Best Practices for Operating and Managing a Production IBM Cloud for VMware Instance

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Employ the right type of cloud to accelerate innovation

PUBLIC
- Public and open-by-design
- Infrastructure on Demand:
  - Easily configure, deploy and scale your infrastructure
  - Leverage community advantages and high quality releases that only Open Source can provide

HYBRID
- Multi-cloud model options
- Choice and Control:
  - Instant scalability of public with support for critical enterprise integration
  - Predictable performance of dedicated with local control

PRIVATE
- Management and deployment options
- On Premise and Hosted:
  - Private: Deploy on premise securely
  - Hosted: Spare capital expense with a hosted private cloud

Sources: Forbes and Gartner
IBM & VMware a strategic global partnership

• Dedicated solution, deployed on single-tenant, bare metal infrastructure – utmost in security and control

• Compatible with VMware workloads on premises – No application rewrites

• Sold in a flexible, cloud monthly subscription model – No contracts

IBM Cloud provides the ability to move VMware workloads to the IBM Cloud seamlessly, using a common platform for management, networking and security on the trusted foundation of VMware.
VMware in the IBM Cloud

- IBM Cloud was first to market delivering and operating VMware workloads in the public cloud
- A decade-long partnership led to a new offering in 2016
- IBM Cloud was named the 2017 VMware Partner of the Year
- IBM & VMware just established a joint Innovation Lab to further advance technologies and experiences on the IBM Cloud

IBM is...

- #1 operator of VMware workloads in world
- #1 VMware SISO partner
- #1 VMware NSX customer and business partner
- #2 VMware vSAN customer and business partner
## Common Use Cases for VMware on IBM Cloud

### Data Center Consolidation
- Consolidate multiple on-premises DCs, or fully evacuate existing DC

### Capacity Expansion
- Quickly address resource constraints & demand spikes
- Expand capacity w/o CapEx

### DR, Backup, HA
- Protect data, & minimize unexpected downtime
- [New] HA, multi-zone infrastructure for mission-critical workloads

### Security & Compliance
- Secure apps, protect data and networks, and reduce audit risk
- Trusted/geo-fenced infra. helps meet data sovereignty requirements

### Infrastructure Modernization
- Leverage latest servers/networking/storage, & VMW SDDC stack features

### App Modernization
- Transform heritage applications through containerization accelerating innovation with services like Watson AI, security, IoT, analytics, blockchain, and more!
- Build out next-gen apps with hybrid cloud approach.

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**VMware on IBM Cloud**

IBM Cloud provides customer’s the ability to move VMware workloads to the Cloud seamlessly, enabled via a common platform for management, networking and security.

<table>
<thead>
<tr>
<th>Top 10 reasons to run VMware workloads on IBM Cloud</th>
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<tbody>
<tr>
<td>1. Native root access &amp; visibility from app down to bare metal</td>
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<td>2. Flexible hardware configs &amp; licensing options</td>
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<td>3. Multiple storage tiers</td>
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<td>4. Design is secure to the core &amp; helps compliance readiness</td>
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<td>5. Minimize unexpected downtime and data loss</td>
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ActivTrades, a leading Forex and CFD broker is using IBM Cloud to boost performance, gain efficiency, and strategically deploy resources for data management - move that will position the company ahead of competitors and make it completely ready for the digital future.

- Traditionally, ActivTrades has been providing investing services mainly to retail traders in Europe. However their non-European client base is also growing as well as there is an increasing number of institutional clients showing interest in online trading.

- To tap this opportunity ActivTrades needed to ensure uninterrupted, fast, reliable, yet flexible and highly secure service, whilst remaining profitable with cost-effective infrastructure, despite low volatility.

- That is how ActivTrades migrated its online trading platform as well as the trading solutions they are using (MetaTrader 4 and 5) to a new, open platform that is flexible to deploy: IBM Cloud.

- In addition to the cloud infrastructure, the agreement also covers IBM technology and security services.

- "Our IBM Cloud based platform helps our clients to more quickly access up-to-date account information, stock quotes, community bulletin boards and online features to better manage their financial portfolios.

- Today we are able to deploy new services in days rather than months.

- We now have the capacity to settle more than a million transactions per day in real-time."

  Sashko Lazov, Global IT Manager, ActivTrades
NOVIS selects IBM Cloud to expand its business globally

NOVIS Insurance company, was established with international capital and is headquartered in Bratislava, Slovakia. Currently NOVIS operates in Austria, Germany, Slovakia, Czech Republic, Hungary, Poland and Finland. In 2017, the company launched its operations in Italy and in the beginning of 2018 in Sweden and Iceland.

"For us as an innovative insurance company, cloud computing offers the potential for significant improvements. It helps us transform and optimize operations, improve governance and transparency, and expand business agility and capability. When we compared the performance of our enterprise systems on cloud services from several providers, the IBM Cloud came out on top."

Siegfried Fatzi, General Manager, NOVIS Insurance Company
IBM Cloud for VMware Solutions: Jointly engineered cloud service

- Operational management
- IBM Cloud for VMware Solutions
- IBM services
- vRealize Suite, ISV ecosystem
- Customer data Center
- IBM Global Infrastructure
- Large-scale application migration

Choice & Control
Multiple VMware configurations

Expertise
4000+ cloud experts, in your industry

Innovation
Access AI & Blockchain via K8s
DR & Backup Use Case

Customer DC

vSphere Replication

Site Recovery Manager

vSphere Active VMs

Interconnect

vSphere Replicated VMs

Customer’s freedom of choice on IBM Cloud
Migrating VMs (HCX) on IBM Cloud

Seamless Bi-directional Migration
• Interconnects between sites loosely coupled – defined by end-users
• Multi-site connectivity
• Seamless app mobility between different VMW stacks
• Move Virtual Machines via vMotion, Cold, or Bulk migrations

Essential to Multi-Cloud Strategy
• Automatic VPN connectivity across sites
• vMotion and replication across disparate VMW stacks
• Multi-site connectivity

Maintain VMware Compatibility
• No need for NSX on premise
• No need to upgrade on prem vSphere
VMware Solutions Portfolio on IBM Cloud

Security
- IBM Cloud Secure Virtualization
- Gateway & Load Balancing
- Firewall

DR, Backup, HA
- Disaster Recovery
- Backup
- HA Mission Critical VMware on IBM Cloud

Storage

Containers
- IBM Cloud Private Hosted

Workload Migration – VMware Hybrid Cloud Extension (HCX)

Infrastructure Services
- Client-managed, Flexible VMware Stack

IBM Cloud Bare Metal Infrastructure
American Airlines Hybrid Cloud Journey
How American Airlines was able to seamlessly consume IBM Cloud.

Business Challenge
• Greatly improve Customer Experience.
• Retire Legacy Sites & Modernize DC infra for operational efficiency and adopting new application model.

Complexity and Ease of Operations
• Long Workload dependency analysis.
• No Service Impact.
• Multiple security and fault domains.
• Bandwidth & resource limitation.

Key Infrastructure Requirements
• Migrate from legacy hardware/software platform.
• Migrate from physical network architecture to NSX.

Key Outcomes
• App & Web tier migrated while keeping physical DB tier on-prem.
• Complete migration of workloads in 3 months.
• 500 VMs, 120 TB’s of data, 80 vLANs – Datacenter Evacuation and DR Site move
Why IBM?: IBM positioned a VMware on cloud configuration so that the company could migrate its applications out of the NN data center by 2018

Solution: Migration of x86 workloads, including those for life insurance, pensions, property and casualty insurance, and banking, to VMware platform-based IBM Cloud Bare Metal Servers. The solution is hosted in IBM data centers in Amsterdam, the Netherlands; and Frankfurt, Germany

Benefits: The low-cost, low-risk migration will have minimal impact on application availability. The applications are already running on the VMware solution, making them flexible and easy to move to the IBM Cloud platform
OSRAM moved production to VMware@IBM Cloud

**Details**

- 270 VMs, 300 TB data, VMware NSX for ByoIP
- Three site setup → Frankfurt & Amsterdam (IBM Cloud IaaS) & Ehningen (IBM Cloud Managed Service for SAP)
- OSRAM manages full IaaS layer in Frankfurt and Amsterdam for more control, transparency and scale
- VMs can be moved live from Frankfurt to Amsterdam (and vise versa) to escape maintenance and for DR
- Migration to IBM Cloud was done by IBM using Zerto

**Used IBM Cloud AddOns**

- for Disaster Recovery (RPO of 5 sec.)
- for Backup (650 TB data)
Pick your first workload and let’s see how IBM can help you set up a world-class hybrid environment.

For further information, please visit the following links:

- VMware on IBM Cloud
- IBM Architecture Center
- IBM and VMware partnership
Thank you

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Let’s get started.

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