



Aurion

PEOPLE & PAYROLL SOLUTIONS

AURION CLOUD

WHAT IS CLOUD COMPUTING?

The “cloud” is a part of daily life for most people, but when topics arise such as public vs private clouds, and what encompasses a cloud solution, the rhetoric is often very subjective.

So let's start with what cloud computing is. At its core, cloud computing is the delivery of computing services over the internet. The National Institute of Standards and Technology (NIST) defines the cloud computing model as having five essential characteristics, three service models and four deployment models.



ESSENTIAL CHARACTERISTICS

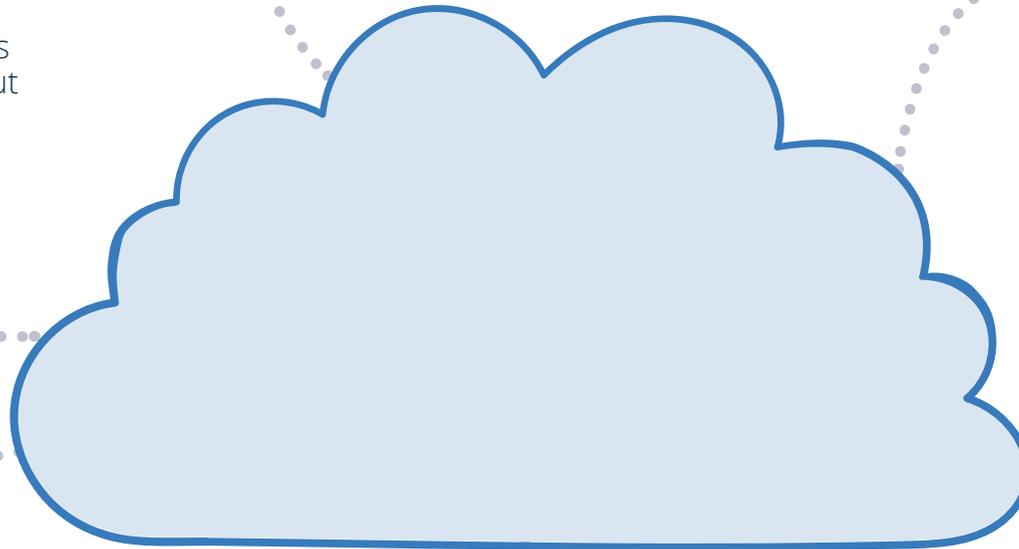
● **On-demand self-service**
A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.

● **Broad network access**
Capabilities are available over the network and accessed through standard mechanisms that promote use by various thin or thick client platforms (e.g. mobile phones, tablets, laptops and workstations).

● **Measured service**
Cloud systems automatically control and optimise resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g. storage, processing, bandwidth and active user accounts). Resource usage can be monitored, controlled, and reported, providing transparency for both the service provider and consumer of the utilised service.

● **Resource pooling**
The service provider's computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand.

● **Rapid elasticity**
Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward, proportionate with demand. To the consumer, the capabilities available for provisioning often appear unlimited and can be appropriated in any quantity at any time.



SERVICE MODELS

SERVICE MODELS



Cloud computing providers offer services that fall into three categories/service models:

- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS)
- Software as a Service (SaaS).



IaaS Model



In an IaaS model, the provider manages the infrastructure on behalf of the customer. Infrastructure includes the physical computing hardware, networking devices and storage. The virtualisation/hypervisor layer is also provided to allow customers to provision virtual servers. The customer is typically responsible for managing the virtual server, including its operating system, patching and the deployment/configuration of applications. Infrastructure resources are provided on-demand and can scale and contract as required.



PaaS Model



The PaaS model is an extension of IaaS. The main differences between PaaS and IaaS is that in PaaS the customer only has to manage the application, such as updates. The underlying cloud infrastructure, including virtual servers and operating systems are managed by the cloud provider. Cloud resources and services can be deployed by a customer using supported programming languages and tools.



SaaS Model



In a SaaS model the application is being provided as a service, restricting control over the platform and infrastructure. The customer only has to manage specific application configuration. The application is licensed on a subscription basis, typically monthly or yearly.

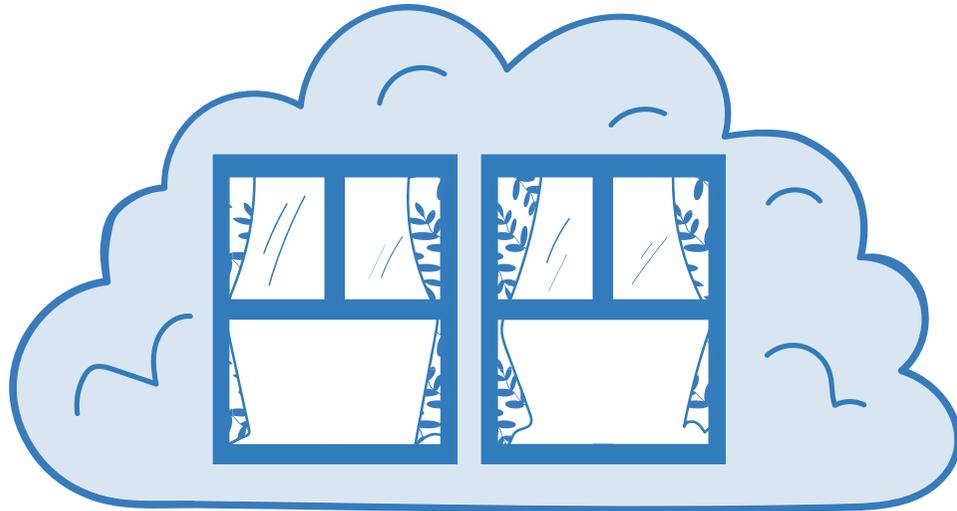
DEPLOYMENT MODELS

SERVICE MODELS



Cloud deployment models can typically be represented by:

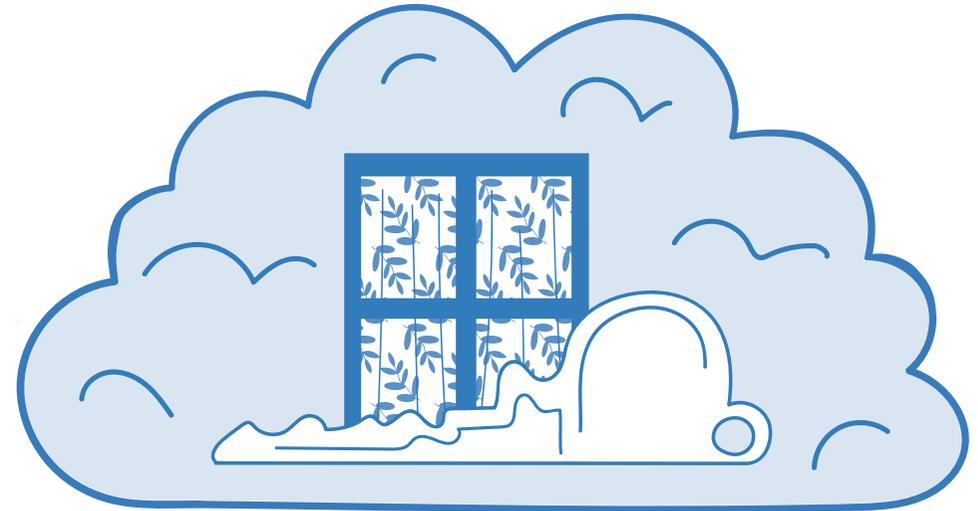
- Public cloud
- Private cloud
- Community cloud
- Hybrid cloud.



Public Cloud



Over the past 5 to 10 years, the trend has been to public clouds, as large tech firms continue to increase the service offerings within their cloud platforms. As the name suggests, a public cloud is available for the general public to use. Examples of public clouds are Amazon Web Services (AWS), Microsoft Azure and Google Cloud.



Private Cloud



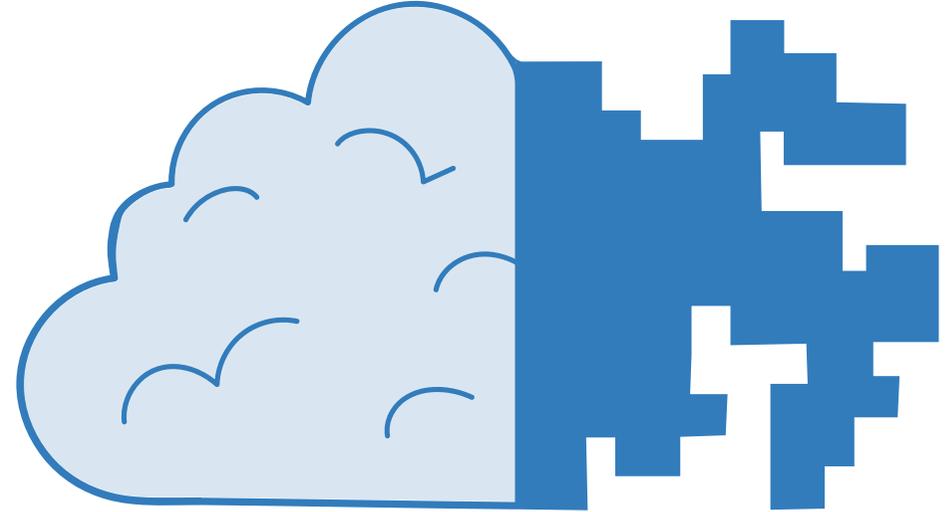
In contrast, a private cloud is usually established for sole use by a single organisation. Private clouds are very expensive and often the main driver for a private cloud is security and risk mitigation. That said, public cloud providers have certainly focused in the area of security and the large players are certified to numerous international and industry standards.



Community Cloud



A Community cloud is used by organisations that have shared concerns, such as security or compliance.



Hybrid Cloud



A hybrid cloud is a combination of at least two of the other models.

AURION'S CLOUD JOURNEY



Aurion's cloud journey started over 10 years ago. We initially offered a SaaS solution hosted on a reputable Australian cloud provider's IaaS platform. Over the years, there have been various iterations of our SaaS solution as the provider's capabilities grew.

In 2018, Aurion made the decision to move to the AWS platform, which offered not only IaaS but also PaaS for some services. The AWS platform has allowed us to improve how we can scale the solution, provided efficiencies in the deployment of the underlying infrastructure and improved the level of change control. Security is at the core of the AWS platform, and this is validated by a comprehensive list of international and Australian security-related standards that AWS are certified to.

AWS are continually improving their platform service offering as well as developing new and exciting services, and Aurion is motivated to incorporate these services into our solution and provide innovative solutions for our customers.

References

Peter Mell; Timothy Grance (September 2011). The NIST Definition of Cloud Computing (Technical report). National Institute of Standards and Technology: U.S. Department of Commerce. doi:10.6028/NIST.SP.800-145. Special publication 800-145.



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