Containerization Technology

Containerization

APPLICATION

OPERATING SYSTEM

HARDWARE

TRADITIONAL ARCHITECTURE

APP APP APP os os OS VIRTUAL MACHINE MONITOR (VMM) **HARDWARE**

VIRTUAL ARCHITECTURE

: 3 App

Hardware: 3

O/S : 3

: 3 App

Hardware: 1

O/S : 3



A

APP Container Container Container

APP

APP

DOCKER ENGINE

OPERATING SYSTEM

HARDWARE

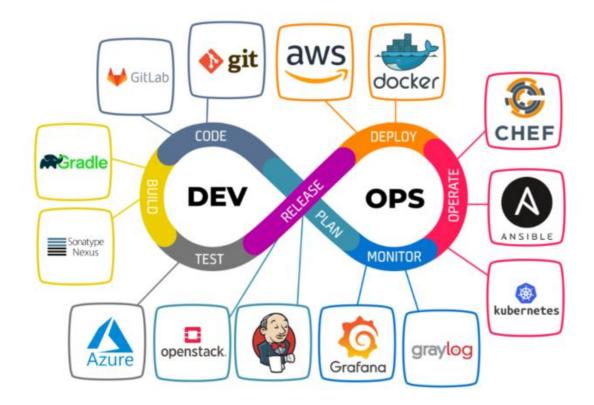
CONTAINERIZATION ARCHITECTURE

> App : 3

Hardware: 1

O/S

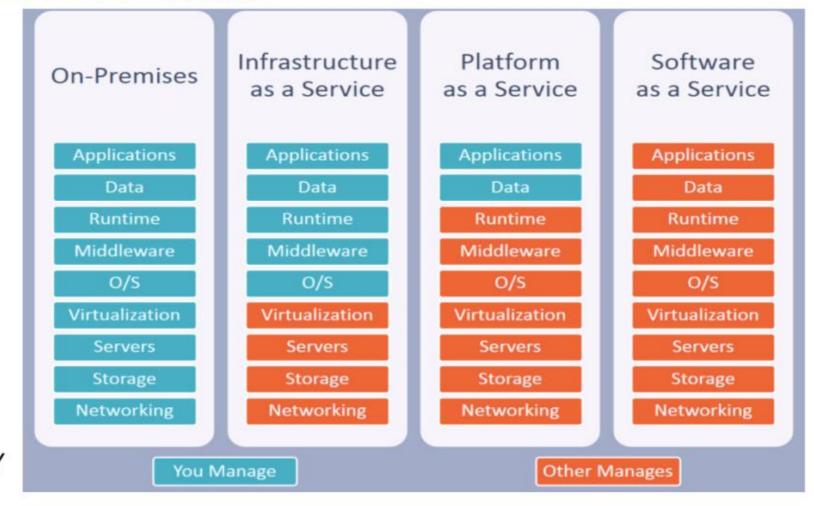
Software Development Cycle DevOps







Cloud Service Models

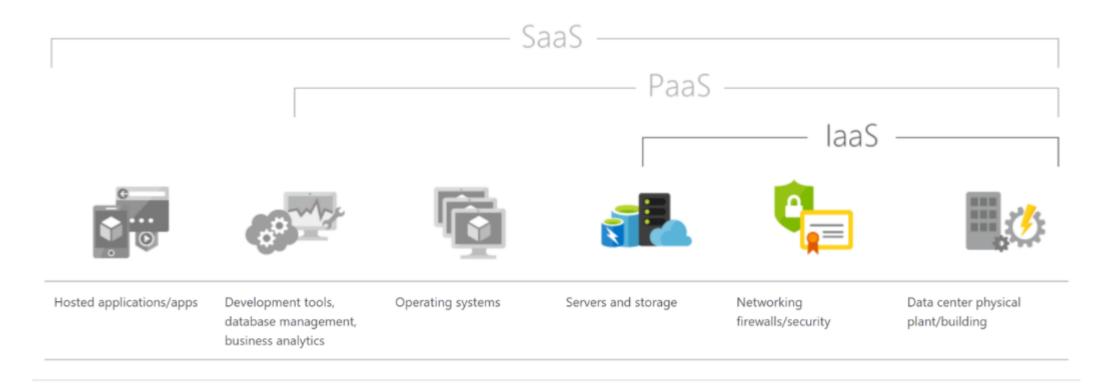








Cloud Service Models





Service Models



Pizza Analogy for Service Model Comparison

Traditional **On-Premises** (On Prem) **Dining Table** Soda Electric / Gas Oven Fire Pizza Dough **Tomato Sauce** Toppings Cheese

Infrastructure as a Service (laaS) **Dining Table** Soda Soda Electric / Gas Oven Oven Fire Fire Pizza Dough **Tomato Sauce** Toppings Cheese

Platform Software as a Service as a Service (PaaS) (SaaS) **Dining Table Dining Table** Electric / Gas Electric / Gas Oven Pizza Dough Pizza Dough **Tomato Sauce Tomato Sauce Toppings** Cheese

- On-Premise Model: You take all the ingredients of the pizza and make it yourself at home.
- laaS Model; You buy ingredients and packaged dough and make it yourself at home.
- Paas Model; You order delivered to your home.

Made at home

Take & Bake

Pizza Delivered

Dined Out

 Saas Model; You take your whole family and go to the pizzeria.



Cloud Deployment Models

There are four common cloud deployment models:

Public Cloud

Private Cloud

Community Cloud

Hybrid Cloud







Private Cloud



- It means using or creating a cloud infrastructure solely for use by one customer/organization.
- Private Clouds are owned and operated by your IT team.
- The key difference between private and public clouds is that you are not responsible for managing a public cloud hosting solution.

Deployment Models



Community Cloud



- Community clouds are shared platforms, usually with shared data and data management considerations, between organizations.
- If multiple companies share use of cloud technology, it is called Community Cloud
- A community cloud, for example, may belong to a single government and can be used by different departments of that government.





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Cloud Deployment Models



- Hybrid clouds use both private and public clouds, depending on their purpose.
- Hybrid clouds are Integrated environments of public and private infrastructure.
- For example, You can use a Public Cloud to interact with customers while retaining secure data via a Private Cloud.

