December 2021

HYBRID CLOUD COMMUNICATIONS AND COMPOSABILITY

TABLE OF CONTENTS

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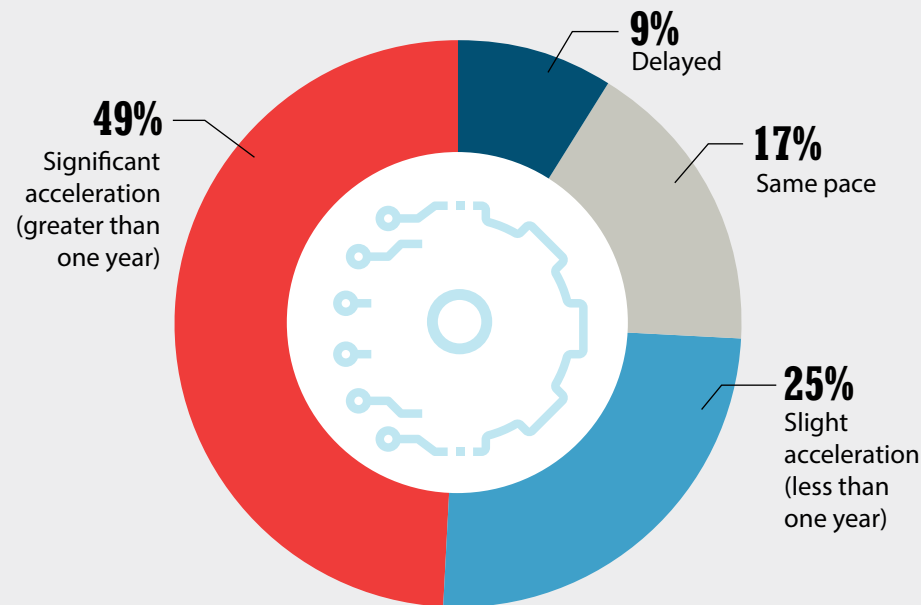*How New Hybrid Cloud Architectures Enable Enterprise Composability.*
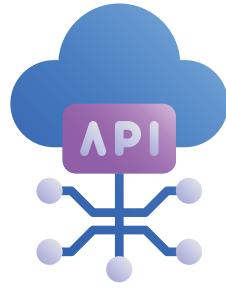
Cloud First

The ZK Research 2021 IT Priorities Survey found that 95% of organizations have at least one digital initiative underway. With today's focus on the customer experience (CX) and employee experience as well as the crucial role that digital technologies play, digital initiatives must be a priority for businesses.

In another interesting data point from the survey, since the COVID-19 pandemic began, 49% of survey respondents have accelerated their digital transformation plans by more than one year because of the pandemic.

How has the pandemic impacted your digital transformation plans?

9%
Delayed

17%
Same pace

49%
Significant
acceleration
(greater than
one year)

25%
Slight
acceleration
(less than
one year)

In composable organizations, **data**, **APIs** and **applications** are **the hub** of **new business models**.

The most critical element of digital transformation is **communications**, as it has a direct impact on both the customer experience and employee productivity, which are the top two drivers of digital transformation initiatives according to the ZK Research 2021 IT Priorities Survey.

Digital innovation also requires an emphasis on becoming a "**composable**" organization, which is one that embraces the application programming interface (API) economy to deliver business outcomes by assembling and combining business capabilities quickly and easily.

In composable organizations, data, APIs and applications are the hub of new business models—and this data needs to travel across the extended network at increasingly high speeds without interruption. To achieve this, organizations are radically redesigning their infrastructure by adopting **cloud-based communications**.
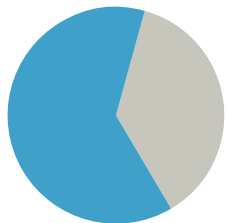
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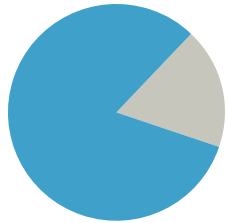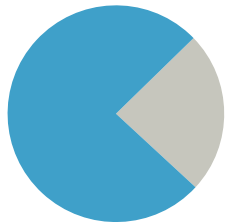
Evolution of Cloud

Although the term "cloud" has been used to describe the shift of applications to an "as a service" model, the cloud industry has been evolving through **several waves of innovation**:

1. Hosted services
2. Centralized infrastructure-as-a-service (IaaS) or software-as-a-service (SaaS) offerings
3. The era of multi-cloud

In the fourth wave of cloud innovation, workloads and data reside on containers, enabling the collection of **public** (shared multi-tenant infrastructure), **private** (single tenant) and **edge locations** (remote cloud resources placed closer to users and data) to look like a single cloud. ZK Research defines this as a **distributed cloud**.

Although the edge is still emerging, private clouds have been growing steadily. The ZK Research 2021 Cloud Computing Forecast shows that in 2017, private clouds only constituted 18% of workloads but now make up 24% and are expected to grow steadily to 37% by 2025.

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The primary units of compute in the distributed cloud era are containers, which are significantly more lightweight than virtual machines and therefore more agile. This makes the distributed cloud the first cloud model to support multiple architectures such as multi-tenant, multi-instance and single instance. These are the **seven key drivers** of distributed clouds:

1. Data isolation

2. Standardized infrastructure with composable applications

3. High-availability service

4. Increased scalability

5. Business continuity

6. Easy integration

7. Better application performance

In modernized cloud deployments, there are multiple architectures:

Single-Instance Container

Multi-Instance Container

Multi-Tenant Container
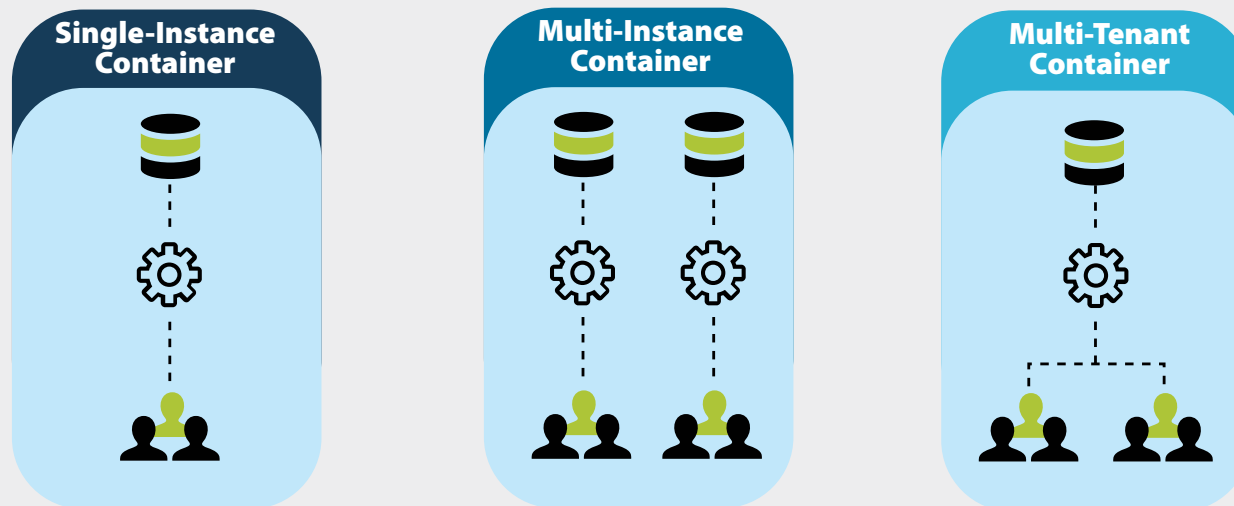
Composability

ZK Research defines a **composable enterprise** as a business that achieves business outcomes by adapting to changes quickly through a combination of packaged applications and application building blocks such as exportable data, APIs and low-code/no-code systems.

A good way to think about a composable business is a company consisting of interchangeable building blocks.
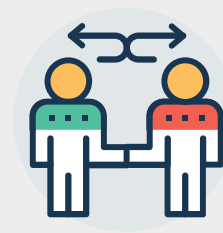
There are four key tenets to a composable enterprise:

1. Moves with unprecedented speed
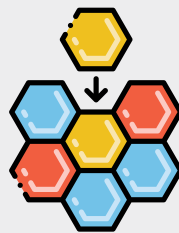
2. Modular capabilities

3. Collaboration between lines of business and IT

4. C-level driven

Hybrid Cloud Approach

Cloud communications services, such as unified communications as a service (UCaaS), contact center as a service (CCaaS) and communications platform as a service (CPaaS), are certainly not new. However, for buyers of these solutions, the landscape can be very confusing because **not all cloud solutions are created equal**:

- **UCaaS** such as calling, meeting, messaging and other functions helps workers collaborate with one another.

- **CCaaS** provides contact center capabilities, enabling customer-facing people to provide services to customers.

- **CPaaS** is used primarily by developers to build custom applications with embedded communications capabilities.

Public clouds offer services delivered over the internet from a cloud provider. The cloud provider deploys, manages and maintains the pool of computing resources required to deliver applications to multiple clients. The crucial features of public clouds are elastic services, a multi-tenant architecture and a pay-per-use model.

Private cloud is an environment that is dedicated to a single organization. The resources can be located in the organization's data center or operated by a third party. The infrastructure and data are isolated and delivered over a private network. Private clouds are also more flexible and more customizable and can meet the business and security needs of any organization, including those in highly regulated industries.

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A **distributed cloud** model mixes on-site, public and private cloud solutions.

A **new "third way" approach** has emerged to blur the traditional lines between public and private cloud—**distributed cloud**. This model mixes on-site, public and private cloud solutions. With a true distributed cloud, solutions are orchestrated and look like a single environment in which applications and resources can be shared between public and private clouds.

The hybrid cloud approach tends to offer composability in the form of a layer of innovation that can be added to existing infrastructures, which also preserves existing investments. Moving forward, composable organizations will want the best of both worlds and will take a hybrid approach.

A **composable**

enterprise needs each

type of cloud model.

Cloud for the Composable Enterprise

Avaya is a well-established communications vendor and a long-standing leader in both UCaaS and CCaaS. Recently, the vendor has rolled out its **Avaya OneCloud** portfolio of solutions that was built in the cloud using the Avaya OneCloud CPaaS framework and was designed from the ground up specifically to meet the needs of composable organizations.

Avaya has used the product to build turnkey employee experience apps (UCaaS), including its workstream collaboration offering Avaya Spaces, and customer experience apps (CCaaS) from the CPaaS APIs. This is a markedly different approach from most of the industry.

Businesses need to stop thinking of the different cloud archetypes as discrete clouds because a composable enterprise needs each type of cloud model. Avaya OneCloud UCaaS and CCaaS solutions can be deployed across all cloud archetypes.

With Avaya, public and private clouds are not solution capabilities but rather delivery models for communications capabilities such as the following:

- **All cloud archetypes:** Built on CPaaS as the cloud foundation

- **Managed/hosted:** Broad foundational CX suite that leverages existing investments

- **UCaaS/CCaaS:** "As a service" capabilities

- **CRM CEC:** Enables a "Total Experience" focus

- **CPaaS:** Enables rapid innovation and custom experiences

- **Build your own:** SaaS and development platform

- **UC contact center:** Supports all employee- and customer-facing workflows

Avaya offers a "best of all worlds" experience, as it empowers a composable business and enables enterprise customers to deploy UC and CC any way they need.

To Wrap It All Up

When choosing a communications provider, organizations need to do the following:

• Embrace composability

• Leverage all the cloud archetypes

• Choose a cloud communications provider that addresses the needs of the composable enterprise

• Make on-premises migration part of the decision criteria

Avaya focuses on enabling its customers to deliver the "Total Experience" via a hybrid cloud approach combined with a comprehensive composability framework. Avaya's One Cloud offering is a composable application framework that delivers any user or customer experience, regardless of how markets transition.

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About ZK Research

ZK RESEARCH | How New Hybrid Cloud Architectures Enable Enterprise Composability

About Avaya

Businesses are built by the experiences they provide, and every day millions of those experiences are delivered by Avaya Holdings Corp. (NYSE: AVYA). Avaya is defining what's next for the future of work, with innovation and partnerships that deliver game-changing business benefits. Our cloud communications solutions and multi-cloud application ecosystem power personalized, intelligent, and effortless customer and employee experiences to help achieve strategic ambitions and desired outcomes. Together, we are committed to help grow your business by delivering Experiences that Matter.

Learn more at www.avaya.com.

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