficiency, speed, and risk of DevOps.

2017 DEVOPS CHALLENGES TO ADDRESS:

- Automation and Abstraction
- Visibility
- Application Requirements

EMA RECOMMENDATIONS: DEVOPS AUTOMATION

RECOMMENDATIONS	EMA TOP THREE
<p>IT automation is the foundation for DevOps: Infrastructure and compliance needs to be codified based on application-specific requirements. This process must be collaborative to ensure that all operations and development groups can participate in the process of continuously improving application-centric infrastructure automation.</p>	 <p>CHEF™ Automate</p> <p>Electric Cloud ElectricFlow</p> <p>RedHat Ansible Tower</p>
<p>Security, compliance, and cost control should be built-in: Shortened release cycles can be achieved while at the same time improving security and compliance, if your DevOps solution facilitates a collaborative approach to building, deploying, and running software.</p>	 <p>CHEF™ Automate with InSpec</p> <p>IBM Cloud Automation Manager</p> <p>Quali CloudShell</p>

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on [Twitter](#), [Facebook](#), or [LinkedIn](#).

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