

IDC Partner Spotlight

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Wipro Leverages Red Hat CloudForms to Offer Hybrid Cloud Management as a Service to European Enterprises

Introduction

In the race to digital transformation, companies are capitalising on 3rd Platform technologies (cloud, Big Data and analytics, next-gen security and mobility) to make their IT infrastructure a business enabler. A cloud transition strategy is fundamental for business transformation.

Public cloud gives enterprises agility, scalability and cost-efficiency, but not all enterprise applications require agility and cloud characteristics all the time, making hybrid cloud a natural evolution. IDC estimates that by the end of 2018, 85% of large enterprises will have committed to multicloud environments. This makes IT infrastructures much more heterogeneous, dynamic and complex — bringing new challenges.

Integrating multiple cloud services to have a unified view to manage demand dynamically is key to success. In addition to cloud management, automation of tasks such as provisioning across the entire hybrid stack is also key to making IT infrastructure efficient. In order to make hybrid cloud effective, secure, responsive and cost-efficient organisations need expertise to formulate their hybrid cloud strategy — that is, to determine which applications are best candidates to move to public cloud, which to keep on private infrastructure, and which to design and host dynamically. They also need assistance in determining what the right strategy is for them and unifying all the services.

IDC believes that an effective cloud management strategy and data and application portability to provision the best infrastructure for any application in a dynamic way can determine how a business can meet its digital objectives.

But creating a single pane of glass for hybrid cloud management can be complex and time consuming. In conversations with IDC, customers share the challenges around using siloed proprietary automation tools and the cost and effort in sewing them together for a standardised approach. We believe solution providers that integrate multiple cloud automation and management layers and offer it as a service save customers time and money, and give them a standardised multicloud management fabric, so they can focus on business objectives.

In This IDC Partner Spotlight

This IDC Partner Spotlight discusses how hybrid cloud and multicloud are becoming integral to enterprise IT, but how they increase management complexities and challenges around cloud automation, integration and orchestration. It explores how integrated hybrid cloud management can help make hybrid cloud more effective.

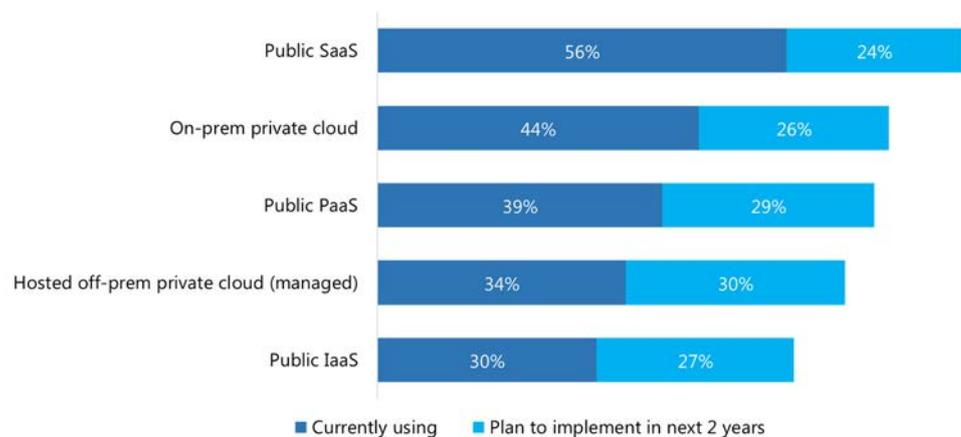
It also assesses solution provider Wipro's investment, innovation and commitment to offering hybrid cloud management solutions to help enterprises overcome challenges around automation and integration of cloud services. It also discusses the role of Red Hat's technologies, mainly CloudForms and Ansible, in Wipro's offerings and what benefits open source brings to customers.

Situation Overview

European companies are transitioning to cloud to take advantage of scale, agility, flexibility and reduced capital expenditures (capex). Security, data privacy and data sovereignty issues have made this transition to hybrid cloud a reality, but have also made it uneven and patchy.

Figure 1

Multicloud, Hybrid Cloud Becoming a Reality in Europe



Source: IDC, 2018

In the rush to cloud, enterprises have purchased public cloud instances on an ad hoc basis, and over time they realise there is no mechanism to track cloud spend or manage instances. As multicloud gains further prominence, other new challenges are emerging such as the complexities in managing APIs of each cloud service in use.

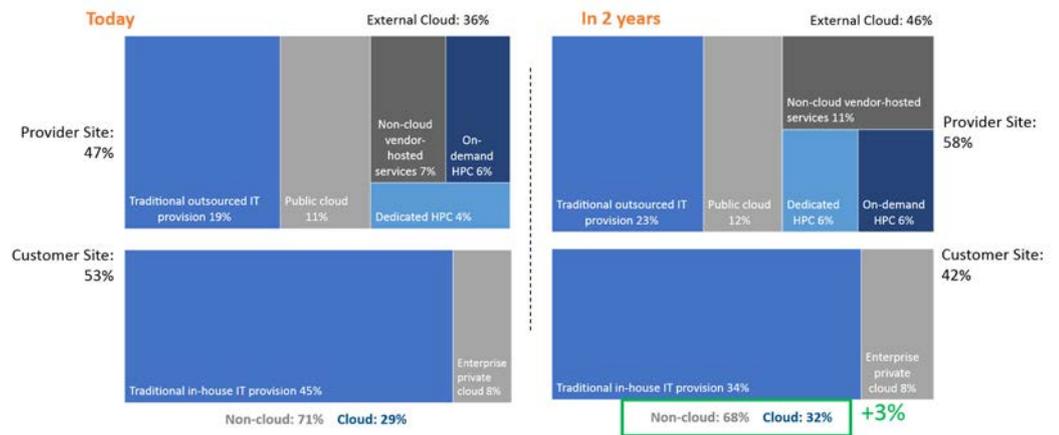
Cloud management has become complex as applications become federated across multiclouds. IT teams are realising that existing siloed, proprietary cloud management tools are insufficient in providing necessary wide-lens visibility so they can enforce policies and standards across the environment. This is where, IDC believes, solution providers that offer integrated cloud management services built

on vendor-agnostic, open source technologies can help enterprises truly yield the benefits of multicloud.

IDC believes that in the era of multicloud, platform-agnostic management tools are essential because they can shield enterprises from vendor lock-in, be it from on-premise infrastructure providers or public cloud providers. It also saves enterprises the complexities of managing individual cloud APIs or stitching together the cloud management services themselves.

Importance of a Seamless Hybrid Cloud Experience

Figure 2
Cloud Impact on IT Budget Distribution



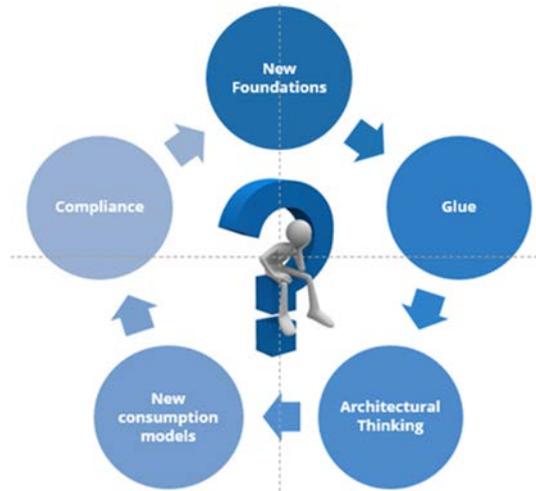
Source: IDC, 2018

The future of enterprise IT is rooted in hybrid and multicloud principles, bringing in complexities around integration, automation, management and security. In fact, by 2020 we expect that we'll stop referring to cloud services as "private cloud" or "public cloud" and it will just be a provisioning mechanism to get work done and become the "new normal".

Challenges in Building a Programmatic Multicloud

The reality is that multicloud is actually much more than just having multiple providers. It is raising a lot of questions for enterprises looking to have a programmatic multicloud by design.

Figure 3
Pillars of Programmatic Multicloud



Source: IDC, 2018

As nearly 85% of organizations commit to multicloud architectures, it will drive up the rate and pace of change within IT departments as they start to consider things such as:

- **Next-gen foundation.** Which virtualised or containerised building blocks should we adopt and build? And then what about software-defined infrastructure and API architecture?
- **Glue.** Which cloud software platforms to adopt to unify and integrate these federated cloud architectures? How do we automate the infrastructure in a simplified manner?
- **Architectural thinking.** Which workload goes on which cloud and supported on which process — how to best identify these criteria?
- **New payment methods.** How to combine capex, lease, flexible capacity and pay-as-you go payment methods and bring transparency to costs.
- **Compliance.** How do we get and manage European cloud compliance for this infrastructure? And how do we continuously track and maintain compliance in such a dynamic infrastructure, applications and data stack?

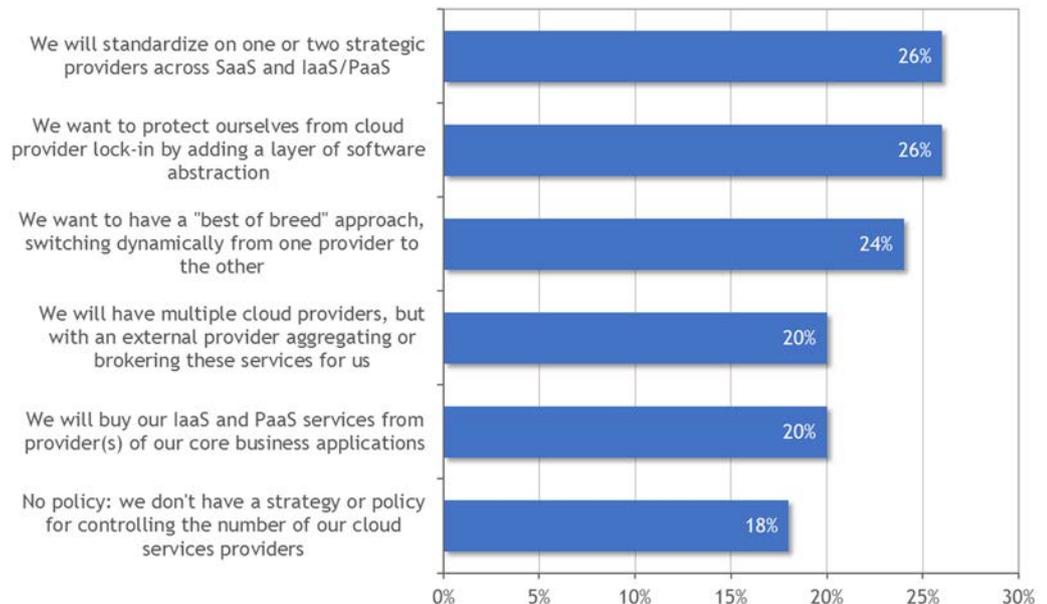
IDC believes unified and integrated cloud management services will have a key role to play in helping hybrid and multicloud users to address many of these above concerns. Using these services and automating key tasks can free up businesses from the task of evaluating and testing the best-of-breed management tools to develop their own integrated hybrid cloud management platform (the glue).

"We have been collaborating with Red Hat in the European markets for positioning cloud technologies and have had successful deployments across verticals. The best part about choosing an open source technology is the flexibility it offers to build and deliver a customised use case at a rapid pace. Red Hat has been agile and proactive in bringing its best talent forward, especially to develop specific APIs required for interoperability among disparate technologies. Wipro and Red Hat have invested in a number of joint solution frameworks that our customers can leverage for their cloud journey."

*Manmeet Singh Marwah,
Emerging Practice Director,
Global Infrastructure Services,
Wipro*

Besides, as technologies are moving at much faster rates, catching up with new features could become a resource-intensive task. As shown in Figure 4, standardisation, automation, freedom from lock-in and best-of-breed IT services are key priorities for companies already on multicloud journeys.

Figure 4
Key Priorities in Multicloud Journeys



Source: IDC, 2018

Overview: Wipro and its Hybrid Cloud Management as a Service

Wipro is a global information technology, consulting and business process services company. It offers its IT services and solutions to more than 1,200 clients globally with presence across 100 countries and has 160,000 employees. Wipro employs cognitive computing, hyper-automation, robotics, cloud, analytics and emerging technologies to build solutions that help enterprises adapt to the digital world.

In the fiscal year 2016–17, Wipro's gross revenues grew by 7.4% to \$7.7 billion. Its Global Infrastructure Services (GIS) accounts for 33% of its total revenues.

With a focus on facilitating enterprise digital transformation, Wipro develops IT solutions aimed at helping customers simplify processes, modernise applications and enable cognitive intelligence to meet their business needs. Almost 70% of customer deals have hybrid cloud requirements.

The solutions provider uses best-of-breed products from a host of ecosystem partners including cloud and open source technologies to provide its cloud services and solutions.

Sensing the growing complexity of IT transformation to hybrid cloud, Wipro has invested in developing solutions for cloud application migration, cloud security, cloud integration services and cloud management services. The service provider

"Red Hat continues to innovate in the cloud management space to help customers overcome cloud management complexities. Integrated hybrid cloud management services such as the ones provided by Wipro can help firms optimise workloads for the right infrastructure and save costs."

Jayne Handley, Director, EMEA
GSI Business, Red Hat

has built a dedicated Cloud Operations Center (CoC) that provides a cloud management platform for customers — to provision, configure, secure, monitor and manage their applications and infrastructure — to have a seamless hybrid cloud experience. The platform includes an integrated management solution based on multiple point solutions.

IDC believes that an open, agnostic approach to cloud management services gives customers the flexibility to choose and decide their management framework. Using integrated cloud management services frees companies from the headache of assessing each point solution themselves and integrating them for effective hybrid cloud management.

In our opinion, a cloud management tool that can span a multivendor environment and offer full administrative and monitoring capabilities can bring benefits such as:

- **Service catalogues and self-service provisioning** of virtual machines on demand directly based on preconfigured approval workflows
- **ITaaS and cloud pricing models** — metering and easy chargeback to internal business units based on consumption as well as cloud-based pay-per-use pricing models
- **Unified service management** with centralized policy management and workflow automation
- **Compliance, security and monitoring** of services in the cloud environment
- **Single pane of glass — centralised dashboard of SLAs and assets** spanning full hybrid cloud environments
- **Well-defined workflow and processes automation** across the proposed and third-party solutions and platforms
- **VM discovery and life-cycle management** across entire virtualised infrastructure
- **API-based integration** with existing tools and public or private cloud
- **Future-ready and DevOps-friendly** with analytical insights to predict capacity requirements and application response times

While the benefits are a key criteria, pricing of integrated managed services can make it impractical for many enterprises.

Wipro's Hybrid Cloud Management as a service based on Red Hat CloudForms is priced based on workloads and number of VMs, where customers pay for business outcomes. IDC believes it fits well with the future of multicloud because customers go to cloud, leverage cloud consumption models and can use the same consumption-based model for management of cloud as well.

IDC believes that as application, data and infrastructure sprawl continues, businesses find it hard to understand application profiles to determine what infrastructure it best fits. This is one key area where integrated cloud management

services can bring value by helping to identify the applications that are the best candidates to move to public cloud, determine the right strategy for them and, once they are moved to the cloud, offer a single consolidated management framework for a seamless cloud experience.

IDC also believes that a single pane of glass view for management is critical to simplify the heterogeneous cloud environment because enterprises want automated orchestration and automated provisioning for workloads in public cloud and workloads on-premise. This is because relying on a virtualisation admin to get on-premise infrastructure will not meet business expectations for a seamless cloud experience as they will have to stitch together security, network and provisioning and configuration of the instances themselves, making the approach traditional, monolithic and time consuming.

Although the business benefit outcomes are the key takeaways, for the IT department, integrated cloud management services based on open source enables a boundary-less, software-defined, API-based infrastructure that brings together agility and scale of public cloud and a modern private cloud for benefits of both cloud setups: cost efficiency, application and data portability, security, compliance and IT control.

The open, vendor-agnostic principles which Wipro offers gives customers more flexibility and options to choose from. It also frees them from any lock-in and helps to better integrate with their current infrastructure.

[Wipro's Collaboration with Red Hat and Commitment to Open Source](#)

Each year, Wipro invests in training over 5,000 employees on open source technologies. These employees contribute actively across 60 community projects on Wipro's Open Connect Platform. Its open source commitment also stems from its deep partnership with Red Hat which began in 2006 as a Red Hat Premier Partner.

Wipro has placed its bets on enterprise-grade open source technologies from Red Hat such as Red Hat JBoss Middleware and Red Hat JBoss Enterprise Application Platform to offer its end-to-end app and middleware migration services.

Wipro has also embraced Red Hat's open cloud container platform and management technologies more recently to build its multicloud and hybrid cloud management as a service portfolio.

Wipro leverages Red Hat OpenShift — the container platform — and Red Hat CloudForms as part of its new transformation solutions.

IDC believes that the appetite for multivendor unified management services is growing among enterprises and open source foundations will help integrate management services.

IDC also believes that because of the inherent nature of the enterprise open source model, Wipro can accelerate innovation and introduce new features by benefitting from community-led innovation.

For customers, there is freedom of choice and flexibility to use any cloud resources and yet benefit from integrated cloud management services.

Red Hat CloudForms and Ansible for Multicloud Management

Red Hat's management products include Ansible, Satellite, Insight and CloudForms (the open source multicloud management platform). CloudForms can discover existing workloads in a brownfield environment where customers have a shadow IT environment, helping IT take back some control and make multicloud more programmatic and less ad hoc. It can also discover environments that are not provisioned and IT can bring all that back into the automation, provisioning and orchestration cycle, so all provisioning requests can go through CloudForms and chargebacks will be more transparent.

Red Hat is also integrating Ansible into CloudForms as part of its vision of the automated enterprise. Earlier this year, at Red Hat's annual summit in Boston, the vendor announced Ansible-enabled multicloud management with Red Hat's latest version of CloudForms adding native Ansible Playbooks support. Although CloudForms will continue to support integrations with other automation tools such as Chef and will still support Ruby-based scripting, Ansible will become the product's core automation platform going forward. Using Ansible Playbooks to automate and enforce a wide range of predefined policies and processes across multiple clouds will simplify and streamline operations.

Products such as Red Hat OpenShift and Red Hat Cloud Infrastructure, which incorporate CloudForms, will also benefit from the addition of Ansible to the CloudForms platform. Red Hat indicated it plans to extend the use of Ansible more broadly across the Red Hat portfolio over time.

Popular among developers and DevOps teams, Ansible has found favour because of its reliance on human readable YAML coding and its lightweight agentless architecture, which can be quickly implemented by generalist developers. IDC expects that Ansible features integrated in CloudForms will become important in the multicloud world as businesses seek to reduce "friction" across complex development and deployment toolchains while helping to abstract away complexity and arm both developers and IT operation teams with simplified processes to manage across cloud, container and virtualised resources.

In our opinion, building hybrid cloud management services using Ansible and CloudForms together will help service providers strengthen their position among modern cloud-native DevOps teams and dynamic multicloud and container-based infrastructure environments.

How Wipro Uses CloudForms

As a global systems integrator for Red Hat solutions, CloudForms is a key part of Wipro's cloud automation, orchestration and management services. The open foundation of CloudForms helps Wipro's services to remain vendor-agnostic and add a wide array of management tools to give customers flexibility. In many cases, organisations are already using discrete cloud management solutions. This open, agnostic model can help widen its total addressable market for cloud management services.

Wipro has also invested in a software-defined centre of excellence (CoE) where it deploys, tests and hardens the services and builds custom PoCs depending on customers' key concerns, be it security, reliability or simplified management. Wipro also uses the PoC of its management services to orchestrate and automate cloud management and contextualises the benefits to each customer. IDC believes Wipro's investment in CoE and building custom PoCs and collaborating with Red Hat engineers differentiates its cloud management services.

Case Study

Wipro has installed its multicloud management solution based on Red Hat CloudForms at several customers' IT environments across various verticals. Most recently, it won a cloud management deal with a transportation customer in Europe.

Prior to using Wipro's solution, the customer was facing challenges around distributed infrastructure across various datacentres and needed to manage them from a single pane of glass. The other challenge was to bring in automation in provisioning of VMs because manual provisioning was slowing its build and deploy teams and made the release cycles longer. Also, the flexibility to scale up and down and to optimise resource cost was a challenge in a complex IT infrastructure landscape.

Wipro's solution helped the customer to manage the entire infrastructure and public cloud through a single pane of glass. It helped bring in automation on VM provisioning and do life-cycle management of VMs. Catalogue-based provisioning, quota management and billing, and metering chargeback were other key features of the solution that was useful for the customer.

The cloud management solution also integrates with the customer's existing toolsets so the customer could reuse the existing tools and yet achieve increased operational stability, better managed infrastructure, cost optimisation and enhanced end-user experience.

Challenges and Recommendations

Multicloud and hybrid infrastructure are becoming default setups, raising management complexities. But enterprises are currently overwhelmed with a myriad of choices of cloud management tools and are sticking to their existing use of discrete tools for the early phases of the hybrid cloud life cycle. IDC believes that Wipro's custom PoC approach can help it overcome the initial customer inertia in investing in a unified cloud management service. The solution provider should continue to integrate the open foundation that makes its services viable in the long run.

As cloud enters phase 2.0, many management vendors and solution providers are likely to innovate in the integrated hybrid cloud management space to essentially create a "glue" that sticks the multiple cloud services together. Wipro could have an early-mover advantage as a service provider with deep commitment and investment in the cloud management space.

Another caveat to the development of the open ecosystem is that the notion of freedom from vendor lock-in when using open source technologies may not hold entirely true. This may well be a small change in the big scheme of the future of open source adoption and penetration via a well-established ecosystem or technology and channel partner. But it is important that together Red Hat and Wipro highlight the business benefits and work on pricing as the differentiator to attract more customers.

Lastly, Wipro should highlight its integrated consumption based pricing that can be a key differentiator as the hybrid cloud management space gets crowded.

Conclusions and Future Outlook

Overall, in our opinion, Wipro's bets on CloudForms and open source are likely to pay off as infrastructure heterogeneity becomes a key challenge for enterprises, making integration and unified automation critical for hybrid cloud success. Its bet on CloudForms is also appearing to be paying off especially with Red Hat's continued innovation in the management space and adding Ansible features to CloudForms.

Wipro, using Red Hat technologies as part of its cloud management and automation services, provides customers with a hybrid and multicloud infrastructure featuring security, reliability and automation via a single pane of glass. This takes away the complexity in managing hybrid cloud so enterprises can focus on their core competency — developing new applications and software to help improve customer experiences and deliver on digital transformation objectives.

IDC sees this as not just a product plus service offering, but as a service (ever service), and this is where the industry is heading. Customers are shifting to a "cloud first" strategy for updating/replacing traditional systems and to "cloud only" when developing their next-generation competitive advantage systems and services. IDC believes that solution providers that make it easy for enterprises to consume cloud services while helping customers meet regulatory requirements and simplify cloud management, make it cost effective and secure, and these will be the ones that thrive in the competitive landscape. Wipro's hybrid cloud management services built on Red Hat technologies has the potential to be critical in the hybrid cloud world.

There is also the opportunity for Wipro to use the technologies to extend conversations beyond management to even DevOps and the continuous development pipeline at its customers' environments, aligning it to business transformation. Most importantly, IDC believes it can also benefit from community-led innovation, where much of it is coming from the customer end. For instance, large banks such as Santander are actively participating in the open source community, making open technologies relevant because of customer-led innovation.

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