HYBRID CLOUD MANAGEMENT WITH

ServiceNow®

Practice Head

Ananth Krishnamoorthy
Director – IT Infrastructure &
Application Support Services

Author

Kaviarasan Selvaraj
Marketing Manager

Research Paper

Introduction

The demand for multiple public and private cloud platforms has been increasing significantly due to rapid growth in adoption of cloud by enterprises. Gartner says by 2020, a corporate "no-cloud" policy will be as rare as a "no-internet" policy is today.

Why Enterprises move to the cloud

Enterprises are moving rapidly towards the cloud and the reason behind the increase in cloud acceptance is cost, speed, scalability and innovation. Moving to the cloud can reduce Total Cost of Ownership (TCO) of Infrastructure by 50 to 75% over time. The open source code and ease to develop applications adds as an incentive for enterprises to move towards the cloud.

According to cloud research by **Datapipe, "External cloud adoption will increase by nearly 46% over the next two years."**

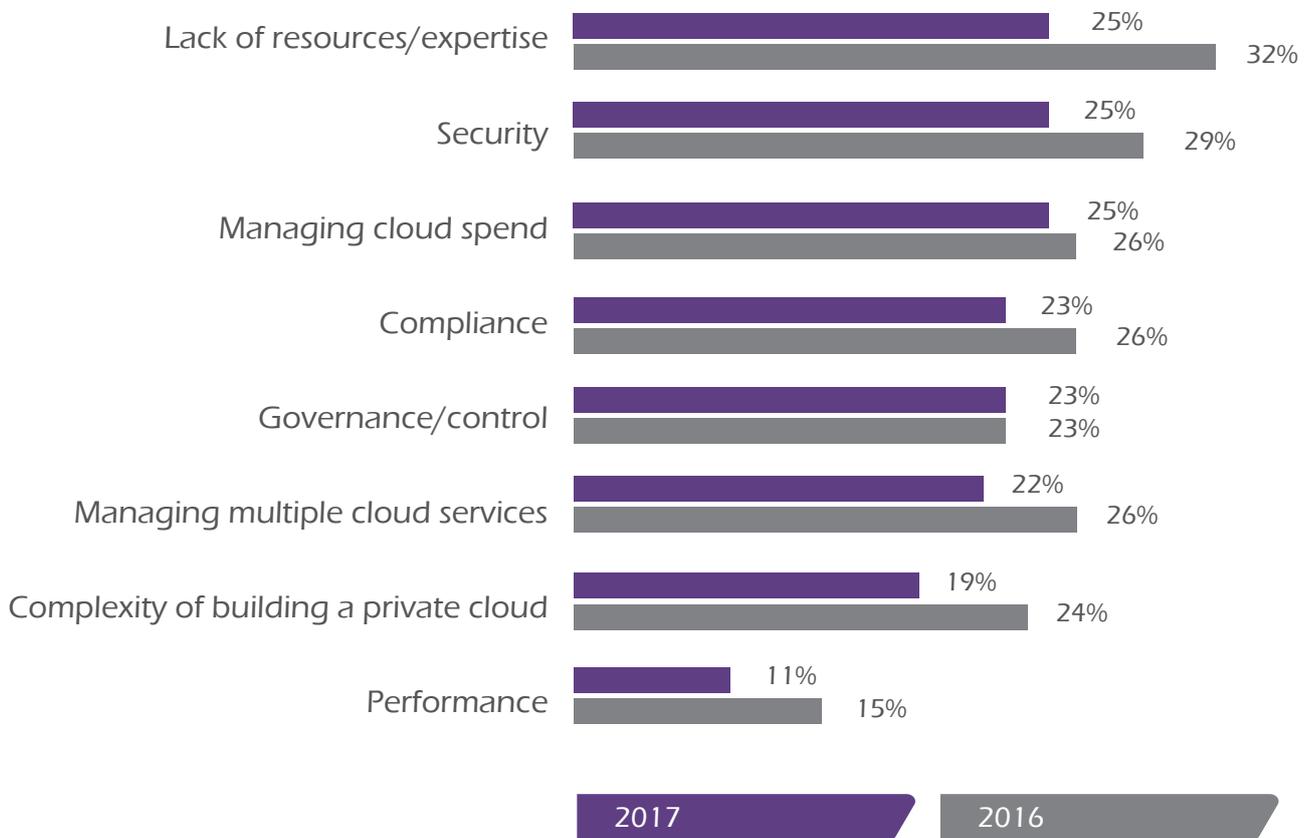# Hybrid cloud adoption is on a growth trajectory

Today, it's impossible for any single cloud platform (open or private) to give developers all that they need. As they build different types of apps on different clouds and legacy platforms, developers will consume different types of infrastructure and services. According to Forrester's Survey, "29% of IT Infrastructure and Operation enterprises have adopted public cloud, 33% use hosted private cloud, and 43% use an internal private cloud. **65% say they already use more than one public and/or private cloud platform, indicating that the hybrid cloud is a reality today."**

Worldwide public IT cloud service revenue is predicted to be 127 billion in 2018 by Datapipe. Clearly, by 2019, cloud IT infrastructure spending will be 46% of total expenditures on enterprise IT infrastructure. Public cloud infrastructure-as-a-service hardware and software spending will reach 126 billion by 2020. The PaaS maker will reach 7.5 billion by 2020, with the APAC region reaching a CAGR of 20.9% through 2020.

By the use of the hybrid approach, companies can control the internally managed private cloud to host sensitive workloads while they also can rely on the public cloud to host less-sensitive information. **At the core, a hybrid cloud management solution helps an organization manage the demands for differing cloud services with the costs, risks and operational efficiencies of hybrid or multi-cloud service delivery.**

Cloud Challenges 2017 vs. 2016

Lack of resources/expertise
- 25%
- 32%

Security
- 25%
- 29%

Managing cloud spend
- 25%
- 26%

Compliance
- 23%
- 26%

Governance/control
- 23%
- 23%

Managing multiple cloud services
- 22%
- 26%

Complexity of building a private cloud
- 19%
- 24%

Performance
- 11%
- 15%

2017   2016

Source: RightScale 2017 State of the Cloud Report

What can go wrong?

- Unable to track who has used what

- Mismatch with your internal change controls

- Cloud sprawl

- Response times from cloud services don't match your own

- Who will pay for problems?

- Critical data held in incorrect levels of security

The changing cloud panorama calls for Cloud Management

Earlier there was doubt and fear towards security of the cloud but now cloud has proven to be more secure than on-premise implementations. A cloud architecture makes life simple, as specific applications no longer need to run on specific physical servers that leads to greater flexibility. Quicker deployments, fewer servers are another major benefit of the cloud. According to "RightScale 2017 State of the Cloud Report", the two areas that showed the most increase over 2016 are scalability (58 to 61 percent) and availability (52 to 56 percent).

A key challenge that was being addressed included a lack of resources and expertise (25% from 32% in 2016) while security and cloud management have also come down at 25% in 2017.
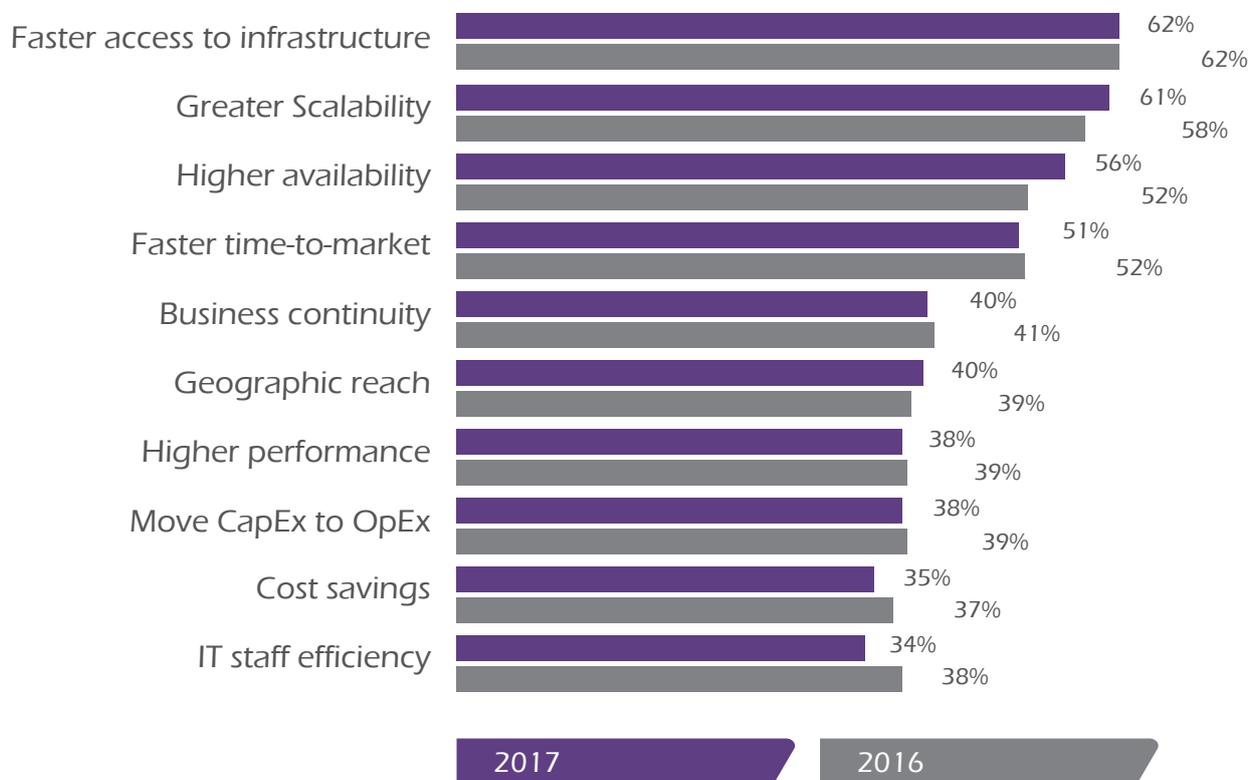
"As more enterprises go cloud-first for their new business applications, they need cloud resources that are enterprise grade, enforcing consistent governance and control regardless of the underlying cloud provider," said Pablo Stern, general manager, IT Operations Management, ServiceNow. With the ServiceNow cloud management platform, employees will be able to access cloud resources and IT the ability to remain in charge that can deliver consumer like self-service to users. Also it will ensure good governance to manage cost and reduce risk.

Cloud Challenges
2017 vs. 2016
% of Respondents Reporting These Benefits

Benefit	2017	2016
Faster access to infrastructure	62%	62%
Greater Scalability	61%	58%
Higher availability	56%	52%
Faster time-to-market	51%	52%
Business continuity	40%	41%
Geographic reach	40%	39%
Higher performance	38%	39%
Move CapEx to OpEx	38%	39%
Cost savings	35%	37%
IT staff efficiency	34%	38%

2017   2016

Source: RightScale 2017 State of the Cloud Report

ServiceNow cloud management gives the user cost visibility at each and every step. Additionally, it has service mapping capabilities by which one can gain visibility into services provided and the underlying infrastructure.
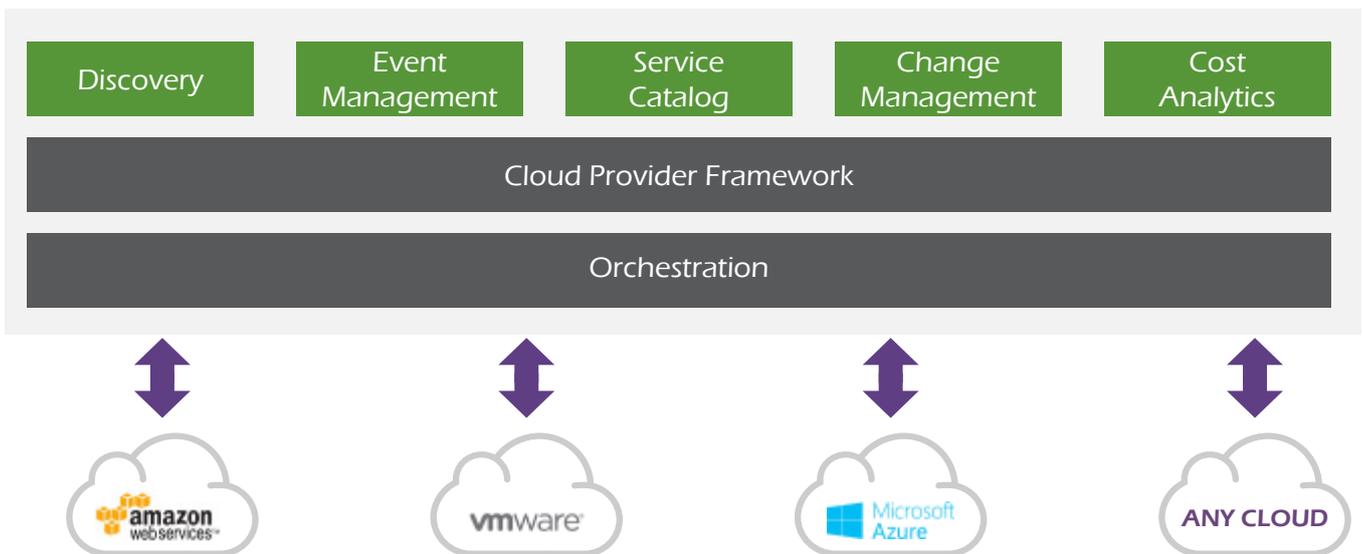
Comparison Chart

	ServiceNow	CloudBolt	VMware	RightScale	Morpheus	Oracle
Platform Extensibility	○	✕	△	○	✕	✕
Third-Party Integration	○	○	△	○	○	✕
Reusable service blueprints	○	○	○	○	✕	○
Role-based access controls	○	○	○	○	○	○
Public cloud networking	○	○	○	○	○	○
Consumption-based billing	○	○	○	○	△	✕
Management of cloud VMs	○	△	○	○	△	△

Supported ○   Not Supported ✕   Limited △

The value ServiceNow Cloud Management adds

| Discovery | Event Management | Service Catalog | Change Management | Cost Analytics |

Cloud Provider Framework

Orchestration

ServiceNow Cloud Management extends a service platform approach to hybrid cloud, integrated with the ServiceNow Platform and Application capabilities the entire cloud services lifecycle. It makes an on demand cloud service environment that optimizes the cloud resources, reduces the resource cost and provisions the
cloud resources.

Cloud blueprint designer

Cloud architects can design catalog items by assembling blueprints of re-usable objects, simplifying and speeding the delivery of offerings into the service catalog. This unique approach enables cloud resources to be designed without the need to know the underlying cloud service provider.

Self-service experience with cloud user portal

Through this console, users have an easy, self-service way to access all their cloud services and take actions. This is a central point displaying their current spend, quota usage, and the status of all their active resources. Self-service provisioning makes cloud provisioning quick and adaptable, it empowers end users to order new resources, ask for updates to existing assets, and communicate with their cloud resources through the ServiceNow Service Catalog. When they order virtual resources, they can define lease terms, provisioning principles, and price alternatives. Likewise, they can connect the virtual resource with services and applications in the ServiceNow CMDB.

Service catalog

In the enhanced Cloud Management application, cloud planners can design catalog items by gathering outlines of re-usable objects that will speed up the delivery of offerings into the service catalog. This remarkable approach empowers cloud resources to be outlined without the need to know the basic cloud service provider.

Separation of policies

By abstracting the policies, you get tremendous flexibility in managing those policies. You don't have to worry about re-writing all your service offerings every time there is a change.

Cost visibility

The Cloud Management application empowers IT by combining billing data from the different cloud servers and numerous records into a solitary view. This gives IT a clear picture of expenses of various cloud resources. The app also enables IT to do the analysis of those expenses for charge back at a granular level.

Cloud provisioning and Orchestration

ServiceNow Cloud Management is based on the orchestration extension to the ServiceNow Service Automation Platform's graphical work process capability.

This provides a one-stop solution for the IT experts in supplanting the mundane tasks which are manual and error-prone in nature. It builds workflow-driven automation utilizing an instinctive point-and-click interface.

Moreover, the users can build their own customized orchestration applications. This can be done by utilizing the ServiceNow platform application maker instrument.

Graphical workflow driven orchestration gives IT the adaptability to stretch out ServiceNow Cloud Management according to specific requirements of an organization.

Return On Investment

IDC's investigation of ServiceNow clients using the organization's suite of cloud-based service management solutions exhibits that these clients are making considerable business value for both their IT operations and their business operations. ServiceNow adds value by enhancing service delivery, automating repeatable tasks and by providing a single ServiceNow interface.

CIOs are inclined towards cloud computing. 55% of CIOs reviewed by Gartner revealed that "by 2020 they will move more than half of their application as SaaS or oversee them in a public cloud infrastructure. To oversee and govern public, private and hybrid cloud services requires an attention on cloud management."

Success Story

ServiceNow Delivers Customer-Centric Visibility across PTC's Amazon Cloud Environment. PTC is a worldwide technology provider that helps organizations transform how they make, operate, and administer products.

Challenges

As a trusted service organization, PTC needs to guarantee their cloud-based services are easily accessible and prominently receptive to clients while controlling the cost of service delivery. PTC was using a mix of disconnected tools and manual processes to manage the cloud-based services that were hindering their visibility and control.

Result after PTC chose ServiceNow

- Reduced incident resolution times from hours to minutes
- Enhanced service quality while managing profitability
- Complete cost visibility by customer and product segment
- Automatic allocation of expenses to individual clients and product segments
- Control of cloud-based services offered

Recommendations

- CIOs need to use a phased approach in cloud migrations for effective cloud management
- CIOs need to consider security in cloud management.
- CIOs should keep in mind the multifunctional capabilities in selecting a CMP or broader cloud management tool.
- One should select tools based on the alignment of cloud service provider choices and cloud management tool vendors' roadmaps by adding specifics for each provider to your evaluation criteria.
- Evaluate third parties as an alternative source for integrating cloud management tooling or providing pre-incorporated cloud management solutions, rather than managing and performing the integration yourself.
- Implement solutions that can provide a single source of action for managing your service-brokered environment. This single system of engagement needs to be able to manage across the entire landscape of people, projects, compliance and vendors.

Key Benefits

Accelerate Adoption of a Multi-Cloud Strategy

• Take a blueprint approach that automates creation of service catalogs and simplifies the deployment of cloud resources

• Manage the lifecycle for multi-cloud environments with a single System of Action for increased service quality, standardized operational process, and reduced remediation effort

Deliver Enterprise Cloud Resources

• Elevate cloud resources to enterprise class with the delivery of VMs on VMware, Azure, and AWS, adhering to consistent processes for configuring data, businesses services, and cloud resources

Gain Cloud Service Oversight, Minimize Risks

• Govern the right cloud resources to the right business activities based on consistent policies and rules ensuring compliance and security needs are met

Simplify Experience through Self-Service

• Allow users to order cloud services for everything they need via fast, consistent, and easy-to-use experiences

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Contact Us

Email: info@aspiresys.com | Website: www.aspiresys.com

SINGAPORE	NORTH AMERICA	EUROPE	INDIA	MIDDLE EAST	BELGIUM
+65 3163 3050	+1 630 368 0970	+44 203 170 6115	+91 44 6740 4000	+971 50 658 8831	+32 3 204 1942