Datacenter transformation in the digital era

June 2019

Authors:
Francesca Ciarletta
Research Analyst
European Services

IDC #EMEA44838619

An IDC InfoBrief, Sponsored by

OVH | vmware
IN THIS INFOBRIEF, YOU WILL LEARN HOW TO ACCELERATE INNOVATION WITH MULTICLOUD BY UNDERSTANDING

1. How datacenter operations are evolving toward multicloud strategies
2. The stepping stones of your multicloud journey
3. How to support multicloud datacenter transformation in your organization
CLOUD OFFERS AN OPPORTUNITY FOR ORGANIZATIONS TO REDEFINE TRADITIONAL BUSINESS MODELS AND THRIVE IN THE DIGITAL ERA

Cloud is the foundation of digital transformation.

Nearly 1 in 3 organizations with 500–999 employees want to enable digital transformation of their business

Which of the following statements best describes your main strategic IT priority for the next two years?

- Enabling digital transformation of the business
- Making the business more profitable
- Supporting revenue growth
- Improving the quality of IT support for the business

Source: IDC European IT Services Survey, Internal, May 2018; n = 762
CLOUD PROVIDE THE AGILITY AND FLEXIBILITY TO SCALE DIGITAL TRANSFORMATION INITIATIVES

90% of organizations are best in class in digital transformation on using multiple cloud services.

Over 1 in 3 firms with 500–999 employees see cloud IaaS as the most important technology investment by 2020, ahead of Big Data, cognitive, the Internet of Things, and artificial intelligence.

Which of the following will be your organization’s most important investment in new technology areas in the next two years?

- Cloud IaaS: 33%
- Mobility/IoT/edge: 24%
- Cloud PaaS/SaaS: 30%
- AI/ML: 18%
- Big Data analytics: 29%
- Blockchain/AR, VR, 3D printing: 14%

Source: IDC European IT Services Survey, 2018; n = 762
SETTING THE FOUNDATION OF DIGITAL TRANSFORMATION:
IT ALL STARTS FROM THE DATACENTER

The datacenter needs to evolve in a multicloud world. Old datacenter architectures are inadequate to meet the innovation and IT operational goals required by the digital business. Datacenter rehaul and modernization strategies are required to enable business growth. The modern datacenter needs to connect to the cloud in a hybrid architecture.

European organizations will seek more automation and flexibility in their datacenter to support faster deployment of IT services, but also enable workload movements across IT environments.

Source: IDC Managed CloudView Survey; n = 400

Please select the two most important initiatives regarding your organization's datacenter infrastructure (e.g., facilities, servers, storage, network) that you are most likely to pursue over the next 24 months.

- 35% of businesses want to improve time to deploy IT
- 28% of firms want to improve flexibility to move workloads
BUILDING BLOCKS OF A MULTI CLOUD DATACENTER:
ASSESSING PUBLIC AND PRIVATE CLOUDS

ENTERPRISE PRIVATE CLOUD
- The ownership of the hardware resides with the organization and not the cloud service provider, and is deployed either on premise or collocated in a third party datacenter.
- The enterprise has more control over the configuration and customization of the servers, alongside with the security of a private environment.
- Unlike the dedicated hosted private cloud, the capital costs, maintenance and running costs fall on the enterprise itself and its IT team, who must ensure the smooth running of IT operations.
- Lately, more flexible forms of enterprise private cloud have emerged, based on a pay per use model.

DEDICATED HOSTED PRIVATE CLOUD
- Unlike public IaaS, the customer gets access to virtualized servers and/or storage resources which are dedicated to its own use, and not shared with unrelated firms.
- This favours those data-sensitive industries which have to meet regulatory and compliance requirements.
- Also, customers are able to customize their dedicated server to accommodate individual requirements.
- Recurring monthly payments (often including network usage and security services), make cost more predictable for the end-user.
- Mission-critical applications which are highly compute and memory intensive can benefit from this cloud model.

ON DEMAND HOSTED PRIVATE CLOUD
- In this deployment model, the customer consumes hardware resources for dedicated use from a shared pool, often from the same pool as their public cloud offerings.
- Through cloud automation, SPs offer a procurement experience that is essentially the same as their public cloud offerings, with rapid self-service provisioning, ability to quickly scale resources up/down, flexible pricing, APIs, rapid enhancement cycles, and very short-term commitments (as short as minutes or hours).

PUBLIC IAAS
- The customer gets access to unlimited compute and storage capacity and can scale up and down dynamically and only pay for what they use.
- To take full advantage of public cloud IaaS, applications need to be designed in a cloud native architecture (12 factor methodology).
- Static workloads which are online 24/7 don’t get many benefits from running on an IaaS platform and can turn out to be more expensive running on IaaS.
- Thus, public cloud IaaS is a good fit for development and testing environments and digital native workloads, or applications which have traffic spikes and need to scale quickly. Increasingly, business critical applications like ERP systems are also moving to the public cloud.
WHAT DOES THE MULTICLOUD DATACENTER OF THE FUTURE LOOK LIKE?

Cloud is becoming mainstream and it will not be long before multicloud datacenters are the new norm. Multicloud includes all public and private clouds.

By 2019, off-premise forms of cloud infrastructure services, including dedicated hosted private cloud and public IaaS, will be consumed by over three-quarters of organizations.

Next-generation datacenters will combine several types of clouds either built in-house or supplied by third-party cloud providers. The number of clouds will increase the complexity of datacenter management and operations. Private cloud is a central element.

Please describe your organization’s current or near-term plans for each of the following cloud deployment options?

- Enterprise private cloud: 62% using in 2018, 22% planning to implement in 2019
- Dedicated hosted private cloud: 54% using in 2018, 21% planning to implement in 2019
- On-demand hosted private cloud: 39% using in 2018, 32% planning to implement in 2019
- Container on-prem: 42% using in 2018, 28% planning to implement in 2019
- Container hosted: 36% using in 2018, 33% planning to implement in 2019
- IaaS: 41% using in 2018, 25% planning to implement in 2019

Source: IDC CloudView Survey, April 2018; n = 1,350
At this stage CIOs’ decisions are mainly driven by the need to reduce the cost of datacenter operations. Monolithic applications sitting on static datacenter resources formed of physical hardware make it virtually impossible for CIOs to undertake any digital transformation projects.

The datacenter transformation starts when cloud is leveraged alongside existing IT assets. CIOs should work in conjunction with CEOs to ensure that business objectives are aligned with the IT department goals.

At this stage the datacenter enables full connection between private and public cloud workloads. This gives CIOs a flexible datacenter which is integrated across business functions and overcomes organizational silos in favor of enterprise agility.

This is where multicloud enablement happens. Orchestration gives corporate leaders the foundational tools to accelerate digital transformation as they can fully leverage dynamic compute and storage resources across private and public clouds and physical IT assets.
ASSESS AND CONSOLIDATE YOUR DATACENTER ASSETS

Achieving consolidation of multiple and physically dispersed datacenter estates is key to lowering the operational cost of the IT department. But strategically it also offers the opportunity to rethink how services are delivered, and the types of infrastructure resources your organization needs to support your multicloud strategy.

COST REDUCTION

Companies with 1,000–2,499 employees want to reduce physical hardware expenditure with SDDC.

FLEXIBLE RESOURCES

Companies with 1,000–2,499 employees want to build a scale-out, flexible, and cloud-ready IT.

FAST DELIVERY

Companies with 1,000–2,499 employees want to reduce time of deployment for new applications.
BUILD A PRIVATE CLOUD

Private cloud is a key element of a multicloud datacenter. Although cost is less critical, many enterprises with incumbent legacy IT prefer datacenter modernization strategies that favor asset retention.

When migrating from on-premise to private cloud, 30% of Western European respondents prefer to upgrade their legacy infrastructure to a private IaaS rather than replace existing assets with a public infrastructure as a service.

Ensuring business continuity in a secure and compliant way are top challenges when combining an on-premise with a private cloud environment.

- Over 1 in 2 CIOs of large organizations with over 1,000 employees have data protection in mind when transforming the datacenter over the next 18 months.
- Over 1 in 2 CIOs of companies with over 2,500 employees face a security challenge.

In using managed cloud services, which one of the following modernization tactics would be your primary objective?

- Upgrade legacy infrastructure to a private IaaS: 30%
- Replace existing infrastructure with public IaaS: 14%

In your hybrid and multicloud journeys, what are your key data services challenges for the next 12–18 months?

- Security and compliance: 54%
- Data protection: 54%
- Data migration and repatriation: 40%
- Data location and optimization: 38%
- Integration and orchestration: 31%

Source: IDC’s European Managed Cloud Services Survey, 2018; n = 400

Source: IDC Multicloud Survey, 2018; n = 136
CONNECT YOUR PRIVATE WITH YOUR PUBLIC CLOUD: ENTERPRISES NEED TO ENSURE WORKLOAD PORTABILITY BETWEEN CLOUDS

Enabling the hybrid datacenter

Public cloud enables businesses to access new functionalities faster to support innovation cycles.

Hybrid cloud environments combine the benefits of the on-demand consumption model with the security of dedicated compute or storage resources.

Private cloud often hosts mission-critical workloads. ERP, CRM, and SCM are usually hosted on private IaaS, but by 2020 organizations will have increased their use of private IaaS for sales force automation, business intelligence, ecommerce, collaboration, and HR applications.

41% of European organizations will enable workload portability across private and public IT environments

Regarding hybrid cloud, which of the following four capabilities does your organization have in place to run applications/workloads in multiple environments (can be multiple public clouds, multiple private clouds, public to private, or cloud to non-cloud)?

- Centralized security: process and tools for governance, visibility, and control
- Consolidated management and operations
- Centralized provisioning, common service catalog
- Workload portability

<table>
<thead>
<tr>
<th>Capability</th>
<th>Already in place</th>
<th>Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralized security</td>
<td>58%</td>
<td>33%</td>
</tr>
<tr>
<td>Consolidated management and operations</td>
<td>56%</td>
<td>35%</td>
</tr>
<tr>
<td>Centralized provisioning, common service catalog</td>
<td>52%</td>
<td>36%</td>
</tr>
<tr>
<td>Workload portability</td>
<td>46%</td>
<td>41%</td>
</tr>
</tbody>
</table>
ORCHESTRATE YOUR MULTICLOUD IT ESTATE

A multicloud strategy can substantially benefit the way the individual business units source their own IT, enabling the as-a-service model to ultimately increase the agility of their organization. In a multicloud strategy cloud is not a one-way street, it is an iterative process. Some workloads are moving on-premise to be refactored.

Top 3 benefits of a multicloud strategy:

1. Give business units more direct control over sourcing their own IT solutions
2. Restructure the financial footprint and shift from capital
3. Improve business agility

Regarding multicloud (overall public and private cloud environment), which of the following benefits do you expect to achieve from your organization’s cloud strategy?

Does your organization plan to move some of your existing infrastructure workloads off your current cloud service provider over the next 12 months? If yes, to where?

YES

Over two-thirds of companies with 500–999 employees plan to move some of their existing infrastructure workloads off their current clouds in 2019.

17%

Companies with 1,000–2,499 employees are more likely to switch from a public to a hosted private cloud, with nearly 1 in 5 (or 18%) planning to do so in the next year.

40% of companies with 2,500 employees or more feel they will have hard time dealing with data repatriation.

Source: IDC Multicloud Survey, 2018; n = 110
Ensuring security and compliance of the datacenter is paramount across all cloud deployment types. **Cost is still important but not critical.** What are the security compliance concerns: you need to understand your data, how you are handling personal information, how you protect your IP, and how you manage access to the data.

Source: IDC Multicloud Survey, 2018; n = 651

**OVERCOMING BARRIERS TO MULTICLOUD ENABLEMENT: BARRIER: SECURITY**

Improving security is a top priority for 40% of European CIOs. **Technology refresh and IT employee productivity are more important than cost.**

Thinking about your datacenter operations, what do you see as the key priorities for your IT organization in the next 12 months?

<table>
<thead>
<tr>
<th>#1 Priority</th>
<th>Security</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4 Priority</td>
<td>IT budget constraints</td>
<td>29%</td>
</tr>
</tbody>
</table>
SECURITY AND REGULATORY COMPLIANCE ARE TOP CONCERNS WHEN ADOPTING PUBLIC CLOUD OR PRIVATE CLOUD

Enterprises with 5,000–9,999 employees are more likely to consider private cloud inherently more secure than the public counterpart than other company sizes.

Which of the following best describe your organization’s main concerns about cloud?

- **#1 Concern**: Security
  - **PUBLIC CLOUD**: 44.4%
  - **PRIVATE CLOUD**: 35.6%

- **#2 Concern**: Regulatory/compliance
  - **PUBLIC CLOUD**: 40%
  - **PRIVATE CLOUD**: 36.5%

Source: IDC Managed CloudView Survey; n = 194
Going “all in” onto the cloud is possible but fear of lock-in may hinder adoption. Workload portability through open source is important to ensure a future-proof cloud strategy.

33% of Western European organizations fear vendor and price lock-in in public or private cloud.

46% of Western European organizations (500–999 employees) have plans to integrate workloads — workload portability is critical for cloud strategy to be future-proof.

68% of Western European organizations with 1,000–4,999 employees say open source ecosystems are an important or very important attribute when considering a cloud service provider.

Source: IDC CloudView Survey, 2018; n = 1,350

Source: IDC CloudView Survey, 2018; n = 233

Source: IDC CloudView Survey, 2018; n = 209
CALL TO ACTION: HOW TO CHOOSE THE RIGHT CLOUD PARTNER LOOK FOR SECURITY, SLAs, AND SERVICE LEVEL WHEN SELECTING A CLOUD SERVICE PROVIDER

What are technology buyers looking for when selecting a cloud service provider?

- **40%** Security
- **32%** Ease of use
- **26%** Support services and SLAs
- **24%** Workload portability
- **21%** Low price point

Compared with 2017, there is less emphasis on price, but the importance of support services and SLAs has notably increased. The presence of a physical datacenter is also valued more in 2018 (19% of respondents) than in 2017.
WHILE MULTI CLOUD IS SET TO BE THE DOMINANT ENTERPRISE STRATEGY, IT ALSO BRINGS COMPLEXITY. KEY FACTS TO BEAR IN MIND TO SUPPORT A SMOOTH TRANSITION

IDC predicts that by 2023 90% of European 500 organizations will have a multicloud management strategy that includes integrated tools across public and private clouds.

Private cloud plays a key role in your multicloud strategy

European organizations must ensure that cloud meets the security, governance, and GDPR requirements of the industry they operate in.

Many workloads operate in a hybrid cloud environment

- Critical workloads including production environments and critical applications (e.g., finance, human resources) are suited to private cloud.
- Those workloads that require a quick burst in compute capacity or development and testing in cloud-native environments are suitable for public cloud.
- Sometimes legacy applications must be kept in a legacy environment, which means they need to be integrated into the whole datacenter multicloud estate.

IDC predicts that by 2020 75% of enterprises using public cloud will also use an enterprise private cloud platform; a majority of these platforms will support delivery of higher-layer platform-as-a-service (PaaS) and SaaS functionalities.

Success factors for cloud transformation:

- **TOOLS**
  - Use the same tools for on-prem and cloud because that creates operational efficiencies

- **SECURITY**
  - Use the same security policies/frameworks for on-premise and in the cloud for a seamless security posture

- **DISASTER RECOVERY**
  - Ensuring business continuity is paramount; organizations need to plan ahead to make it easier to recover corporate data when disaster strikes

- **OPEN SOURCE**
  - Use an open architecture to facilitate your multi cloud journey
## METHODOLOGY AND SOURCES

<table>
<thead>
<tr>
<th>Name</th>
<th>Sample</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDC Western Europe Managed CloudView Survey, 2018</td>
<td>Western Europe: 400 respondents</td>
<td>Web-based</td>
</tr>
<tr>
<td></td>
<td>U.K.: 250 respondents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Germany: 150 respondents</td>
<td></td>
</tr>
<tr>
<td>IDC EMEA's European IT Services Survey, 2018</td>
<td>Western Europe: 762 respondents</td>
<td>Computer-assisted web interviews</td>
</tr>
<tr>
<td></td>
<td>Seven countries/territories: Benelux, the Nordics, France, Germany, Italy, Spain, and the U.K.</td>
<td></td>
</tr>
<tr>
<td>IDC's CloudView Survey, 2018</td>
<td>Western Europe: 1,350 companies</td>
<td>Computer-assisted web interviews</td>
</tr>
<tr>
<td></td>
<td>Respondents included organizations with over 50 employees across 9 countries and 17 industries</td>
<td></td>
</tr>
<tr>
<td>IDC EMEA, IDC Multicloud Survey, 2018</td>
<td>Western Europe: 651 respondents</td>
<td>CATI + CAWI</td>
</tr>
<tr>
<td></td>
<td>Six countries/territories: the U.K., the Netherlands, Italy, Germany, France, and the Nordics</td>
<td></td>
</tr>
</tbody>
</table>
About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives.

IDC is a subsidiary of IDG, the world's leading technology media, research, and events company. Further information is available on our websites at www.idc.com

IDC UK
5th Floor, Ealing Cross,
85 Uxbridge Road
London
W5 5TH, United Kingdom
44.208.987.7100
Twitter: @IDC
idc-community.com
www.idc.com

Global Headquarters
5 Speen Street Framingham, MA
01701 USA
P.508.872.8200
F.508.935.4015
www.idc.com

Copyright Notice

The external publication of IDC information and data—this includes all IDC data and statements used for advertising purposes, press statements, or other publication—requires written approval from the appropriate IDC Vice President or the respective Country Manager or business leader. A draft of the text to be published must be attached to the request. IDC reserves the right to reject the external publication of data.

For more information about this publication, please contact:
Mathew Heath, Marketing Director, +44 (0)20 8987 7107 or mheath@idc.com.
Copyright: IDC, 2018. Reproduction of this document without written permission is strictly forbidden.