



Cloud Repatriation Accelerates in a Multi-Cloud World

July 2018

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Executive Summary

1

As cloud adoption accelerates and the sophistication of cloud applications and services increases, organizations are evaluating the best fit for elements of their critical business applications including moving into maturing IaaS and PaaS services or onto private cloud landing zones.

2

While customers continue to deploy public cloud infrastructure and PaaS solutions at a rapid rate, they are also significantly increasing investments in on- and off-premises private cloud solutions where dedicated systems better address security, performance/latency, cost and control requirements.

3

Multi-cloud deployments are now the norm for enterprise organizations - less than 30% of customers report using single cloud environments. Most customers leverage different cloud platforms across multiple service providers.

4

The interoperability of data and applications between these varied cloud environments is growing in importance, yet access to hybrid cloud capabilities remain elusive for most enterprises. Where interoperability exists, private cloud (either on-premises or with a service provider) is typically the on-ramp to public cloud interoperability.

Executive Summary

1

80% of customers report repatriating workloads from public cloud environments. On average, those respondents expect to move 50% of their public cloud applications to hosted private or on-premises locations over the next two years, but this doesn't mean customers will consume 50% less public cloud.

2

These same customers also expect their application portfolio to increase 50% over five years and are making a significant shift to modular application development. Many of these modular applications will land in public cloud environments, but these applications will be more easily extensible to dedicated private cloud environments as well.

3

The complexity of managing an increasingly disaggregated application portfolio across multiple landing zones is driving a sharper focus on TCO and performance for discrete elements. The advent of new, more mature private cloud solutions presents customers with the capability to migrate workload components back (or near) on premises.

4

While IDC does not expect the growth in public cloud adoption to slow or decline due to new service innovation, there is a significant proportion of customers that will leverage private cloud options to modernize their large installed base of non-cloud applications and will continue to reassess the applicability of public cloud for those applications.

Executive Summary

1

The early success of public cloud providers was built on servicing cloud-first customers, application developers and ISV's that often experienced massive application growth. The follow on expansion was built on enabling major enterprises to develop and extend their of competing digital services..

2

The modern enterprise, wants to extend the value of its classic applications. It has multiple options as it evaluates best fit and as its technical expertise with emerging cloud technologies improves. All enterprises have more opportunities and capabilities to migrate or extend applications by leveraging alternate landing zones.

3

Respondents from more agile organizations will have the best opportunity to move applications because they are already confident that they can accommodate the right cloud option while less technically-savvy organizations that lack such capabilities will not have the same opportunity. Their applications will largely stay in place.

4

The need to develop/deploy complex hybrid cloud services is a game changer. Today, these are deployed by technically adept organizations where moving/rebalancing applications is minimized through automation and an orchestration architecture that allows interdependent applications to run across multiple landing zones.

Research Objectives

**This IDC presentation includes analysis of
IDC's 2018 Cloud and AI Infrastructure Perceptions Survey**

- IDC's Enterprise, Datacenter, Cloud infrastructure research practice conducted a survey of end-users to understand current and planned use of cloud and artificial intelligence (AI) in their organizations.
- The primary goal of the survey was to uncover cloud adoption, segment types of buyer and uncover the impact that multi-cloud adoption will have on enterprise deployments
- Secondary goals sought to understand the impact of AI in conjunction with cloud adoption

Additional detail and data available via request

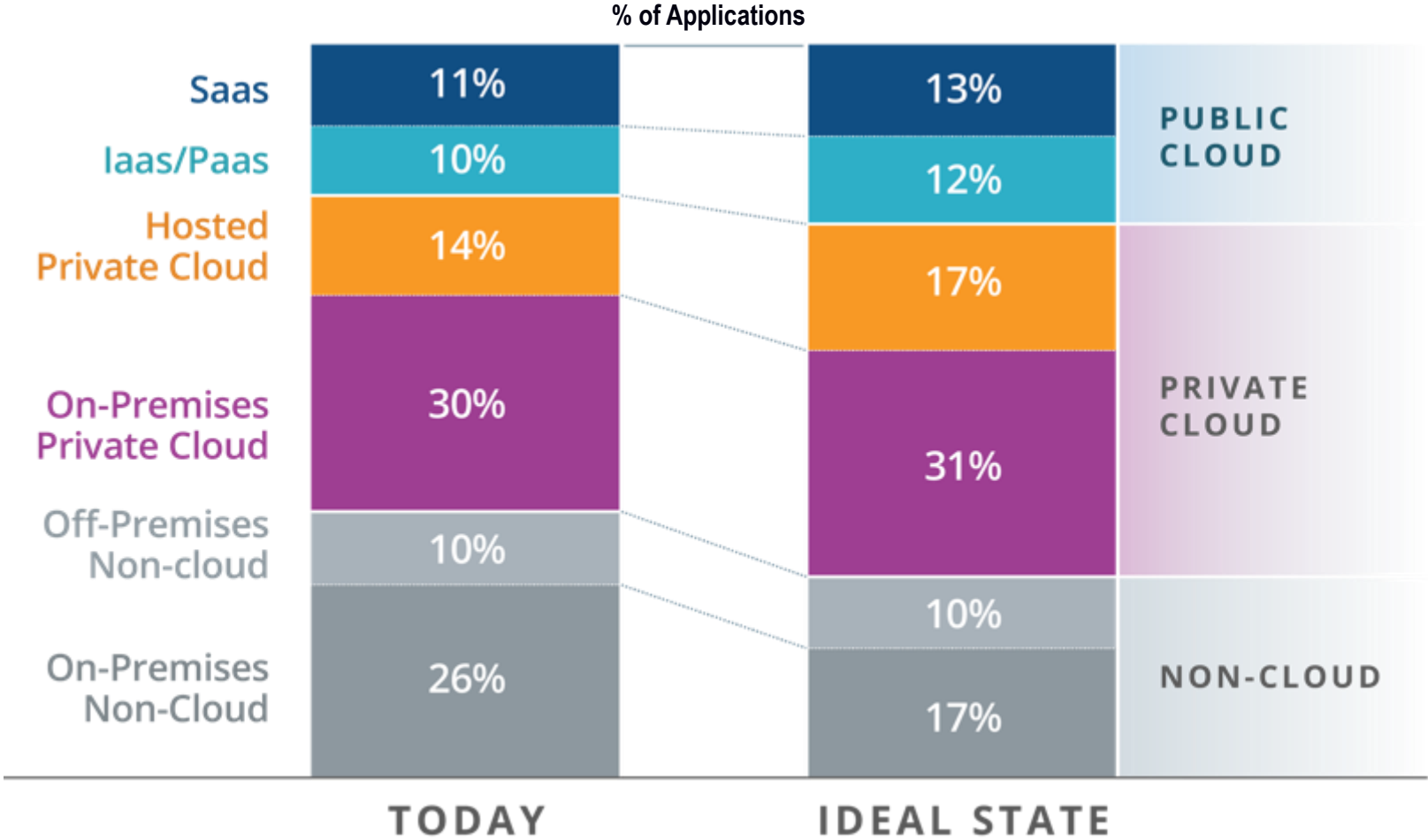
Key Analysis and Findings

Substantial Workload Shifts to Cloud Environments

Private Cloud a strong focus for on- and off-premises solutions

Q. What percent of your organization's applications are currently deployed in the following venues: sum to 100

Q. Ideally, if your organization could start over tomorrow without legacy IT decisions, what percent of your organization's applications would be deployed in the following venues sum to 100



Focus shifts from efficiencies & cost savings to speed & performance

Application churn, particularly for non-cloud on premises apps favors private clouds

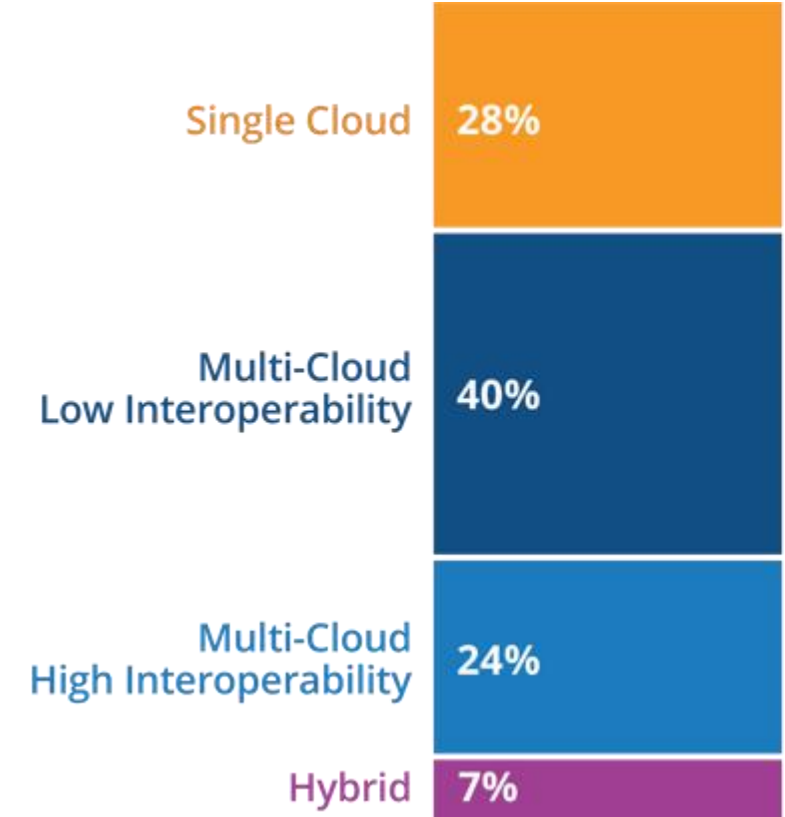
Cloud management the glue for the increasingly complex application portfolio

Customers Default to Multi-cloud Environments

The Journey Begins with Private Cloud

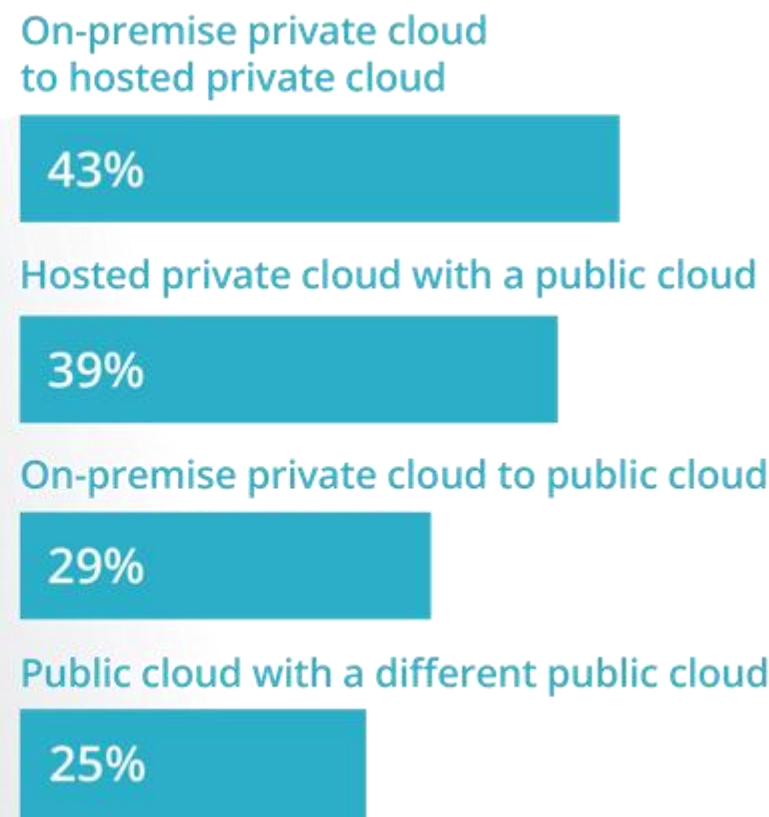
Multi-Cloud Adoption by Type

Q. Over the next two years, how would you describe your organizations use of different on-premise & off-premise cloud environments? [SR]



Multi-Cloud Connection Points

Q. Has your organization enabled any of the following clouds to interoperate? [MR]

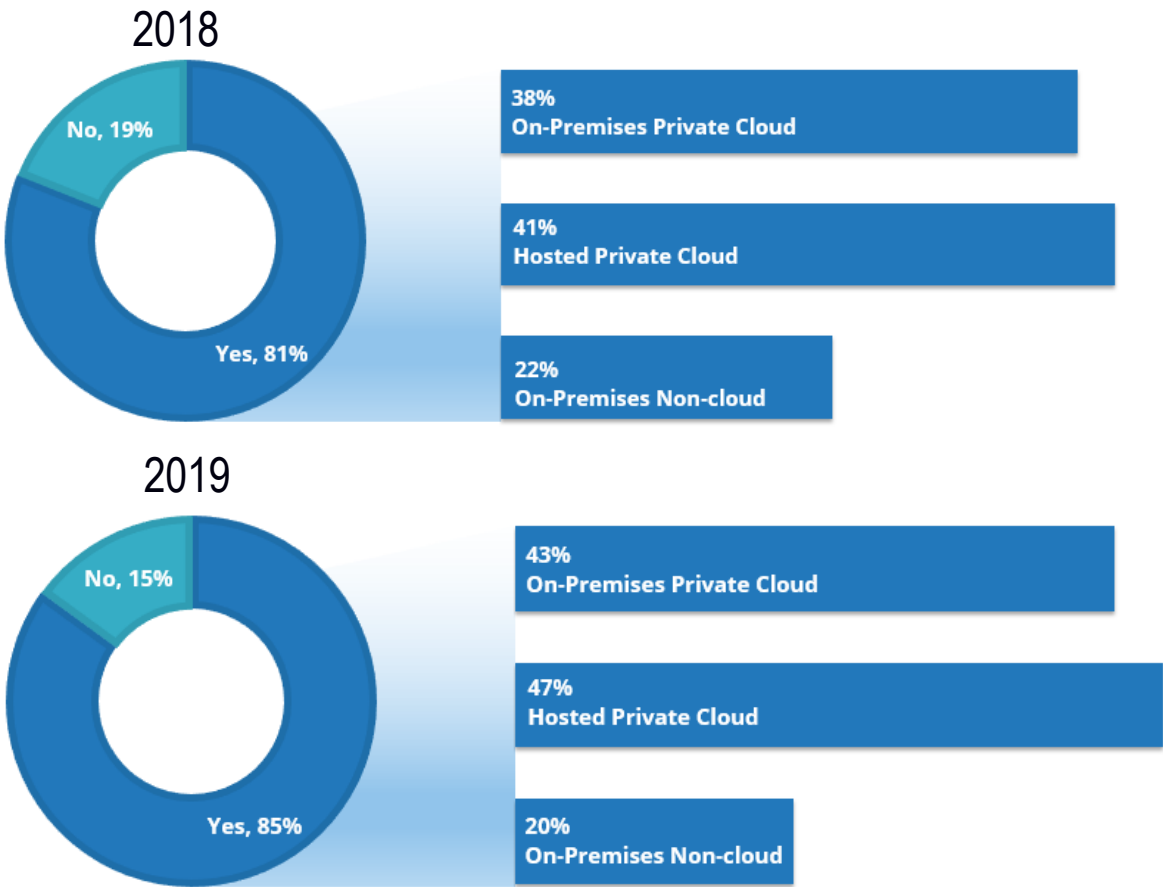


80% of Customers Report Cloud Repatriation Activities

More customers expect to repatriate workloads next year

Public Cloud Repatriation Rates

Q. In the last year, has your organization migrated any applications or data that were primarily part of a public cloud environment to a private cloud or on-premises environment?








Percent of Public Applications Expected to Repatriate Over the Next Two Years (Average)

Q. Using your best guess, what proportion of the public cloud applications installed today will move to a private cloud, hosted private cloud or non-cloud environment over the next two years?

50%

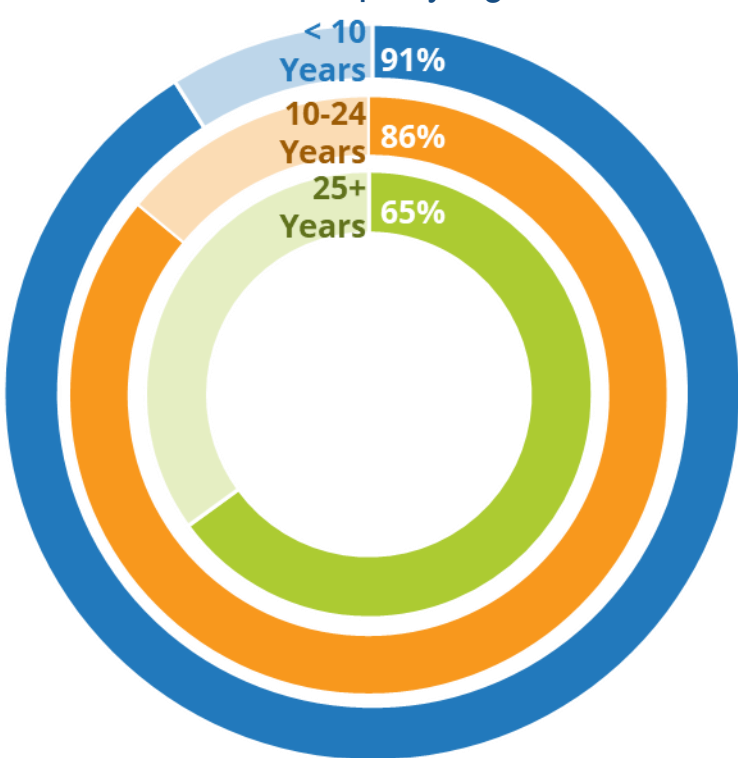
Top Repatriation Drivers

	Security	19%
	Performance	14%
	Cost	12%
	Control	12%
	Centralize/Reduce Shadow IT	11%

Cloud Repatriation by Organization Type

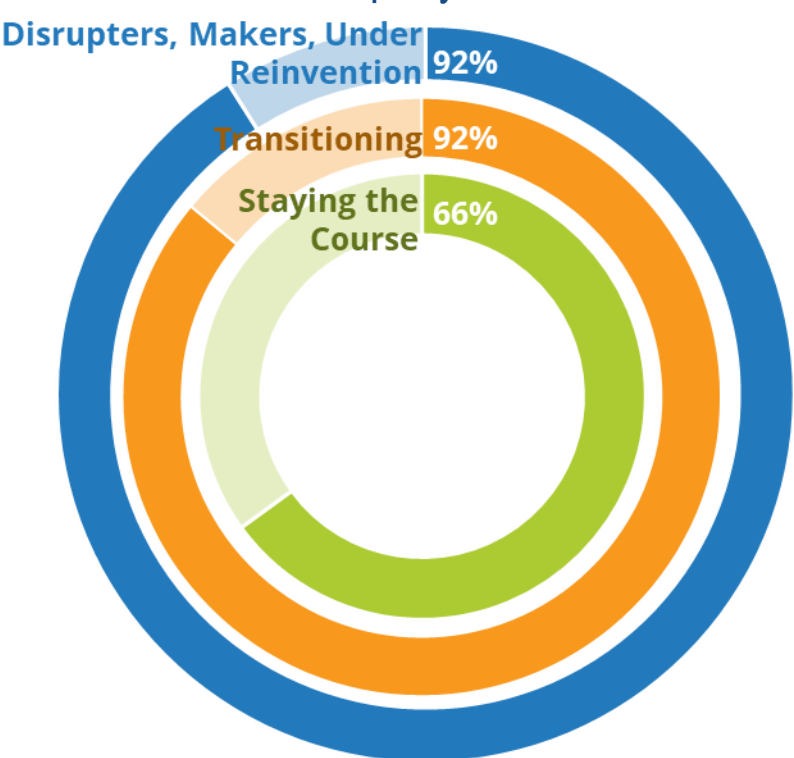
Agile Organizations are Repatriating Workloads at Higher Rates than Less-Agile Organizations; Hybrid Cloud is a Game-Changer for Public Cloud Stability

Repatriation Activity by Company Age



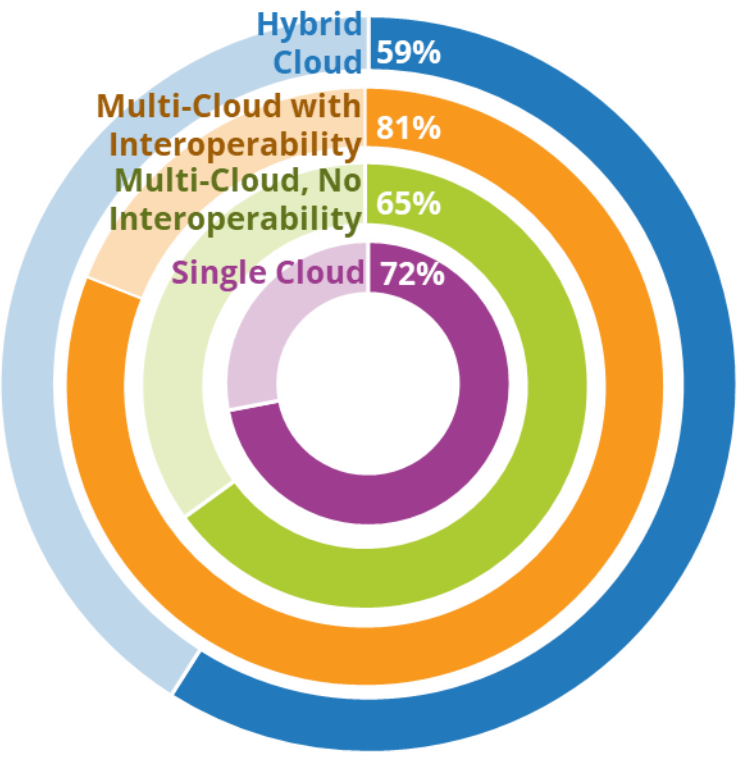
Younger organizations are significantly likely to repatriate public cloud workloads than those that have been in business for 25+ years

Repatriation Activity by Company Persona



Company culture is a strong determinant of repatriation. Companies that are self described market disrupters, market makers, under reinvention or transitioning have the highest rates of repatriation

Repatriation Activity by Cloud Architectures

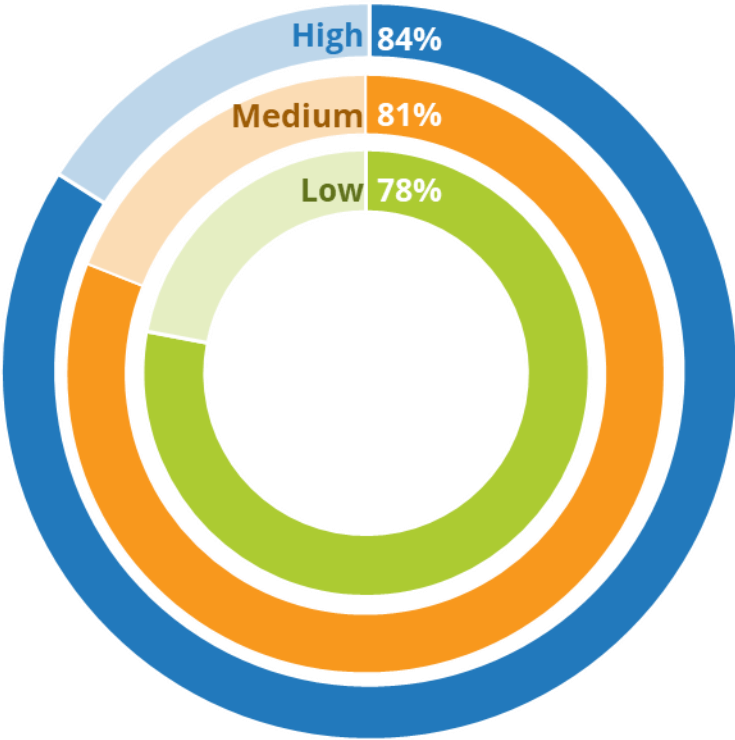


Companies deploying true hybrid cloud capabilities have some of the LOWEST rates of repatriation. These organization have the ability to run a single application across multiple cloud environments and hence do not need to move workloads at the same rate as organizations without automation

Cloud Repatriation by Segment

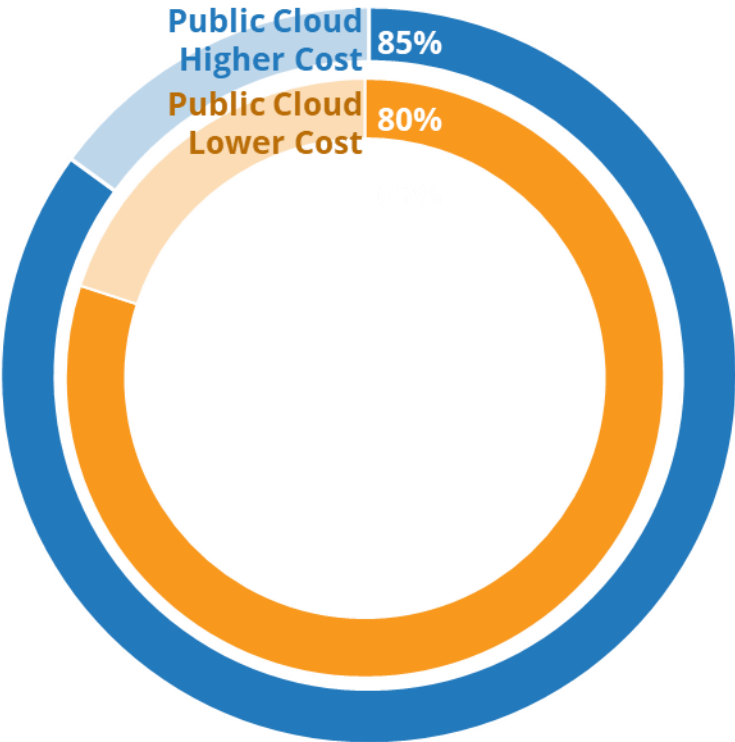
Application Architectures, Perceptions of Cost and Job Role Impact Cloud Repatriation Activity

Repatriation Activity by
Application Interdependencies



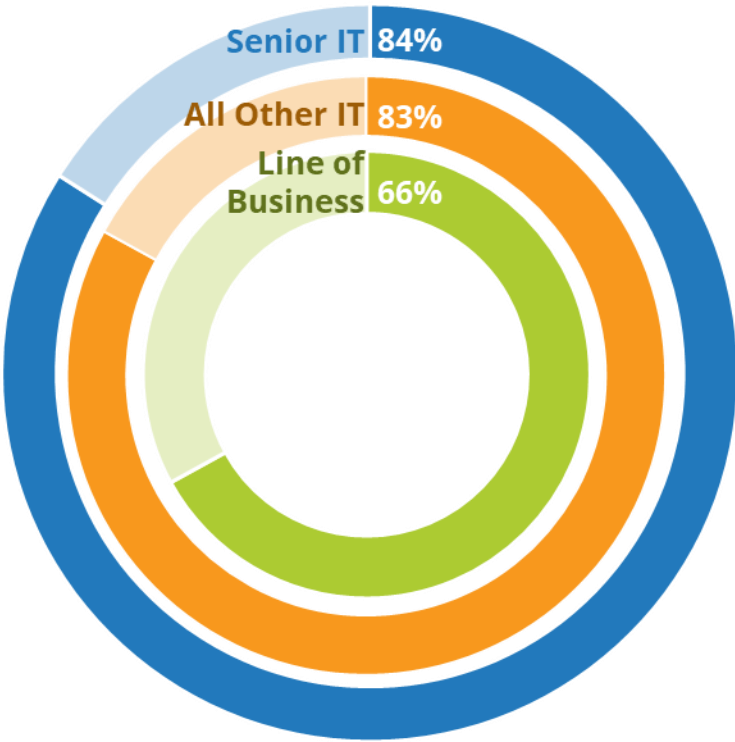
Companies reporting high levels of application interdependencies are the most likely to repatriate workloads, likely due to needs to connect to on-premises data or applications

Repatriation Activity by
Perceived Public Cloud Cost



When Public Cloud costs are perceived to be higher than other computing costs, repatriation rates increase

Repatriation Activity by
Job Role



Line of Business decision makers are the least likely to repatriate workloads. The IT organization is most likely to repatriate applications and data from public cloud environment

Shifting, Disaggregated Application Portfolio



Complexity in management rises quickly over the next two years

50% growth in the typical application portfolio

38% of applications will be built using modular development frameworks

50%+ of all applications at remote/edge or provider datacenters

49% expect high application interdependencies (up from 19% today)

Each business application already has 4 – 8 other application dependencies

Related Research

DR2018_GS4_MB

When Computing Becomes Human: Automation, Innovation, and the Rise of the All-Powerful Service Provider

March 2018

EMEA44074418

IDC Service Provider Pulse 1Q18 Quarterly Summary

July 2018

US43941918

CloudView 2018: Visualization of Worldwide Survey Results

June 2018

US43842118

2018 Worldwide Public Cloud Services Competitive Landscape: Concentration, Stability, or Diversification?

June 2018

US44086018

IDC Cloud BuyerView: IaaSView Survey Results
PowerPoint Attachment

June 2018

US43625818

Worldwide and Regional Public IT Cloud Services Forecast, 2018–2021

May 2018

US42014217

Worldwide Software as a Service and Cloud Software Forecast, 2017–2021

July 2017

US43978918

IDC PlanScape: Local Clouds to Deliver DX at the Edge

July 2018



Michelle Bailey

GVP/GM & IDC Research Fellow Datacenters
and Cloud

(508) 935-4115

mbailey@idc.com

[@mbailey316](#)

LinkedIn: <https://www.linkedin.com/in/datacenterexpert/>



Matt Eastwood

Senior Vice President
Enterprise, Datacenter, Cloud Infrastructure and
Developer Research

(508) 935-4503

meastwood@idc.com

[@MattEastwood](#)

LinkedIn: <https://www.linkedin.com/in/maeastwood/>

Appendix

Methodology

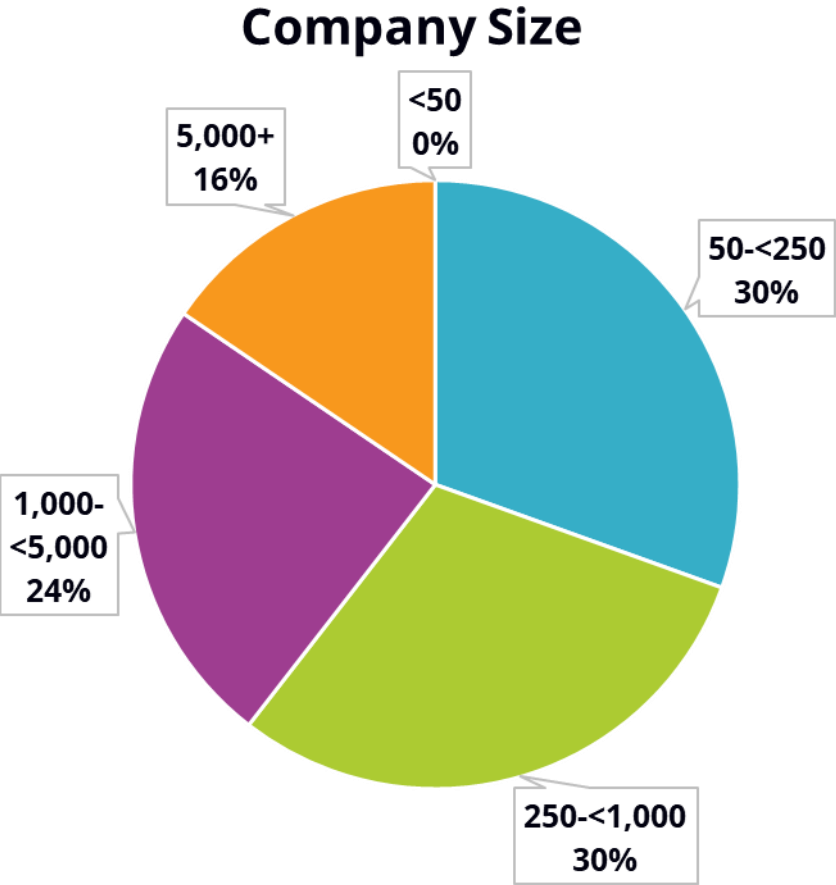
- IDC conducted a survey targeting infrastructure and operations end-users. The survey sample included:

Country	50-<250 employees	250-<1,000 employees	1,000+ employees	Total
USA	81	65	104	250
UK	23	22	30	75
India	5	12	8	25
Singapore	5	11	9	25
Australia/NZ	8	10	7	25
Total	122	120	158	400

- Field Time: January, 2018
- Method: Internet
- Screener Requirements
 - Familiarity with your organizations cloud computing infrastructure and applications
 - Familiarity with your organizations IT strategy and future technology investments
 - Knowledge, influence or authority over IT investment decisions

Survey Overview

Q. How many *full-time employees* work in your entire company?



Q. What *industry classification* best represents your site's principal business activity?

