Virtualization

* Emulation of physical machines
* Different virtual hardware configuration per machine/app
* Different operating systems per machine/app
* Total separation of environments
  + file systems,
  + services,
  + ports,
  + middleware,
  + configuration

## **Virtual Machines**

* Infrastructure as a Service (IaaS)
* Total control over the operating system and the software
* Supports marketplace and custom images
* Best suited for
  + Custom software requiring custom system configuration
  + Lift-and-shift scenarios
* Can run any application/scenario
  + web apps & web services,
  + databases,
  + desktop applications,
  + jumpboxes,
  + gateways, etc.

## **Virtual Machine Scale Sets**

* Infrastructure as a Service (IaaS)
* Set of identical virtual machines
* Built-in auto scaling features
* Designed for manual and auto-scaled workloads like web services,\* batch processing, etc.

### Containers

* Use host’s operating system
* Emulate operating system (VMs emulate hardware)
* Lightweight (no O/S)
  + Development Effort
  + Maintenance
  + Compute & storage requirements
* Respond quicker to demand changes
* Designed for almost any scenario

## **Azure Container Instances**

* Simplest and fastest way to run a container in Azure
* Platform as a Service
* Serverless Containers
* Designed for
  + Small and simple web apps/services
  + Background jobs
  + Scheduled scripts

## **Azure Kubernetes Service (AKS)**

* Open-source container orchestration platform
* Platform as a Service
* Highly scalable and customizable
* Designed for high scale container deployments (anything really!)

## **App Service**

* Designed as enterprise grade web application service
* Platform as a Service
* Supports multiple programming languages and containers

## **Azure Functions (Function Apps)**

* Platform as a Service
* Serverless
* Two hosting/pricing models
  + Consumption-based plan
  + Dedicated plan
* Designed for micro/nano-services

# **Summary**

* Virtual Machines (IaaS) - Custom software, custom requirements, very specialized, high degree of control
* VM Scale Sets (IaaS) - Auto-scaled workloads for VMs
* Container Instances (PaaS) - Simple container hosting, easy to start
* Kubernetes Service (PaaS) - Highly scalable and customizable \* container hosting platform
* App Services (PaaS) - Web applications, a lot of enterprise web \* hosting features, easy to start
* Functions (PaaS) (Function as a Service) (Serverless) - micro/nano-services, excellent consumption-based pricing, easy to start

Interface gráfica do usuário, Texto, Aplicativo, chat ou mensagem de texto

Descrição gerada automaticamente

Texto

Descrição gerada automaticamente