Optimizing Cloud Operations and Applications: The Key to Getting Hybrid Cloud Right

Date: November 2019  Author: Mark Bowker, Senior Analyst

Abstract: Integration and seamless operations are critical as businesses embrace cloud and maintain on-premises investments. The next wave of successful cloud consumption adoption has the potential for even greater success beyond the initial business and IT maneuvers that are already in place. The future of cloud depends on IT’s ability to maintain control while providing support for a platform that inspires innovation and helps companies embrace technology to achieve success in their business.

Digital Transformation Continues to Drive Cloud Momentum

The benefits of cloud are well-known as businesses shape strategies to embrace new cloud services and modify the existing operating model to accommodate both new and existing applications. While business priorities drive the variety of approaches to the cloud, IT professionals have to balance the potential complexity and pace of adoption as 76% of organizations already employ a multi-cloud strategy and 76% of organizations are committed to a hybrid cloud strategy to bring the “cloud experience” on-premises. Hybrid cloud is viewed by IT professionals as the foundation for digital businesses, enabling agile application development.

Cloud adoption mimics server virtualization adoption as it too was first adopted for relatively simple applications for the initial phase and as confidence built, mission-critical applications became the server virtualization target. Today, digital transformation initiatives help shape and accelerate cloud priorities as they are focused on the use of technology to support ongoing business processes while driving new means of competitive differentiation. Digital transformation is providing the fuel for cloud initiatives as digitally mature businesses have opened the gap of overall public cloud usage, leading with cloud-first application deployment policies and landing applications in the cloud (see Figure 1).

---

1 Source: ESG Master Survey Results, 2019 Technology Spending Intentions Survey, March 2019.
2 Source: ESG Master Survey Results, Hybrid Cloud Trends, May 2019.
3 ibid.
While organizations look to keep pace with innovation and achieve the initial success of cloud, they also have challenges and concerns with technology issues, organizational dynamics, and data governance that are creating potential pitfalls for further adoption (see Figure 2).\textsuperscript{4} Many businesses find that they have checked off many of the simple and obvious first moves to the cloud only to be met with complexity, unknown economics, and organizational angst between IT operations, information security, and application development.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{chart1.png}
\caption{Digital Transformation Is Inextricably Linked to Cloud}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{chart2.png}
\caption{Technology Issues and Organizational Dynamics Are Most Common Digital Transformation Challenges}
\end{figure}

What are your organization’s biggest challenges or concerns with its digital transformation initiatives? (Percent of respondents, N=572, multiple responses accepted)

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology issues</td>
<td>38%</td>
</tr>
<tr>
<td>Projects that require collaboration across multiple business and IT groups</td>
<td>38%</td>
</tr>
<tr>
<td>Budget constraints</td>
<td>35%</td>
</tr>
<tr>
<td>Ensuring data governance/privacy</td>
<td>34%</td>
</tr>
<tr>
<td>Lack of staff with the necessary skills/experience</td>
<td>31%</td>
</tr>
<tr>
<td>Cultural resistance</td>
<td>29%</td>
</tr>
<tr>
<td>Uncertain or lengthy time to value</td>
<td>23%</td>
</tr>
<tr>
<td>Lack of executive support/sponsorship</td>
<td>22%</td>
</tr>
<tr>
<td>No clear strategy</td>
<td>13%</td>
</tr>
</tbody>
</table>

\textsuperscript{4} ibid.
On-premises Integration Is Vital to Hybrid Cloud Strategies

In order to achieve the next wave of successful application migration and cloud adoption, organizations are expected to realize better performance monitoring and management, tighter integration, and improved backup and recovery capabilities. These developments are required to springboard cloud initiatives beyond where they are today. Initial adoption has been successful, but it has also exposed both IT and business challenges that still need to be overcome as businesses ultimately look to achieve the goal of building once and deploying anywhere.

Further compounding the complexity is the choice businesses have on the environment to run applications. For example, when ESG asked respondents about the approximate percentage breakdown of the production applications/workloads running on each server type used today (e.g., containers, virtual machines, and bare metal) and in 24 months, their answers indicated that IT will be responsible for a heterogeneous mix of environments with new initiatives like containers continuing to grow (see Figure 3). Containerization is key to delivering a consistent experience for cloud-native and non-cloud-native apps residing on-premises, at the edge, and in the cloud. ESG research also reveals that 70% of organizations prefer a hybrid approach for containers, meaning deployed across a combination of public cloud platforms and private data centers, likely due to the flexibility and ability to use public cloud services while maintaining integration with on-premises deployments. Adoption is accelerating, but there are some lingering problems with containerizing monolithic non-cloud apps. These challenges include security, data gravity, latency, and the cost of refactoring legacy apps.5

Figure 3. Container Footprint Is Expected to Grow

![Figure 3. Container Footprint Is Expected to Grow](image)

The Bigger Truth

The next wave of successful cloud adoption has the potential for even greater success beyond the initial business and IT maneuvers that are already in place. In order to meet business goals and achieve success, businesses should look to:

- Embrace a common operating model for new and existing applications to help accelerate application development with the stability, performance, and compliance they expect.
- Contain costs of developing new applications and refactored legacy applications as IT maintains on-premises investments while tapping into the value of services delivered from the public cloud.

---

5 Source: ESG Master Survey Results, *Trends in Modern Application Environments*, to be published.
• Mitigate application data and latency issues with an understanding of a shared responsibility model that protects the business while integrating with the intelligence in the cloud.

• Embrace and leverage cloud-native services that provide developers with a robust platform, self-service, and alignment with IT operation’s tools and processes.

• Align the organization to help alleviate culture issues that are stressing the business goals aimed at embracing cloud consumption.

Integration and seamless operations are critical as businesses embrace cloud and maintain on-premises investments. The future of cloud depends on IT’s ability to maintain control while providing support for a platform that inspires innovation and helps companies embrace technology to achieve success in their business.