
MULTI-CLOUD ENVIRONMENTS ARE BECOMING THE NEW NORMAL FOR IT.

**IS YOUR ORGANIZATION READY TO TAKE ON THE CHALLENGE OF HYBRID
CLOUD MANAGEMENT?**

February 2016

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Executive Summary

VMware commissioned Dimensional Research to investigate cloud adoption patterns. The research also examined the benefits customers expected to receive from their cloud implementations, along with the current levels of automation being used to operate these clouds.

This report finds a large majority of companies are already leveraging a hybrid or multi-cloud strategy. In order to reap the benefits of a multi-cloud solution, participants of this survey stated that cloud automation is critical.

While most businesses are still early in the cloud automation journey, they have lofty aspirational goals. Most companies want sophisticated automation that will enable both automated infrastructure and application deployments. Nearly three-quarters of those surveyed stated their company plans to offer self-service to various end-users.

However, most respondents indicated that today they are still leveraging scripts and task-based automation tools. The strong desire for a unified management and automation solution indicates that IT leaders are aware that today's primitive tool approach will not deliver the benefits that IT and business expect. This creates a gap in the automation capabilities they have today and the benefits they expect from their cloud strategy.

Key Findings

- **Mixed cloud environment is now the norm**
 - 69% use a hybrid cloud approach
 - 75% prefer a private cloud
 - Cost savings drive companies to select a public- or private-cloud-first stance
- **Companies are implementing automation to achieve their cloud strategy**
 - 69% started automating their private cloud in just the last two years
 - 55% plan for automated infrastructure and application deployment
 - 72% are striving for automated self-service capabilities
- **Currently used tools are not capable of delivering on the cloud vision**
 - Only 55% are currently using a dedicated automation platform
 - 64% desire a unified solution for cloud management and automation

VMware Cloud Management

VMware vRealize Suite is a Enterprise-ready Cloud Management Platform (CMP) that gives organizations the ability to provision and manage at scale – heterogeneous compute, storage, network and application services across multi-cloud environments. It addresses cloud management requirements across day one service provisioning and day two operations. Day one capabilities support the need to provision resources quickly and efficiently across both private and public clouds. Embedded policy management gives organizations control over decisions such as “where resources are provisioned” and “who can request resources”.

Day two capabilities start with the ability to intelligently monitor and manage the health and performance of infrastructure and applications across physical, virtual and cloud environments in order to meet business SLAs. Capacity management combined with companion automation capabilities to right-size, reclaim and retire already provisioned resources, helps organizations achieve the best use of data center resources. VMware's CMP also provides day two capabilities that help IT teams understand and manage the costs of both private and public cloud resources.

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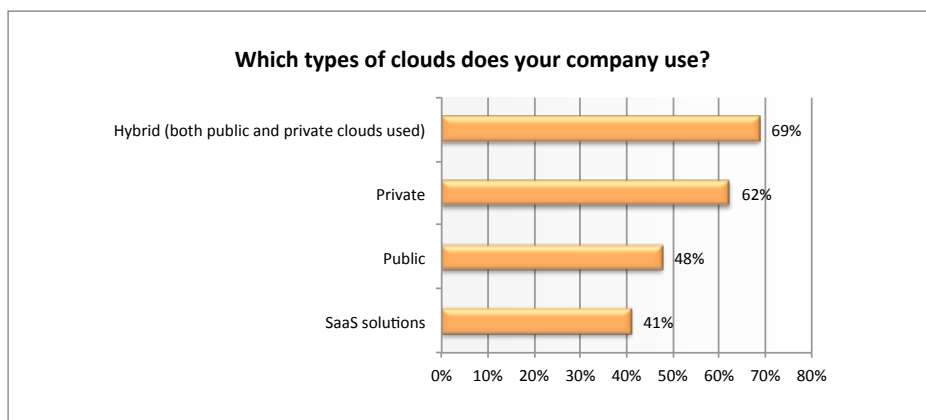
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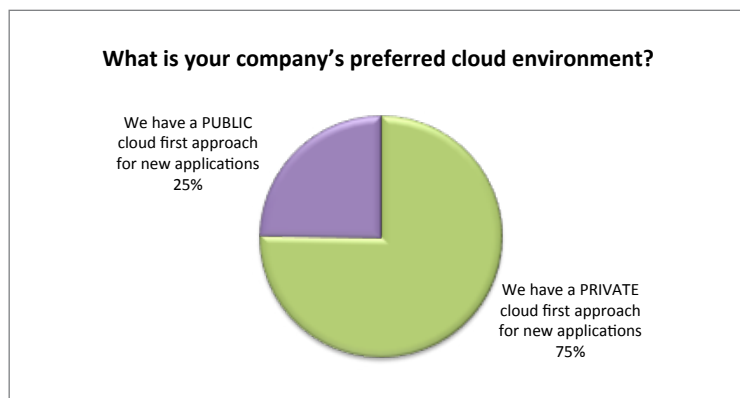
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Detailed Findings

Today, nearly 7 in 10 companies (69%) are already utilizing a hybrid cloud approach. It was just a few years ago that the public cloud emerged from testing sandboxes with the proof that it can deliver business value while mitigating and managing security and compliance risk. This research finding indicates that, for most companies, they must be able to manage both private cloud and public cloud assets and operations. Utilizing multiple cloud platforms will require a plan that encompasses the entire IT organization to converge complex processes and numerous cloud management tools.



While the hybrid cloud is part of IT's operating environment, three-quarters of the participants (75%) still prefer to operate a private cloud. Participants that were interviewed stated this preference based on their ability to deliver services faster, cheaper and more reliably. They also mentioned this approach was superior for managing security, compliance and data risk, and they were more confident they could better meet business requirements with something physically tangible that they owned. But this preference has not changed IT's ability to remain objective and receive benefits from the public cloud. IT will require solutions that can manage both private and public clouds.



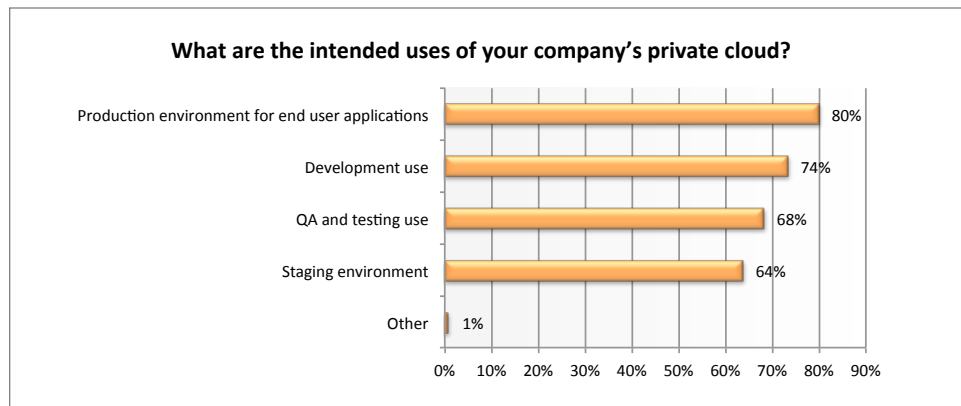
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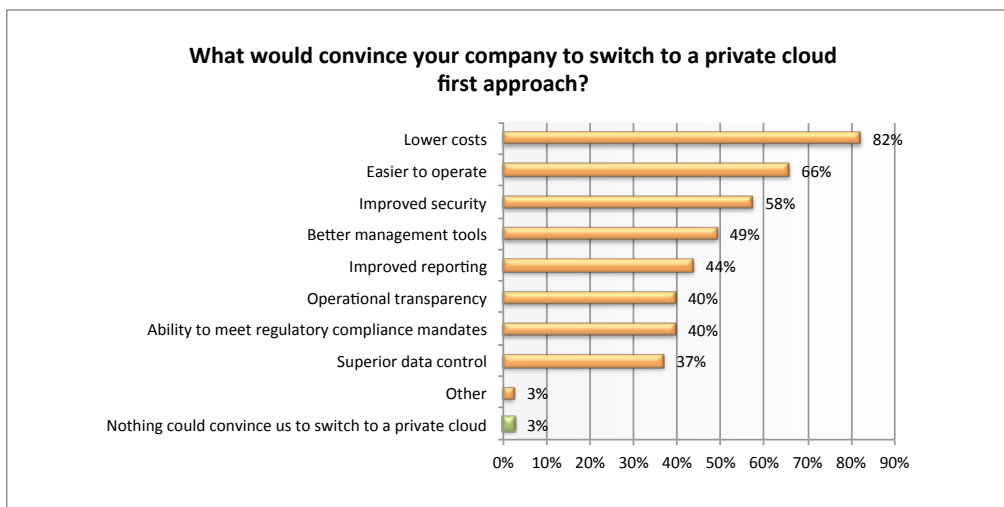


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Participant responses indicate that private cloud utilization has fully matured, as their private cloud provides value and services across the entire software development lifecycle. For these companies, the cloud has moved beyond the initial use models of provisioning a simple infrastructure for development or spinning up additional compute resources for business applications. This does place a higher demand on the tools and processes needed to efficiently manage and govern the use of the private cloud for a range of services.



In the survey, participants were asked whether they were a 'private cloud first' company or took a 'public cloud first' approach. They were then asked what it would take to convert them to the other approach. Perhaps not surprisingly, the answers from both types of companies was nearly identical, with lower costs, easier operations, and improved security holding three out of the top four answers for both groups. Participant interviews revealed that those with mature private cloud operations felt their physical assets and people delivered better services, while those with a public cloud preference saved on capital and personnel costs and shared that their resource costs were correlated to actual business need. Neither preference was cited as a technology advantage but was rather based on their organization's ability to deliver the best services at the lowest cost to the business.

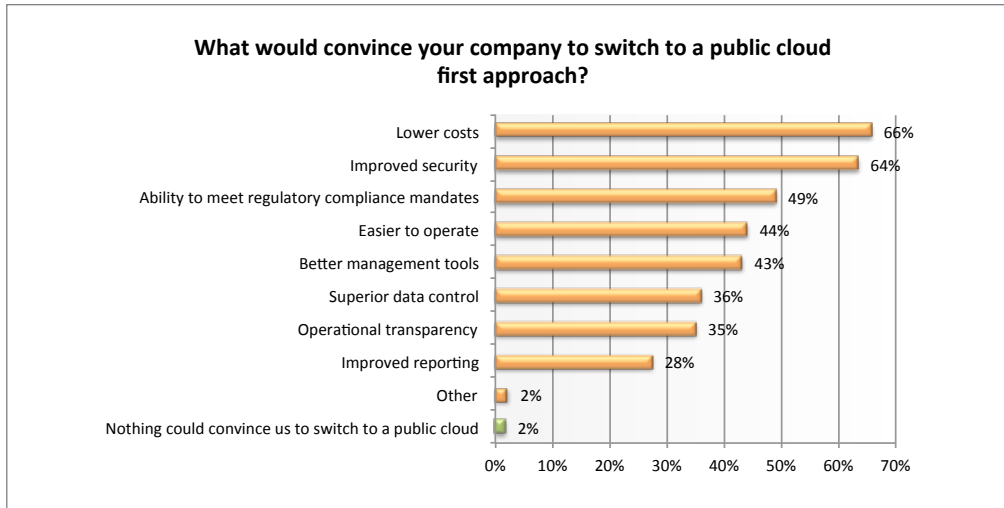


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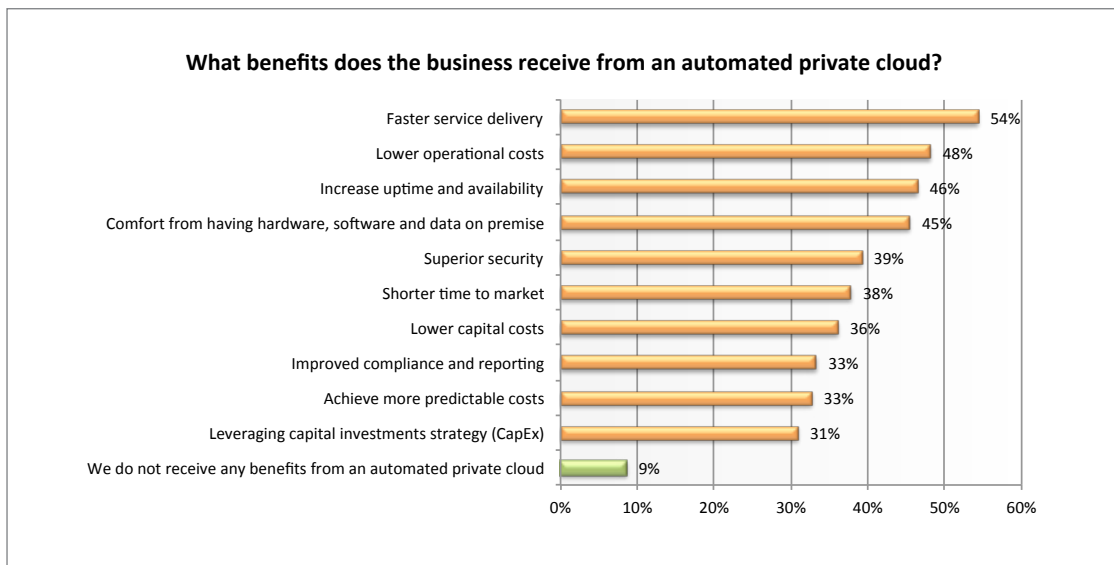
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The top three business benefits expected from a private cloud strategy were faster service delivery, lower operational costs and increased uptime. Driving better hardware utilization is often credited with cost savings. Increased uptime and faster service delivery were described as benefits from standardized processes that are consistently enforced. Participants explained that this desire for fast, consistent processes often led them to investigate and begin automation for the private cloud.



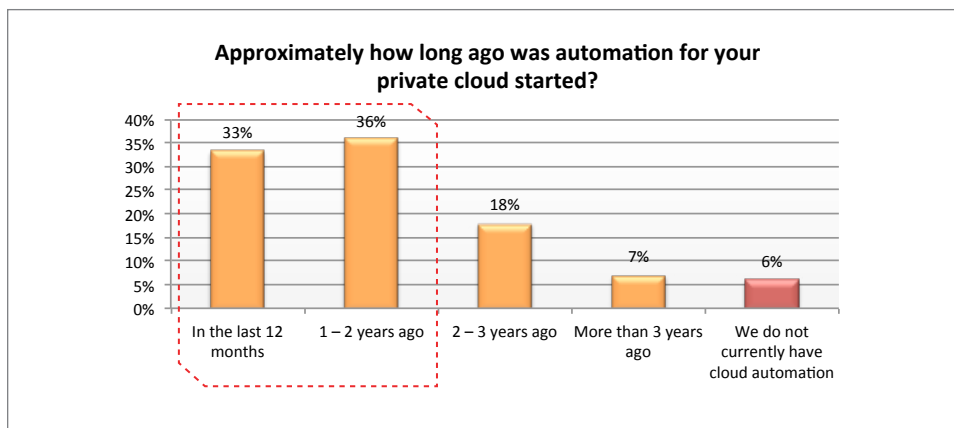
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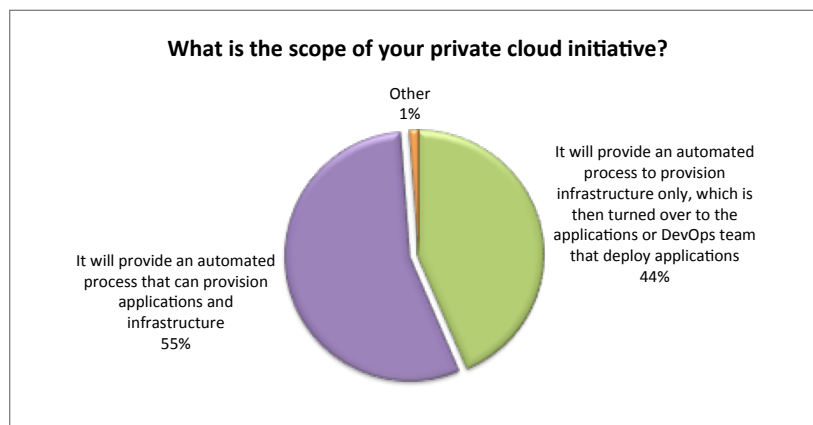


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While private cloud initiatives have been around for several years, 69% of the participants indicated they have just started automating their cloud in the last two years. Those interviewed shared that the lag between private cloud utilization and automation was part of a maturity process. The first challenge was maturing teams and roles, with new processes adapted to the changing requirements of a cloud environment. Once those processes were mature they then could be considered for automation. The second challenge was selecting automation tools and solutions that could manage an end-to-end process beyond patching applications or spinning up a single virtual image. They shared that at the beginning they just didn't know what they didn't know yet, and it took time and experience to learn the scope of all the tasks that needed to be automated.



Participants were asked about their automation objectives and more than half indicated they wanted the ability to automate the deployment of infrastructure, as well as applications on top of that infrastructure. In contrast, discussions with participants revealed that most companies are only able to automate the standing up of basic infrastructure today. That infrastructure is then passed over to another team to layer on the applications. This research confirms that most companies are still very early on the path to automated application deployments.



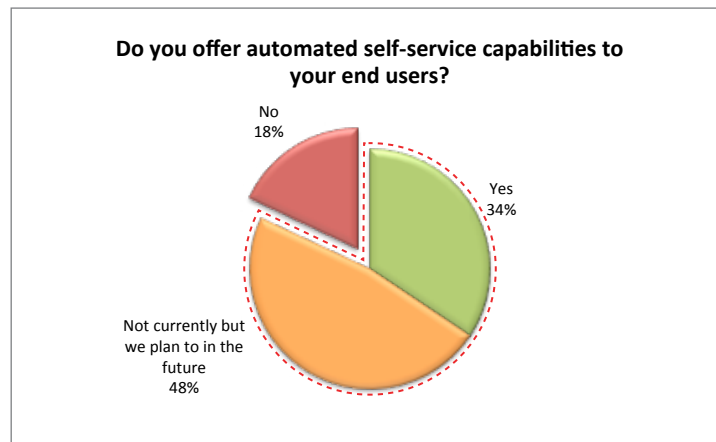
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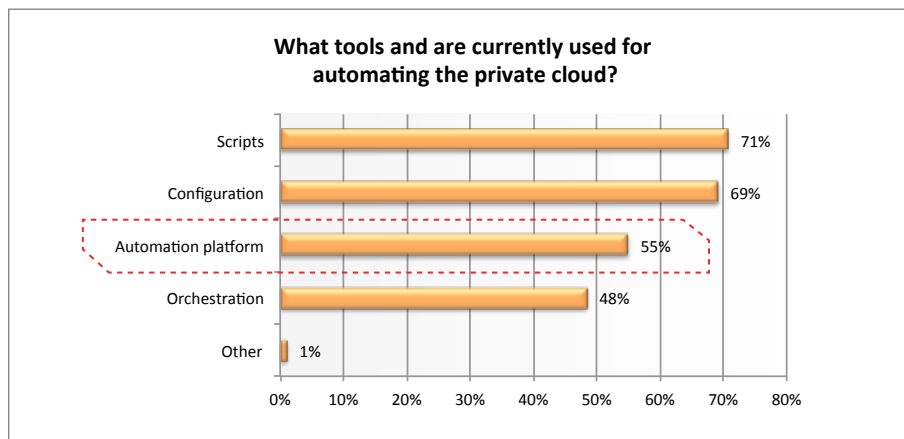


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72% aspire to offer self-service capabilities to end-users. However, most service delivery processes today are only partially automated, with scripts automating a portion which is then stitched together with manual procedures. Full automation will not only require the ability to automate infrastructure and software, but that process has to be made easily available to end users. Participants also indicated that self-service must be governed to meet data, compliance and cost controls, adding additional hurdles.



Today only 55% cite that they are using an automated platform, and the use of scripts and basic configuration management is far more common. When interviewed, many shared that automation platforms in use today are fairly narrow and task-centric. They stated these tools cannot provide the capabilities of full application automation, nor a self-service offering. Thus most of the market today lacks the tools and capabilities necessary for their stated cloud and automation goals.



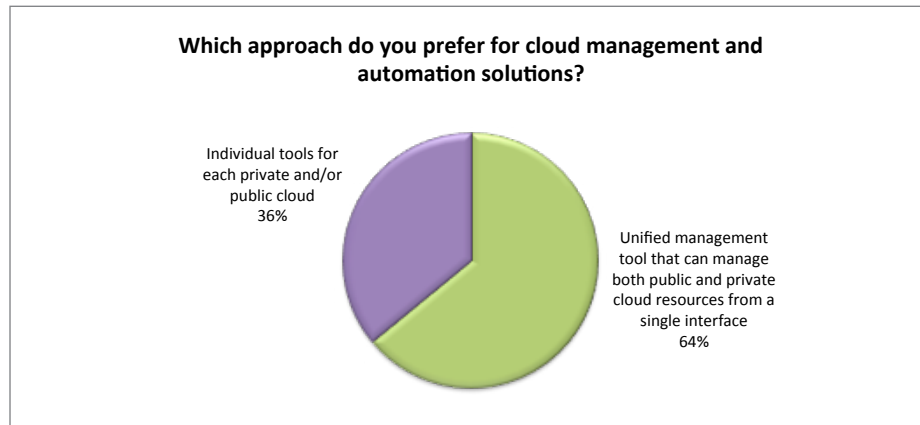
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Lastly, survey participants were asked their preference for cloud management and automation solutions for their cloud environments. 64% prefer to have a unified solution that can manage both private and public clouds in a single interface. Considering the focus on delivering fast IT services through a solution that is cheaper and easier to manage, and combined with aspirations of end-to-end automation, a unified solution becomes a critical requirement.



Conclusion

Multi-cloud or hybrid cloud is now the normal cloud environment for the foreseeable future. This places increased demands on the IT teams who must offer IT services faster and more reliably, at lower costs across multiple platforms. This in turn puts a premium on the ability to efficiently manage and operate multiple environments to meet business goals as well as growing compliance requirements. IT professionals see this challenge and have chosen automation as the method to capture all the benefits a hybrid cloud strategy offers.

With many companies still early in their automation journey, however, it is challenging to anticipate and predict the needs their desired end state will require. As such, companies need to take time to ensure that tools and processes can be planned out. This will help migrate them from the many point tools and scripts currently used, to an end-to-end automation solution. However, choosing a new tool at each cross roads will lead to wasted effort and slow the progress towards the very benefits that IT and business are turning to the cloud for. A solution path that can mature from deploying just a test bed or a new computing engine, to one that can deploy applications and provide automated self-service, is feasible.

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About The Study

This study included responses from IT professionals worldwide, with direct cloud responsibilities, who were invited to participate in a global survey on their company's cloud implementation and drivers, as well as their strategy and future objectives. The survey was administered electronically and a total of 348 IT professionals completed the survey.

In addition, Dimensional Research conducted around two dozen in-depth telephone interviews. Participants were asked detailed questions about cloud strategy, direction, process, current capabilities and future objectives. VMware was not revealed as the sponsor of the research and participants were offered a token compensation for their participation.

About Dimensional Research

Dimensional Research® provides practical marketing research to help technology companies make their customers more successful. Our researchers are experts in the people, processes, and technology of corporate IT and understand how IT organizations operate. We partner with our clients to deliver actionable information that reduces risks, increases customer satisfaction, and grows the business. For more information, visit www.dimensionalsearch.com.