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
Written by Torsten Volk

July 2017

TOP 3

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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.

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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.

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

68% ENTERPRISES EVALUATING CONTAINERS IN 2017

HYBRID CLOUD COST CONTROL

| IMPORTANCE OF **HYBRID CLOUD COST CONTROL** | **#1** |

| ENTERPRISES USING **4 OR MORE PUBLIC CLOUDS** | **35%** |

| ENTERPRISES **EVALUATING CONTAINERS** | **68%** |

"THE 'CONTAINER REVOLUTION' MAKES COST CONTROL EVEN MORE IMPORTANT, AS IT OFFERS EXPONENTIALLY MORE DEPLOYMENT OPTIONS FOR YOUR APPLICATIONS."

– CTO, MAJOR MORTGAGE BROKER

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VIEW EMA CLOUD RANT VIDEO "CONTAINERS IN PRODUCTION USE"

EMA Cloud Rants - Containers in Production Use

Torsten Volk (EMA) and Andrew Hillier (Densify, CTO)
Optimizing containers for production use

Andrew Hillier, CTO, Densify: "Densify is a predictive analytics service that optimizes public cloud, bare metal cloud, and on-premises virtual environments in real-time, enabling customers to operate with less cloud cost, less infrastructure and better performing applications"

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EMA TOP THREE: HYBRID CLOUD COST CONTROL

MULTI-CLOUD MANAGERS

Cisco CloudCenter

IBM Cloud Automation Manager

RightScale Cloud Management Platform

EMA Market Metrics Size: >$800 Million

Saturation: Low

Growth Rate: Fast

Maturity: Moderate

Key Trends: Containers, Multi-Cloud Adoption

Risk of Disruption: Low

PRIVATE CLOUD PLATFORMS

Embotics vCommander

OnApp Cloud Platform

VMware vRealize Automation

EMA Market Metrics Size: >$10 Billion

Saturation: Low

Growth Rate: Moderate

Maturity: Low

Key Trends: Multi-Cloud Adoption, Hyperconverged

Risk of Disruption: Medium

CLOUD OPTIMIZATION

Cloudability

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VMware vRealize Business for Cloud

EMA Market Metrics Size: >$1 Billion

Saturation: Low

Growth Rate: Fast

Maturity: Early

Key Trends: Containers, Machine Learning

Risk of Disruption: Medium

RAPID ROI UTILITIES

CloudRanger

GorillaStack

ParkMyCloud

EMA Market Metrics Size: $300 Million

Saturation: Low

Growth Rate: Moderate

Maturity: Moderate

Key Trends: Multi-Cloud, Public Cloud, Containers

Risk of Disruption: Moderate

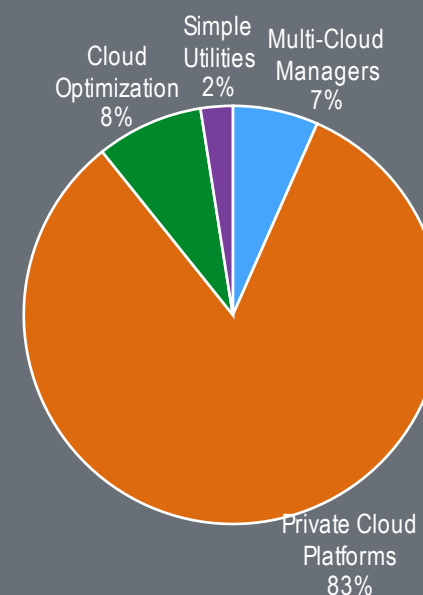## TOTAL MARKET: HYBRID CLOUD COST CONTROL

Size: >$12.1 Billion

Saturation: Medium

Growth Rate: Fast

Maturity: Moderate

Key Trends: Containers, Multi-Cloud, Machine Learning

Risk of Disruption: Low

Cloud Optimization 8%

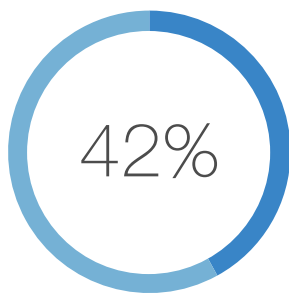Simple Utilities 2%

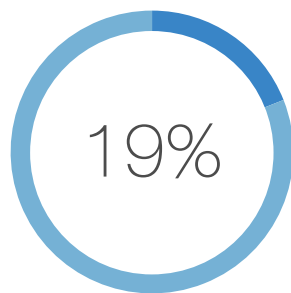Multi-Cloud Managers 7%

Private Cloud Platforms 83%

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HYBRID CLOUD COST CONTROL IS THE #1 IT OPERATIONS INITIATIVE IN 2017
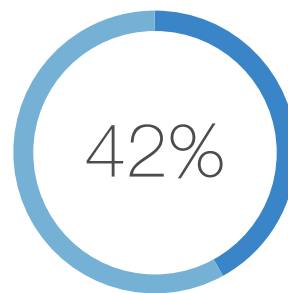
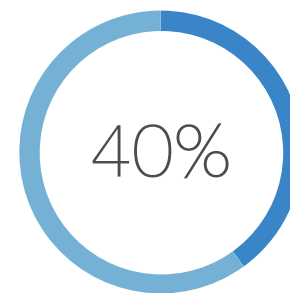| ENTERPRISES NAMING "COST CONTROL" AS THEIR NUMBER ONE IT OPERATIONS PRIORITY.	DATA CENTER APPLICATIONS MOVING TO PUBLIC CLOUD IN 2017	SHARE OF AMAZON CUSTOMERS COMPLAINING ABOUT COST INEFFICIENCIES	SHARE OF ENTERPRISES UNABLE TO IDENTIFY THE MOST COST-EFFICIENT CLOUD
42%	19%	42%	40%

"Cost Control in the Hybrid Cloud" tops the list of operational challenges that enterprises aim to address in the following 12 months. 42 percent indicated that cost control is their greatest IT operations challenge. The cost control topic boiled over in 2017, as enterprises are adopting different clouds and rapidly shifting more data center applications to these cloud platforms. EMA research found that 35 percent are using four or more public clouds and are planning to move 19 percent of their currently data center-hosted applications to the public cloud, and 11 percent to on-premise clouds.

Customers are blaming a lack of internal enterprise governance and difficult-to-understand cloud pricing models for today's cost overruns. Hence, 40 percent of enterprises indicated that they are unable to identify the most cost-efficient cloud solution for their applications.
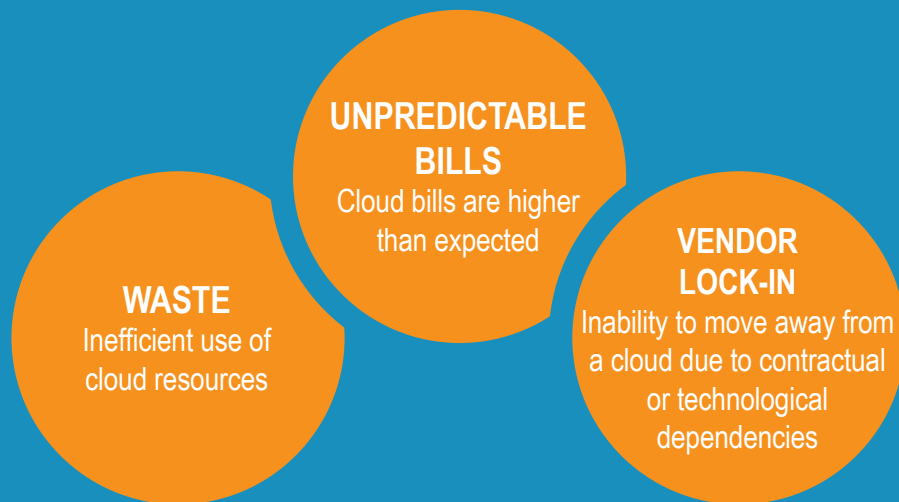
PRODUCT SPOTLIGHT: DENSIFY
We selected Densify as an EMA Top 3 product as it provides continuous optimization of public cloud, bare metal cloud, and on-premises infrastructures. Densify delivers better application performance with the highest asset utilization and lowest cloud spend without requiring any special training. In addition to optimization of existing environments, the service also offers precise, data-driven cloud migration and transformation strategies and real-time hybrid and multi-cloud workload placements.
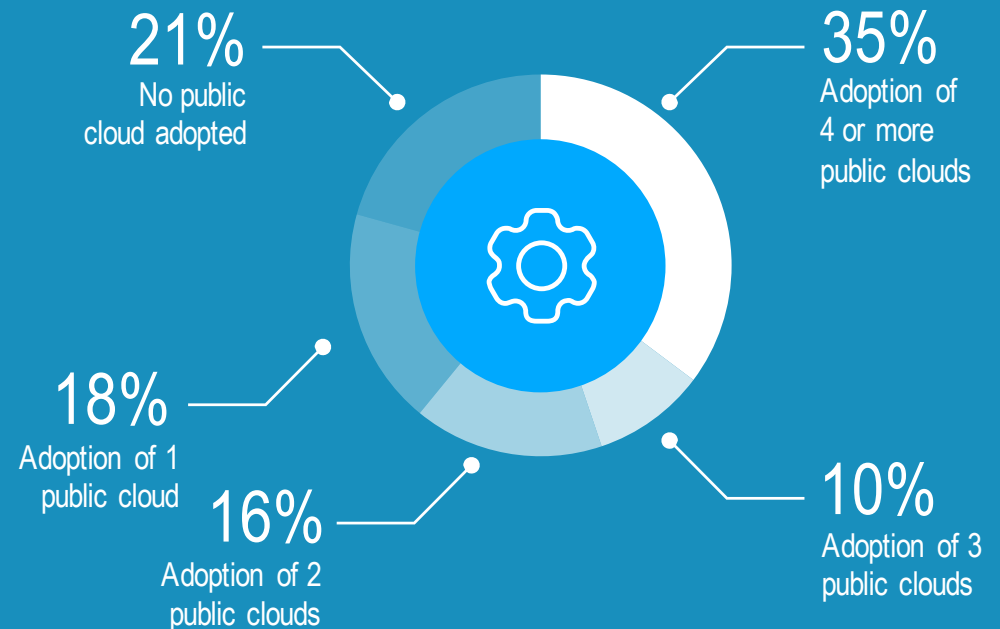
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HYBRID CLOUD COST CONTROL – IN A NUTSHELL

To address the cost challenge, EMA recommends enterprises consider four product categories (multi-cloud management, private cloud platforms, cloud optimization software, and rapid ROI tools) that follow different approaches and can, in some instances, be combined. The EMA Top Three listings are a good starting point for this evaluation, especially the category of "rapid ROI tools," which can easily be tried out and the results evaluated in a brief period of time.

UNPREDICTABLE BILLS
Cloud bills are higher than expected

WASTE
Inefficient use of cloud resources

VENDOR LOCK-IN
Inability to move away from a cloud due to contractual or technological dependencies

PUBLIC CLOUD ADOPTION

21%
No public cloud adopted

35%
Adoption of 4 or more public clouds

18%
Adoption of 1 public cloud

16%
Adoption of 2 public clouds

10%
Adoption of 3 public clouds

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EMA RECOMMENDATIONS:
COST CONTROL FOR MULTI-CLOUD MANAGERS AND CONTAINERS

RECOMMENDATIONS	EMA TOP THREE

CLOUD OPTIMIZATION

Evaluate cloud optimization tools: Hybrid cloud and container optimization tools aim to minimize operations cost while considering compliance, security, performance, and availability. They can therefore be valuable tools for cloud transformation and optimization.
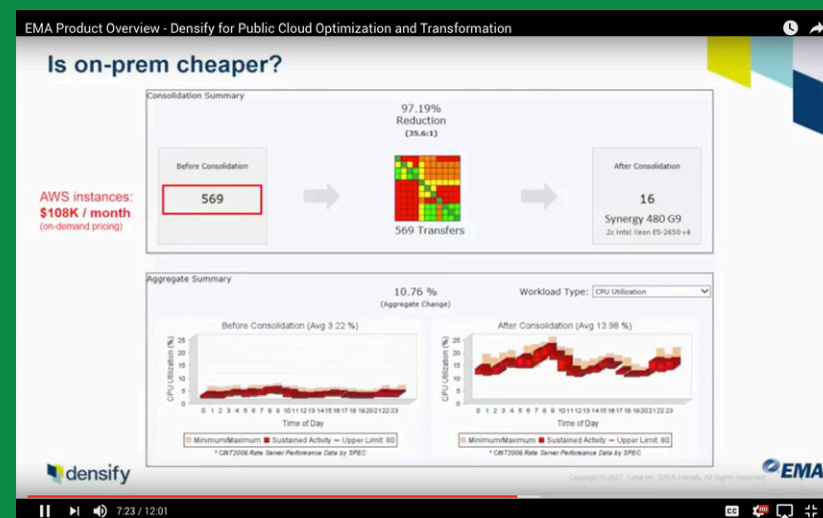
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RightScale Optima

VMware vRealize Automation

FREE
FOR THE FIRST
14 DAYS

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EMA PRODUCT OVERVIEW

EMA Product Overview - Densify for Public Cloud Optimization and Transformation

Is on-prem cheaper?

AWS instances: $108K / month (on-demand pricing)

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EMA RECOMMENDATIONS:
COST CONTROL FOR MULTI-CLOUD MANAGERS AND CONTAINERS

	RECOMMENDATIONS	EMA TOP THREE
RAPID ROI UTILITIES	**Consider simple tools with large impact:** Evaluate tools that are quick to implement and help harvest "low-hanging fruit."	CloudRanger GorillaStack ParkMyCloud
MULTI-CLOUD MANAGERS	**Evaluate multi-cloud managers:** Multi-cloud management tools can provide the governance and automation layer needed to make application placement decisions under full information.	Cisco CloudCenter IBM Cloud Automation Manager RightScale Cloud Management Platform
PRIVATE CLOUD PLATFORMS	**Also include traditional private cloud management platforms into the evaluation:** Most traditional cloud management platforms no longer exclusively focus on on-premise clouds, but in many cases turned into versatile multi-cloud deployment and operations tools.	Embotics vCommander OnApp Cloud Platform VMware vRealize Automation

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