Hybrid Cloud for the Enterprise

Research by Gary Chen, Research Manager, Software Defined Compute, IDC
There’s no “standard” path to cloud

Companies begin with cloud in many different ways.

Organizations end up with very different mixes of:

- On-premises/public cloud
- SaaS, PaaS, and IaaS
- Cloud native and traditional applications
- Cloud usage for dev, test, production, and mission-critical applications
- Use cases such as disaster recovery, backup, datacenter replacement, and burst capacity, among others
Public and private cloud are growing at the expense of traditional IT

Most organizations will end up using **BOTH** on-premises and public cloud.

The priority going forward is how to manage and integrate across diverse environments, **avoiding building more silos.**

<table>
<thead>
<tr>
<th>IT Environment</th>
<th>Today</th>
<th>In 2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional IT (on-premises)</td>
<td>57.1%</td>
<td>63.8%</td>
</tr>
<tr>
<td>Private cloud (on-premises or hosted)</td>
<td>21.2%</td>
<td>19.1%</td>
</tr>
<tr>
<td>Public Cloud – IaaS</td>
<td>21.7%</td>
<td>17.1%</td>
</tr>
</tbody>
</table>

Source: VMware on AWS Cloud Survey, IDC, June 2017, n=753
Hybrid cloud is defined by integration

Multicloud

Public Cloud(s) ↔ Public Cloud(s)

On-premises Private Cloud

Hybrid Cloud

Public Cloud(s)

Bi-directional portability

Robust, comprehensive integrations

On-premises Private Cloud
### The many faces of hybrid cloud integration

Many types of integration are needed for a robust and completely seamless hybrid cloud.

<table>
<thead>
<tr>
<th>Integration Type</th>
<th>Currently deployed</th>
<th>Currently + Plans to implement in next 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscribe to multiple public IaaS clouds</td>
<td>32%</td>
<td>68%</td>
</tr>
<tr>
<td>Using my existing management tools to manage public cloud resources</td>
<td>31%</td>
<td>68%</td>
</tr>
<tr>
<td>Ability to burst into the public cloud to handle usage spikes</td>
<td>27%</td>
<td>61%</td>
</tr>
<tr>
<td>Ability to seamlessly migrate workloads between the public cloud and my datacenter</td>
<td>26%</td>
<td>64%</td>
</tr>
<tr>
<td>Deploy an application that is stretched across public IaaS cloud and on-prem [(parts of the application running in both locations)]</td>
<td>25%</td>
<td>61%</td>
</tr>
<tr>
<td>Subscribe to public cloud with same hypervisor and similar infrastructure as my datacenter to achieve better compatibility with existing apps and provide familiar environment to IT staff/users</td>
<td>24%</td>
<td>68%</td>
</tr>
<tr>
<td>Federating user identity and access between public cloud and on-premises</td>
<td>24%</td>
<td>66%</td>
</tr>
<tr>
<td>Having a single management pane of glass to manage multiple public IaaS clouds and my own datacenter</td>
<td>24%</td>
<td>68%</td>
</tr>
<tr>
<td>Ability to have core set of IT policies that can be applied across multiple clouds and my own datacenter</td>
<td>23%</td>
<td>63%</td>
</tr>
<tr>
<td>Having a single self-service portal than can provision across on-premises and multiple public IaaS clouds</td>
<td>21%</td>
<td>58%</td>
</tr>
<tr>
<td>Having a unified service catalog across cloud and my datacenter</td>
<td>19%</td>
<td>63%</td>
</tr>
</tbody>
</table>

Source: VMware on AWS Cloud Survey, IDC, June 2017, n=753
Challenges to achieving hybrid cloud

**Differing infrastructures** (hypervisor, VM format, networking, and storage, among others)

**Different sets of management tools**

**Operational differences**

**Skills**

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**On-Premises Datacenter**
- MANAGEMENT
- IDENTITY
- NETWORK
- STORAGE
- HYPERVISOR

**Public Cloud**
- MANAGEMENT
- IDENTITY
- NETWORK
- STORAGE
- HYPERVISOR
**Consistent infrastructure = seamless integration**

- **Bi-directional portability**
- **Consistent operations**
- **Transparent integration at all layers**
- **Unified skill set and team**

**On-Premises Datacenter**
- Management
- Identity
- Network
- Storage
- Hypervisor

**Public Cloud**
- Management
- Identity
- Network
- Storage
- Hypervisor

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Seamless hybrid cloud use cases

**Datacenter Extension**
- On-demand capacity (regional, seasonal, temporary, burst)
- Footprint expansion (net new capacity for specific need, such as test/dev)
- Disaster recovery
- Backup

**Cloud Migration**
- Datacenter-wide migration/evacuation
- Infrastructure refresh (substitute old on-premises with new in public cloud – typically for category or tier of workloads)
- App-specific migration

**Next-gen Applications**
- App modernization
- New app build-out
- Hybrid applications
Methodology

The data presented in this InfoBrief comes from a custom IDC survey sponsored by VMware in June 2017 (n=753).
IDC analyst profile

Gary Chen
Research Manager, Software Defined Compute

Gary Chen is IDC’s Research Manager, Software Defined Compute. His research focuses on server virtualization, container infrastructure and management, and cloud system software (system software used to build IaaS clouds). Mr. Chen has also done extensive IT consulting with numerous businesses in the retail, e-commerce, healthcare, and publishing industries, he was overseeing software development, technical support, and datacenter operations.
Message from the Sponsor

A Closer Look at VMware Cloud on AWS

VMware Cloud on AWS is powered by VMware Cloud Foundation, a unified SDDC platform that integrates VMware vSphere, vSAN and NSX virtualization technologies, and will provide access to the broad range of AWS services, together with the functionality, elasticity, and security customers have come to expect from the AWS Cloud.

You can find more in-depth information on this topic by downloading the IDC white paper, “Attaining a True Seamless, Integrated Hybrid Cloud”, sponsored by VMware.

For more information please visit [http://www.vmware.com/go/vmc-aws](http://www.vmware.com/go/vmc-aws) or just give it a try.