



Are you Cloud fluent?

Helping you thrive
in a digital world

Glossary



Do you speak Cloud?



Cloud. It's everywhere. Literally.

It has become a mainstay of everyday life, and as such has moved from the talk of technologists to the boardroom and beyond. It's a language seemingly everyone is speaking.

Most business people know a little about the Cloud – some even know a lot – but we'd all be forgiven for getting lost in the ever-changing language, endless terminology and latest buzzwords attached to it. After all, we're talking about the combination of technology and consulting – two of the most buzzword-rich business sectors on the planet!

But don't worry, we've got you.

This glossary of terms has been created to help you understand the basics. It lays out some of the most widely used Cloud terms, explains what they mean, and will have you speaking Cloud in no time.

Keep it as a handy reference guide, and be primed for the kind of conversations you should be having about the Cloud and your own business.

Ready? Let's talk Cloud.

Definitions



Do you speak Cloud?



Term	Definition
What is Cloud?	<p>Cloud computing is the on-demand delivery of IT resources over the internet with pay-as-you-go pricing. Instead of buying, owning, and maintaining physical data centres and servers, you can access technology services, such as computing power, storage, databases, analytics, network services, Artificial Intelligence (AI), Machine Learning (ML), etc. on an as-needed basis. Combined, these components make up cloud computing architecture.</p> <p>The benefits of Cloud are that it provides organisations with increased speed and agility. Cloud technologies enable new ways of working, helping organisations to bring new products and services to market quickly and/or solve business problems quickly.</p>
What is Cloud Managed Services (CMS)?	<p>Cloud Managed Services refers to outsourcing daily IT management for Cloud-based services and technical support to automate and enhance your business operations.</p>
What is Cloud Architecture?	<p>Cloud architecture refers to the components and subcomponents required for Cloud computing. These components typically consist of a front-end platform, back end platforms, a Cloud-based delivery, and a network.</p> <p>We in Deloitte Cloud, for example, adhere to the AWS Well-Architected Framework and have built upon this using our extensive knowledge of Cloud services and tools to develop our own highly articulate architecture standards for build and custodianship of Cloud solutions.</p>
What is DevOps?	<p>DevOps is a set of practices that combines software development and information-technology operations with the aim of shortening the systems development life cycle and providing continuous delivery of high software quality.</p>

Term	Definition
Cloud Service Provider (CSP)	<p>CSPs are companies that offer network services, infrastructure, or business applications in the Cloud. The large public CSPs are Amazon Web Services (AWS), Microsoft Azure and Google Cloud Platform (GCP).</p>
What is AWS?	<p>Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted Cloud platform. AWS services can offer an organisation tools such as compute power, database storage and content delivery services.</p> <ul style="list-style-type: none">• 69 availability zones.• Visit this link for more details on Amazon's instance types – More details on Amazon's instance types visit here for more details.
What is Azure?	<p>Microsoft Azure is an ever-expanding set of Cloud services to help your organisation meet your business challenges. It's the freedom to build, manage and deploy applications on a massive, global network using your favourite tools and frameworks.</p> <ul style="list-style-type: none">• 54 availability zones.• Visit this link for more details on Microsoft Azures instance types – More details on Microsoft's instance types visit here for more details.

Cloud architecture refers to the components and subcomponents required for Cloud computing...

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What is GCP? (Google Cloud Platform)	<p>Google Cloud Platform (GCP) is a Cloud computing service that runs on the same infrastructure that Google uses internally for its end-user products, such as YouTube. It provides a series of modular Cloud services including computing, data storage, data analytics and machine learning.</p> <ul style="list-style-type: none">• 61 availability zones.• Visit this link for more details on Google Cloud Platforms instance types – visit here for more details.
Application	<p>An application is simply another term for a software product (a computer program designed to allow a user to perform a set of functions or task) and a Cloud App is an application which runs on Cloud architecture.</p>
Application Programming Interface (API)	<p>An API is an interface or communication protocol between different parts of a computer program intended to simplify the implementation and maintenance of software.</p> <p>A Cloud API is a type of API that enables the development of applications and services used for the provisioning of Cloud hardware, software, and platforms.</p>

Term	Definition
Availability Zone (AZ) (Regions and Data Centres)	<p>Regions and Availability Zones (AZs) are a key concept in Cloud. A Region is a separate geographic area, with the larger public Cloud Service Providers having multiple regions spread across the globe. Each Region is in turn made up of multiple AZs. An Availability Zone is a unique physical location within a Region, made up of one or more Data Centres equipped with independent power, cooling and network connectivity. Data Centres within an AZ are typically connected via dedicated low-latency network within a latency-defined perimeter.</p> <p>Businesses choose one or multiple worldwide regions and/or availability zones for their services depending on business need. (See High Availability (HA), Fault Tolerance and Disaster Recovery (DR)).</p>
Business Process as a Service (BPaaS)	<p>Business Process as a Service (BPaaS) is a form of business process outsourcing (BPO) that employs a cloud computing service model. Whereas the aim of traditional BPO is to reduce labour costs, BPaaS reduces labour count through increased automation, thereby cutting costs in the process.</p>

Do you speak Cloud?



Term	Definition
Cloud Adoption	<p>Cloud adoption is a strategic move by organisations of reducing cost, mitigating risk and achieving scalability in applications and services by moving these to the Cloud. There are varying degrees of Cloud adoption across organisations. The depth of adoption depends on the maturity of best practices and enterprise-ready Cloud services availability.</p> <p>Organisations that go ahead with the strategic decision of adopting Cloud-based technologies have to identify potential security vulnerabilities and controls, required to keep data and applications in the Cloud secured, hence there is a need for compliance assessment during Cloud adoption.</p>
Cloud Broker	<p>A Cloud Broker abstracts away from the underlying provider to offer users easier access to Cloud computing resources. Often it provides a simplified API and/or human UI, data lifecycle management, security guardrails, best practice guidance and focused service integrations and aggregations.</p> <p>In this respect, Deloitte Cloud Managed Services is a Cloud Broker with its Cloud Management Platform (CMP) and Managed Service Provider (MSP) offerings.</p>

Term	Definition
Cloud Computing – 3 Main Models: 1. IaaS 2. PaaS 3. SaaS	<p>Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.</p>
1. Infrastructure as a Service (IaaS)	<p>Contains the basic building blocks for Cloud IT providing access to networking features, computers (virtual or on dedicated hardware), and data storage space. IaaS provides you with the highest level of flexibility and management control over your IT resources and is most similar to existing IT resources that many IT departments and developers are familiar with today.</p>
2. Platform as a Service (PaaS)	<p>Removes the need for organisations to manage the underlying infrastructure (usually hardware and operating systems) and allow you to focus on the deployment and management of your applications. This helps you be more efficient as you don't need to worry about resource procurement, capacity planning, software maintenance, patching, or any of the other undifferentiated heavy lifting involved in running your application.</p>
3. Software as a Service (SaaS)	<p>Provides you with a completed product that is run and managed by the service provider. In most cases, people referring to SaaS are referring to end-user applications as you do not have to think about how the service is maintained or how the underlying infrastructure is managed; you only need to think about how you will use that particular piece software.</p>

Do you speak Cloud?



Term	Definition
Cloud Enabled Solution	Cloud Enabled Solutions allow companies to focus on revenue driving initiatives rather than time-consuming, non-core business tasks through the leveraging of Cloud-based applications and services to increase capacity, scalability, functionality, whilst reducing the cost of maintaining computer infrastructure and/or in-house staff.
Cloud Management Platform (CMP)	A suite of integrated software tools that an enterprise can use to monitor and control Cloud computing resources. Allows administrative control over public, private, hybrid and multi-Cloud deployments.
Cloud Migration	The process of moving data, applications or other business elements to a Cloud computing environment. One common model is the transfer of data and applications from a local, on-premises data centre to the public Cloud.
Cloud Native	<p>Cloud Native is an approach to building and running applications that exploit the advantages of the Cloud computing delivery model. It is about 'How' these applications are created and deployed, not 'Where'. Though it does tend to imply that these applications live in the public Cloud.</p> <p>The Cloud Native Computing Foundation (CNCF) defines Cloud Native more narrowly, as “the use of containerised open-source software stack, where each part is packaged in its own container, dynamically orchestrated so each part is actively scheduled and managed to optimise resource utilisation and microservices-orientated to increase the overall agility and maintainability of applications.”</p>

Term	Definition
Cloud Services Brokerage (CSB)	An IT role and business model in which a company or other entity adds value to one or more (public or private) Cloud services on behalf of one or more consumers of that service via 3 primary roles; aggregation, integration and customisation brokerage. A CSB provider offers a combination of technologies, people and methodologies to implement and manage Cloud-based projects. (Gartner).
Consumption Based Pricing	A consumption-based pricing model is a service provision and payment scheme in which the customer pays according to the resources used. This model is becoming a popular approach within Cloud Managed Services.
Container	A container is a standard unit of software that packages up code and all its dependencies, so the application runs quickly and reliably from one computing environment to another. Unlike virtual machines (VMs), containers do not need to run a full-blown operating system (OS) image for each instance. Instead, containers can run separate instances of an application within a single shared OS.
Content Delivery Network (CDN)	A Content Delivery Network (CDN) is a system of distributed servers (network) that deliver pages and other web content to a user, based on the geographic locations of the user, the origin of the webpage and the content delivery server.

Do you speak Cloud?



Term	Definition
Continuous Integration/Continuous Delivery (CI/CD)	<p>Though not terms which are exclusively Cloud, Continuous Integration/Continuous Delivery (CI/CD) are commonly referred to within Cloud Managed Services.</p> <p>Developers practicing Continuous Integration (CI) merge their changes back to the main branch as often as possible. With emphasis on testing automation, changes are constantly validated by creating a build and running automated tests against the build to check that the application is not broken whenever new code commits are integrated into the main branch. By doing so, you avoid the integration hell that usually happens when people wait for release day to merge their changes into the release branch.</p> <p>Continuous Delivery (CD) is an extension of continuous integration to make sure that you can release new changes to your customers quickly in a sustainable way. This means that on top of having automated your testing, you also have automated your release process and you can deploy your application at any point of time by clicking on a button. In theory, with continuous delivery, you can decide to release daily, weekly, fortnightly, or whatever suits your business requirements. However, if you truly want to get the benefits of continuous delivery, you should deploy to production as early as possible to make sure that you release small batches that are easy to troubleshoot in case of a problem.</p>
Docker	Docker is an open-source platform/tool, for the creation, deployment and management of applications using containers.
Elasticity in the Cloud	In Cloud computing, Elasticity is a term used to reference the ability of a system to adapt to changing workload demand by provisioning and de-provisioning pooled resources so that provisioned resources match current demand as well as possible.

Term	Definition
Function as a Service (FaaS)	Function as a Service is the concept of serverless computing via serverless architectures. Developers can leverage this to deploy an individual 'function', action or piece of business logic which runs when triggered by an event. Based on a microservices architecture, they start within milliseconds, process a specific individual request then end. With a complete abstraction from the underlying server infrastructure, billing is based on consumption and executions, not instance size (something which also helps FaaS implementations be instantaneously scalable).
Github	Github is a cloud-based service that allows developers to store and manage source code (a source code repository), enabling them to track and control changes to the code using the 'Git' open-source version control system.
Hybrid Cloud	Hybrid Cloud is a mixture of on-premise data centre infrastructure and one or more public and/or private Cloud environments networked together to enable application and/or data portability.
Infrastructure	Cloud Infrastructure refers to a virtual infrastructure that is delivered or accessed via a network or the internet. This usually refers to the on-demand services or products being delivered through the model known as Infrastructure as a Service (IaaS).

Do you speak Cloud?



Term	Definition
Infrastructure as Code (IaC)	Infrastructure as Code (IaC) is the process of managing and provisioning IT resources through machine-readable definition files, rather than physical hardware configuration or interactive configuration tools. The IT infrastructure managed in this way comprises both physical equipment such as bare-metal servers as well as virtual machines and associated configuration resources. It can use either scripts or declarative definitions, rather than manual processes. IaC approaches are promoted for Cloud computing, which is sometimes marketed as infrastructure as a service (IaaS). IaC supports IaaS but should not be confused with it.
Instance Types	Instance types represent units of compute power, comprising varying combinations of CPU, memory, storage, and networking capacity and give you the flexibility to choose the appropriate mix of resources for your applications. Each instance type includes one or more instance sizes, allowing you to scale your resources to the requirements of your target workload.
Kubernetes	<p>Kubernetes is a portable, extensible, open-source container orchestration system for automating the creation, deployment and management of containerised workloads and services.</p> <p>Originally designed by Google, it is now maintained by the Cloud Native Computing Foundation and facilitates both declarative configuration and automation.</p>
Jenkins	Jenkins is an open-source automation server offering a simple way to setup a continuous integration/delivery environment for almost any combination of development languages and source code repositories using pipelines. Whilst facilitating the automation of routine development tasks, Jenkins doesn't eliminate the need to create scripts for individual tasks but does provide for a faster and more robust way to integrate the entire chain of build, test and deployment tools.

Term	Definition
Load Balancing	The process of distributing computing workloads across multiple resources, such as servers. In Cloud computing, a load balancer acts as a reverse proxy and distributes application traffic to multiple servers in order to prevent any single application server from becoming a point of failure.
Managed Services Provider (MSP)	A Managed Services Provider (MSP) is an IT service provider that provides fully outsourced network, application, and system services across a network to clients. Deloitte Cloud Managed Services is a multi-Cloud MSP, providing such services across AWS, Azure and GCP.
Microservices	Microservices or microservice architecture is a way of designing applications in which complex applications are built out of a suite of small, independently deployable services. These 'microservices' run their own processes and communicate with one another using lightweight mechanisms such as language-agnostic APIs.
Multi-Tenancy	Refers to a type of computing architecture in which one or more logical software instances are created and executed on top of primary software. Multitenancy in the Cloud refers to multiple end-users running their virtually separated servers/applications on top of the same physical hardware.
On-Premise	On-Premise means that a company keeps all of its IT environment (infrastructure, applications, etc.) on-site in their own data centre, where it is either managed by themselves or a third-party. Whereas Cloud means that it is housed offsite with someone else responsible for monitoring and maintaining it.

Do you speak Cloud?



Term	Definition
Resilience in Cloud	Resilience is the ability of a server, network, storage system, or an entire data centre, to recover quickly and continue operating even when there has been an equipment failure, power outage or other disruption.
Fault Tolerance	Fault Tolerance is a system's ability to continue operating properly when one or more its components fails.
High Availability (HA)	High Availability (HA) is the maintenance or acceptable continuous performance despite temporary fluctuations in load or failures in services, hardware or datacentres.
Disaster Recovery (DR)	Disaster Recovery (DR) is a system's ability to backup and restore apps/resources/data when needed.
Rightstart	<p>Rightstart is a Product Offering from Deloitte Cloud Engineering encompassing a program of work which is geared towards addressing Cloud adoption challenges and allow clients to accelerate their Cloud journey. It provides an opined target state AWS infrastructure to quickly establish a Minimum Viable Cloud (MVC) platform for Deloitte clients.</p> <p>Technically it allows for a best practice, enterprise class implementation of AWS services in a multi-account architecture to provide clients with a highly secure landing zone tailored to their requirements.</p> <p>In imparting the knowledge and learnings Cloud Engineering have built up through considerable experience, it provides a platform which allows clients to get up and running in a predictable and proven way and scale quickly, underpinning their Cloud strategy.</p>
Scalability	Scalability in Cloud is the ability of a process, system, or framework to handle a growing workload. In other words, a scalable system is adaptable to increasing demand. You can scale horizontally (e.g. more instances, typically non-disruptive) or scale vertically (e.g. larger instance sizes, potentially disruptive).

Term	Definition
Serverless Computing	Serverless computing is a Cloud-based technology where an application runs on-demand. It does not require the customer to manage a server to run their code. Pricing is calculated based on memory usage and execution duration.
Software Development Kit (SDK)	Software Development Kit (SDK), also known as a developer's toolkit or devkit, is a set of development tools that aids or allows the creation of applications for a certain platform. SDKs typically include APIs, sample code, documentation, debuggers and other utilities.
Software Stack	A Software Stack is a group of applications that work in a specific and defined order to achieve a common goal.
Virtual Machine (VM)	A Virtual Machine is a software computer that runs an operating system or application environment, just as physical hardware would. Essentially, a VM is a machine within a machine. By running VMs, a hardware computer can run multiple instances of the same operating system.
Virtual Private Cloud (VPC)	A Virtual Private Cloud (VPC) is an on-demand configurable pool of shared computing resources allocated within a public Cloud environment, providing for a level of isolation between the different organisations using the resources. This network separation allows for the protection of applications and data using software defined networks, firewalls, load balancers, etc.



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