Market Impact: Cloud Shift — 2022 Through 2025

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Initiatives: Technology Market Essentials

> The proportion of enterprise IT spending on public cloud computing will continue to increase through 2025. Technology and service providers must remain attuned to increased cloud shift in the wake of accelerating digital transformation.

Overview

Impacts

- Cloud shift accelerated in 2020 due to COVID-19 rather than declining as initially expected in prior cloud forecasts.
- Accelerating levels of cloud adoption are expected as organizations respond to a new business and social dynamic. This is driving a faster rate of cloud shift than pre-COVID-19 forecasts indicated.
- Technology and service providers that fail to adapt to the pace of cloud shift face increasing risk of becoming obsolete or, at best, being relegated to low-growth markets. Ongoing disruption will be amplified by the introduction of new technologies, including distributed cloud.

Recommendations

To capture the market opportunities associated with cloud computing, technology and service providers must ensure they address the following market essentials:

- Target investment toward segments where cloud shift is occurring most aggressively — in addition to, separately, seeking new high-growth cloud opportunities. Infrastructure-related segments have a lower level of cloud penetration, and are expected to experience faster growth than segments that are already heavily penetrated.

- Cater to public, noncloud, distributed and hybrid cloud opportunities by analyzing revenue streams, rates of cloud shift in specific markets and ongoing customer/prospect dependencies on traditional (noncloud) solutions.
- Calibrate cloud go-to-market initiatives by using this research as an indicator of how to capitalize on trends in cloud adoption across IT infrastructure, application and service markets.
- Target the needs of differing personas, adoption profiles and use cases by reviewing solution messaging and positioning, and revising as needed. Develop case studies and reference architectures that support successful cloud adoption (including migration, modernization and transformation of workloads).

Forecast Statements

- By 2024, nearly 60% of IT spending on application software will be directed toward cloud technologies.
- More than 30% of organizations will bring their long-term initiatives in digital transformation, modernization and user experience forward to 2022, due to the disruption COVID-19 caused to “ways of business.”
- From 2020 through 2025, demand will increase for multiple integration capabilities, agile work processes and composable architecture as organizations balance risk and innovation through uncertain times.

Introduction

Gartner estimates the rate of cloud shift based on calculations and categories derived from Gartner’s published cloud forecasts. Several major aspects are considered in determining this cloud shift:

1. The overall qualitative market trends related to cloud, which are published in Gartner documents such as Hype Cycles and informed by a variety of data sources (e.g., surveys, client inquiry, primary and secondary research).

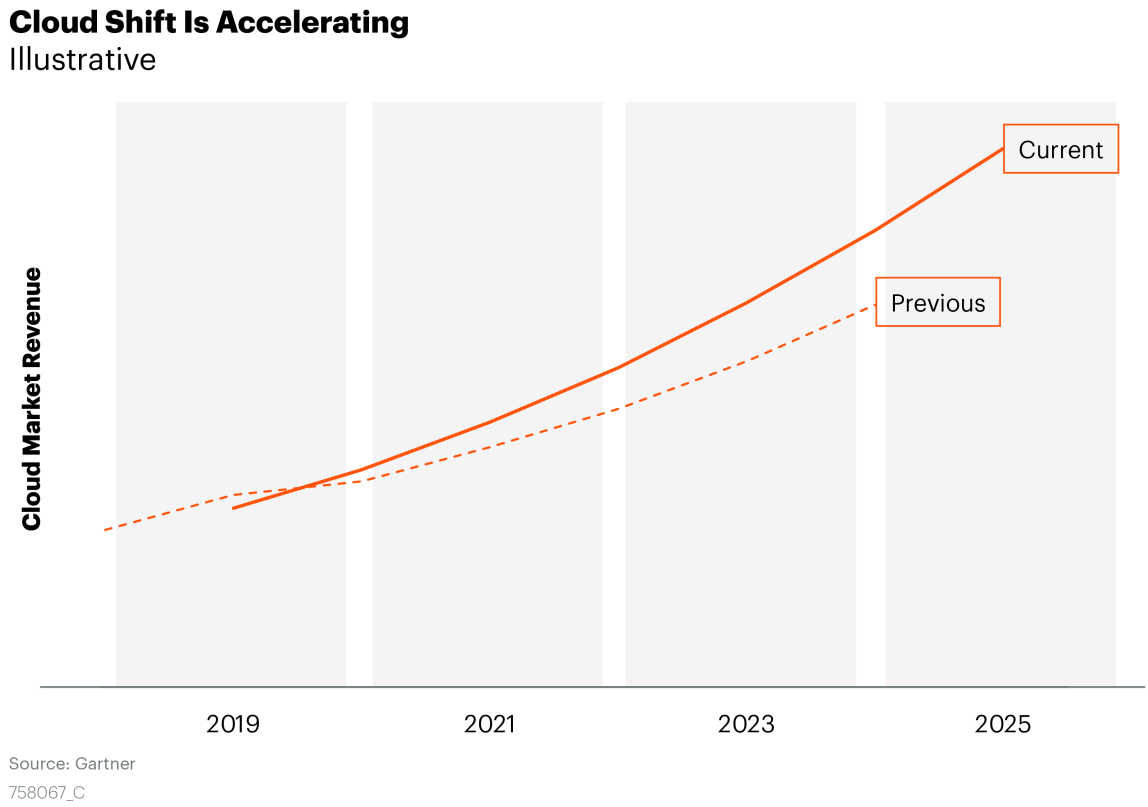
2. The use of Gartner Quantified Market Insight as the foundation for sizing over the forecast period to 2025 — this is based on our categorization of market segments across published Gartner forecasts of enterprise IT markets (hardware, software and services). In each forecast segment, we determine the extent that is public cloud, partially public cloud and/or traditional (noncloud). Updated mapping of segments into cloud shift categories improves the ability to reflect market trends.

3. A method for calculating the extent of the overall shift to cloud, based on the defined set of cloud shift categories described in Point 1 above.

Points 2 and 3 are largely quantitative in nature, while the first point includes a mix of differing measures. Other points of comparison include Gartner IT Key Metrics Data (ITKMD).

Comparing the results of different iterations of cloud shift is not recommended. However, Figure 1 shows the general extent of change in expectations for cloud shift. It compares this iteration of cloud shift against the previous.

Figure 1: Cloud Shift Is Accelerating



Source: Gartner
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From the quantitative perspective, we note that Gartner regularly revisits, evaluates and updates its market definitions and segmentation to align with the changing market trends and to complement the way our clients understand and consume Gartner market data. This may result in definitional and methodological changes and how we track and segment the markets. The changes in market sizing definitions and segmentation will impact individual segments in a forecast (see Market Definitions and Methodology: Public Cloud Services).

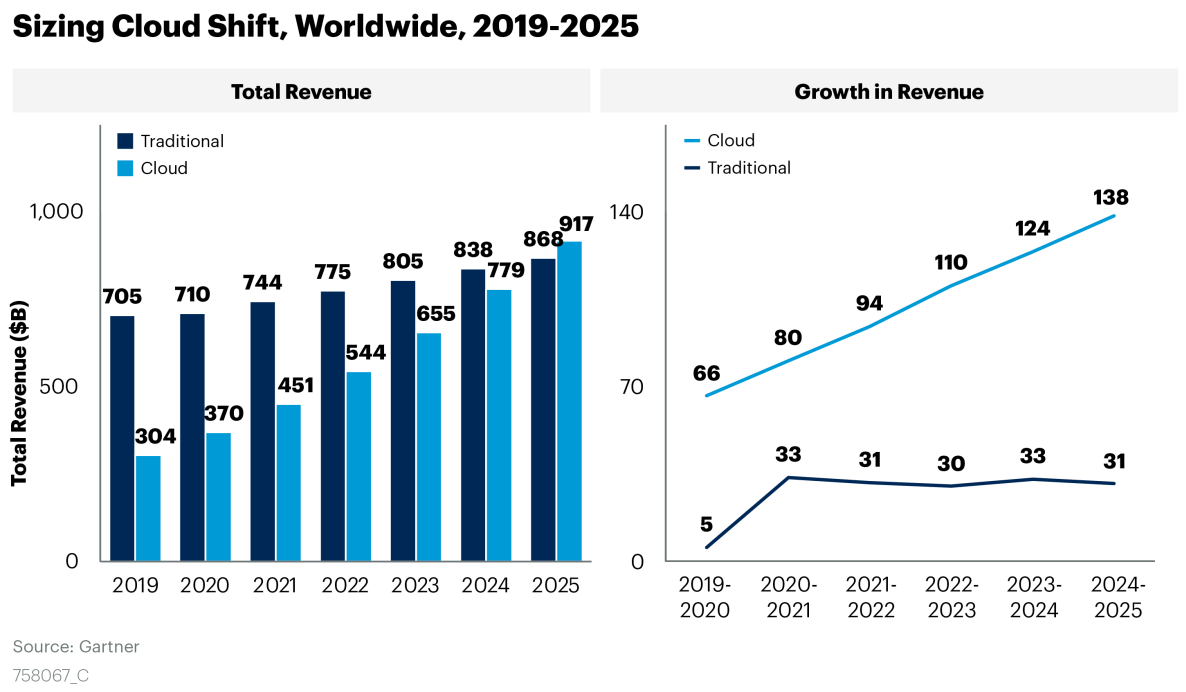
As a result, and to be more specific, cloud shift calculations — even for a given forecast year — should not be compared between different iterations of cloud shift published research. In other words, we advise readers to review cloud shift data only in the latest published research.

> **Cloud Shift Research**
>
> The cloud shift research measures the ratio of enterprise IT spending on public cloud services compared with traditional (noncloud) for a given set of market segments. The cloud shift calculations compare spending in a set of specific market categories to provide a comparison for similar applications, workloads or outcomes.
>
> As an example, application software is one of the four cloud shift categories (see Note 1). It estimates the shift in IT spending on applications from traditional (noncloud) to cloud. In doing so, it contrasts application software licensed and deployed as traditional (noncloud) software with applications purchased as software as a service (SaaS) and consumed via public cloud.

Impacts and Recommendations

The adoption of public cloud continues. To explore this trend, Gartner has published cloud shift iterations in 2016, 2018 and 2020. This document is the latest update and uses the latest available forecast data. As such, it highlights the continuing movement expected through 2025, as illustrated in Figure 2.

Figure 2: Sizing Cloud Shift, Worldwide, 2019 Through 2025



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Economic Outlook

Cloud shift draws on Gartner market forecast data and therefore is influenced by the same market forces as Gartner's standard forecasts. Therefore, in the wake of accelerated cloud adoption due to COVID-19, the rate of cloud shift shown in this iteration varies from the previous (see Figure 1). At the time of publication of this research, the Gartner forecast for growth in global IT spending in 2022 will expand by 5.4% in constant currency and 5.5% in U.S. dollars.

IT Spending on Cloud

There are other methods of tracking changes in enterprise IT spending on cloud. As a notable example, Gartner's IT Key Metrics Data provides an array of metrics related to IT budgets and performance as reported by IT budget owners. For 2022, ITKMD indicates cloud has reached an average 15% of total IT spending worldwide. For more information, see IT Key Metrics Data 2022: Industry Measures — Executive Summary.

It is important to note that ITKMD differs from the cloud shift calculations in this document. The primary reasons for this difference include the following:

- Cloud shift does not reflect total IT spending, whereas ITKMD does. For example, cloud shift does not include internal staffing, telecommunications or devices. These are a major proportion of IT spending: Personnel salaries and benefits accounted for 35% of average total IT budgets in 2022; traditional outsourcing represented 12%; and networking represented 7%.
- Cloud shift calculations, by design, exclude market segments that will experience low impact from the increasing use of cloud. See Note 2 for the forecast segments and whether they are included or excluded.
- ITKMD is a lagging indicator of IT spending trends.

Irrespective of the differences, numerous data sources, including these, essentially have the same results — cloud shift is continuing. A key benefit of this method of measuring cloud shift is that it compares only those markets where shift is a meaningful trend that can be exploited by technology and service providers.

Distributed Cloud

Gartner defines distributed cloud as the distribution of public cloud services to different physical locations, while the operation, governance, updates and evolution of the services are the responsibility of the originating public cloud provider. It is the first cloud model that incorporates the physical location of cloud-delivered services and will further blur traditional (noncloud) and cloud capabilities. As such, enterprise adoption of distributed cloud has the potential to further accelerate cloud shift. This is because it inherently expands the addressable market. Distributed cloud capabilities bring public cloud services into domains that have primarily been noncloud. For more information, see Distributed Cloud: Does the Hype Live Up to Reality?

Note 1: Forecast Revenue by Cloud Shift Category

Table 1 shows the estimated revenue for the four categories in the cloud shift research. Data is provided for traditional (noncloud) and cloud, respectively. See Note 3 for more on how Gartner determines between cloud and noncloud.

Table 1: Forecast Revenue by Cloud Shift Category, Worldwide, 2019-2025

(Enlarged table in Appendix)

Traditional	2019	2020	2021	2022	2023	2024	2025
Application Software	115,146	117,569	120,773	124,345	128,465	133,320	138,699
Business Process Services	102,642	96,776	99,861	103,075	105,776	108,767	111,728
Infrastructure Software	156,123	158,206	166,161	174,927	184,183	194,532	204,327
System Infrastructure	331,153	337,927	356,975	372,871	386,604	401,012	413,724
Total	**705,064**	**710,478**	**743,771**	**775,217**	**805,028**	**837,631**	**868,478**
Cloud	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Application Software	105,634	123,149	144,165	169,665	199,382	232,115	267,824
Business Process Services	62,751	70,625	79,005	88,454	98,740	110,428	122,520
Infrastructure Software	64,651	85,143	107,648	134,419	164,777	196,731	232,698
System Infrastructure	71,355	91,468	119,839	151,911	191,844	239,399	293,919
Total	**304,391**	**370,386**	**450,656**	**544,449**	**654,744**	**778,673**	**916,960**

Source: Gartner (January 2022)

Note 2: About Cloud Shift

Gartner research on cloud shift was first published in 2016. Cloud shift refers to a method of gauging the magnitude and direction of movement in enterprise IT spending patterns — in respect to cloud computing.

Gartner's global IT spending forecast outlines five major forecast segments — data center systems, software, devices, IT services and communications services (telecom). Of those, cloud infrastructure and cloud software are directly related to:

- Data center systems — server hardware, external controller-based storage, enterprise networking equipment and unified communications

- Enterprise software — enterprise application software and infrastructure software
- IT services — business IT services and IT product support

Cloud shift is indirectly related to:

- Devices — PCs, tablets, mobile phones and printers
- Communications services — consumer fixed services, consumer mobile services, enterprise fixed services and enterprise mobile services

As such, devices and communications services are excluded whereas portions of data center systems, enterprise software and IT services are included.

The inclusions (and exclusions) for each major market segment are shown in Table 2.

Table 2: Cloud Shift Inclusions and Exclusions

(Enlarged table in Appendix)

Forecast	Segment	Included in Cloud Shift?
Data Center Systems	Servers	Yes
Data Center Systems	External controller-based storage	Yes
Data Center Systems	Enterprise network equipment	Yes
Data Center Systems	Unified communications	No
Software	Application software	Yes
Software	Infrastructure software	Yes
Software	Vertical software	No
Services	Business process services	Yes
Services	Data center services	Yes
Services	Consulting and implementation services	No
Services	Application-managed services	No
Services	Hardware support	No
Services	Enterprise-network-managed services	No
Services	Managed workplace services	No
Services	Service-desk managed services	No
Public Cloud	Business process as a service	Yes
Public Cloud	SaaS	Yes
Public Cloud	Platform as a service	Yes
Public Cloud	Infrastructure as a service	Yes
Devices		No
Communications Services		No

Source: Gartner (January 2022)

Note 3: Determining Cloud Versus Noncloud

Gartner's research on cloud shift provides a broad, high-level view of the ongoing market impact of cloud computing over multiple years. It is intended as a macrolevel view of related trends.

The following approach was used to determine which portions of traditional (noncloud) forecasts are included in estimating the size of cloud shift:

1. All cloud shift estimates are developed using standard published Gartner forecasting data. No alternative forecasting models or assumptions are involved.

2. This version of cloud shift uses constant U.S. dollars across all cloud shift categories. This provides a more reliable view of IT spending rates and therefore a more accurate view of cloud shift.

3. Only enterprise-related forecasts are included. For example, consumer-related forecasts are specifically excluded. The set of included Gartner forecasts for cloud shift is shown in Table 2.

4. For each forecast segment, a determination has been made by Gartner as to whether the revenue of a given segment should be attributed to cloud or traditional (noncloud) from a cloud shift perspective. In other words, revenue in a given segment is not split between cloud and noncloud.

5. Many traditional (noncloud) forecasts are composed predominantly of on-premises revenue. However, certain subsegments may be specific to cloud. This occurs in the software and services markets, for example.

In future cloud shift research, Gartner will adjust the mappings of forecast segments as and when necessary.

Cloud shift should generally be used only for comparison in the context of a specific research document or analysis. In other words, inclusions and exclusions will vary over time; this is unavoidable due to market changes and the alignment of cloud shift methodologies to standard Gartner forecasts.

Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

Emerging Technology and Trends: The Future of Cloud Will Be Dictated By Customers

Gartner Market Databook, 3Q21 Update

Forecast Analysis: Public Cloud Services, Worldwide, 3Q21 Update

Forecast Analysis: Enterprise Infrastructure Software, Worldwide

Forecast Analysis: Enterprise Application Software, Worldwide

Forecast: Public Cloud Services, Worldwide, 2019-2025, 3Q21 Update

Forecast: Enterprise Infrastructure Software, Worldwide, 2019-2025, 3Q21 Update

Forecast: Enterprise Application Software, Worldwide, 2019-2025, 3Q21 Update

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Data Center Systems	Enterprise network equipment	Yes
Data Center Systems	Unified communications	No
Software	Application software	Yes
Software	Infrastructure software	Yes
Software	Vertical software	No
Services	Business process services	Yes
Services	Data center services	Yes
Services	Consulting and implementation services	No
Services	Application-managed services	No
Services	Hardware support	No
Services	Enterprise-network-managed services	No
Services	Managed workplace services	No
Services	Service-desk managed services	No

Forecast	*Segment*	*Included in Cloud Shift?*
Public Cloud	Business process as a service	Yes
Public Cloud	SaaS	Yes
Public Cloud	Platform as a service	Yes
Public Cloud	Infrastructure as a service	Yes
Devices		No
Communications Services		No

Source: Gartner (January 2022)