Hybrid and Multi-Cloud Study: The New Enterprise Computing Reality

Bob O’Donnell, President and Chief Analyst
Goal, Agenda and Methodology

Determine cloud platform and workload usage and reasons why they’re used

What platforms
Public and private
Workloads by platform
Goals and challenges

Online survey of 600 US-based businesses using cloud computing

Medium and Large Businesses
Over 5,000 in initial sample
## Average Number Of Cloud Providers

<table>
<thead>
<tr>
<th></th>
<th>Infrastructure (IaaS)</th>
<th>Platform (PaaS)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Number</td>
<td>2.3</td>
<td>2.0</td>
<td>3.1</td>
</tr>
</tbody>
</table>

*It’s a Multi-Cloud World*
It’s a Hybrid Cloud World, Too

Private Cloud Usage

- Running a Private Cloud: 86.5%
- Not Running a Private Cloud: 13.5%

Average Number of Private Cloud Platforms: 1.6
In sum, roughly 30% of workloads are public cloud, 30% are data center legacy, and the remaining 40% are a combination of private and hybrid cloud.
Top SaaS Applications

3.7
Average Number of SaaS Applications Used
Cloud Platforms Used by Survey Participants

- Microsoft Azure: 72%
- Amazon Web Services (AWS): 53%
- Google Cloud (GCP): 53%
- IBM Cloud: 47%
- Oracle Cloud: 35%
- Baidu: 18%
- Tencent: 17%
- Alibaba: 17%
Cloud App Maturity Levels Still Low

Percentage of Each Application Type:
- Lift and Shift: 34.3%
- Refactored: 33.6%
- Built New: 32.1%
Top Cloud Workloads

- The most popular workloads across public, private and hybrid clouds are:
  - Databases
  - Analytics
  - Web/Content Hosting
Different Workloads Require Different Providers

Top 5 AWS Workloads
- Web/Content Hosting
- Database
- Edge Solution Support
- IoT/Data Streaming
- Analytics

Top 5 Azure Workloads
- Database
- Vertical Industry Market Solutions
- Web/Content Hosting
- IoT/Data Streaming
- Software Development/DevOps

Top 5 GCP Workloads
- Database
- Software Development/DevOps
- Vertical Industry Market Solutions
- Analytics
- Legacy/App Migration to Containers

AVERAGE CLOUD WORKLOADS
3.4 Per Provider
## Total Cloud Workloads/Applications Per Company

<table>
<thead>
<tr>
<th>Platform Types</th>
<th>Platform Count</th>
<th>Workload Average</th>
<th>Total Workloads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Cloud</td>
<td>3.1</td>
<td>3.4</td>
<td>10.5</td>
</tr>
<tr>
<td>Private/Hybrid Cloud</td>
<td>1.6</td>
<td>2.9</td>
<td>4.6</td>
</tr>
<tr>
<td>SaaS Applications</td>
<td></td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>18.9</strong></td>
</tr>
</tbody>
</table>
Workload Types Vary by Provider

Percentage of Public Cloud Workloads Using Containers

17%
Reasons for Moving to Cloud

- Performance Improvements: 36.0%
- Security: 32.9%
- Cost Savings: 31.8%
- Leverage Cloud Programming Tools: 30.7%
- Need to Modernize Applications: 28.1%
- Connectivity to Partners: 26.8%
- Create New Products or Services: 24.8%
- Connectivity to Partners: 24.7%
- Move to Agile Development Techniques (CI/CD): 20.9%
- Consolidating Data Centers: 19.3%
- Faster Access to Resource: 15.0%
- My Boss Asked Me To: 0%

Source: Technalysist
Reasons for Not Moving to Cloud

- Security: 52.5%
- Performance challenges: 43.7%
- Regulatory requirements: 42.3%
- Lack of internal development skills: 39.2%
- Cost: 29.5%
- Fear of vendor lock-in: 22.0%
- Poor experience with previous cloud computing deployments: 17.7%
- Want to leverage existing data center infrastructure investments: 10.5%
- No need: 9.7%
Price was selected as a Top 2 factor by more people, but technical capabilities rank highest overall.
Reasons for Abandoning Cloud Project

- Bad experience: 43.7%
- Poor quality programming tools: 43.0%
- Poor quality management tools: 40.8%
- Inability to migrate workloads: 33.8%
- Cost: 30.3%
Cloud Computing Impact on Clients

93% Expect an Impact On Client Devices

Top 3 Client Impacts

- Lengthening refresh cycle: 59%
- Reducing technical requirements: 57%
- More non-Windows OS usage: 51%

93% Expect an Impact On
Client Devices

Cloud Computing Impact on Clients
Final Thoughts

• Multi-Cloud is Real But Cloud Migrations Are Slowing
  • Workloads Are Split Among Many Different Computing Environments

• Private Cloud is Critical For Many Organizations

• Workload Specialization Drives Cloud Provider Preferences
  • Companies Putting Many Diverse Applications in Cloud

• Companies Have Different Reasons for Migrating Different Workloads

• Cloud Computing Providers Need to Emphasize the Technical Tools They Have

• Client Devices Are Starting to Be Impacted by Cloud Computing Initiatives
Contact

Bob O’Donnell  
President and Chief Analyst  
TECHnalysis Research, LLC  
1136 Halsey Blvd.  
Foster City, CA 94404

bob@technalysisresearch.com  
(650) 224-2355  
@bobodtech  
www.technalysisresearch.com

A complete 123-slide version of the Hybrid and Multi-Cloud report with full details from the study is available for purchase. Please contact Bob O’Donnell for additional information.