

The background is a solid dark blue. At the bottom, there is a dark blue silhouette of a city skyline with various skyscrapers of different heights. Scattered across the upper half of the image are numerous white, stylized cloud icons of varying sizes. From each cloud, a thin, light blue vertical line extends downwards, ending just above the city skyline, suggesting a connection between the clouds and the city.

ONE OF THE LARGEST CLOUD EVENTS OF THE YEAR

CLOUD SUMMIT 2021

(Azure Focused)

SEPTEMBER 13 – 23



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Kramer&Crew

Senior Consultant

Microsoft Data-Platform & Azure

SQL Server since Version 6.5

Azure Meetup Hamburg Organizer

PASS Deutschland e.V. Member

Volunteer, Speaker, MVP

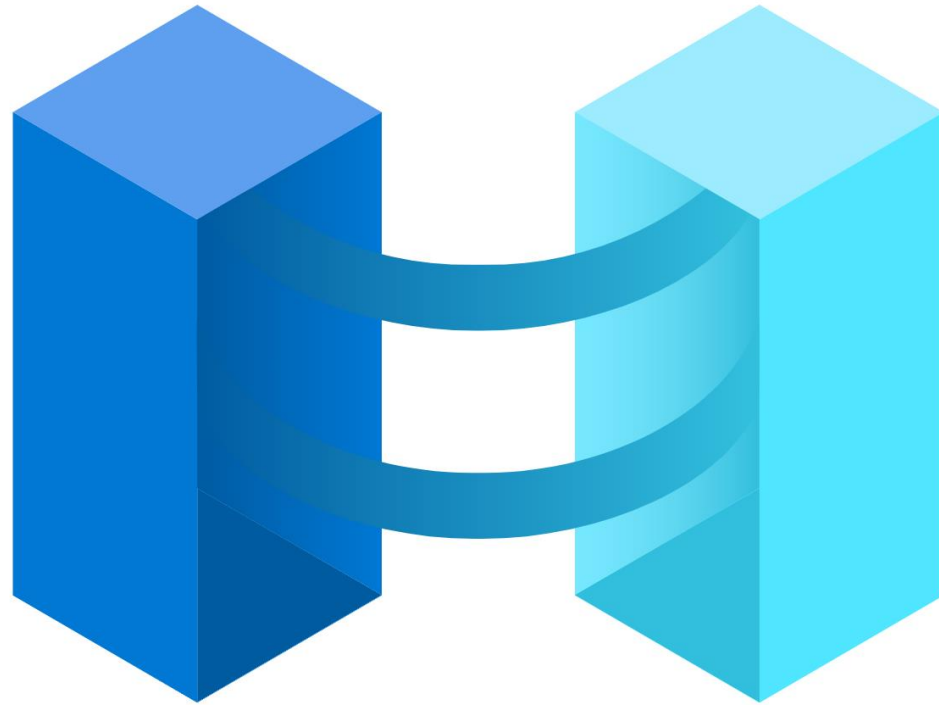
Father, Husband, Snowboarder, Cyclist, Geek

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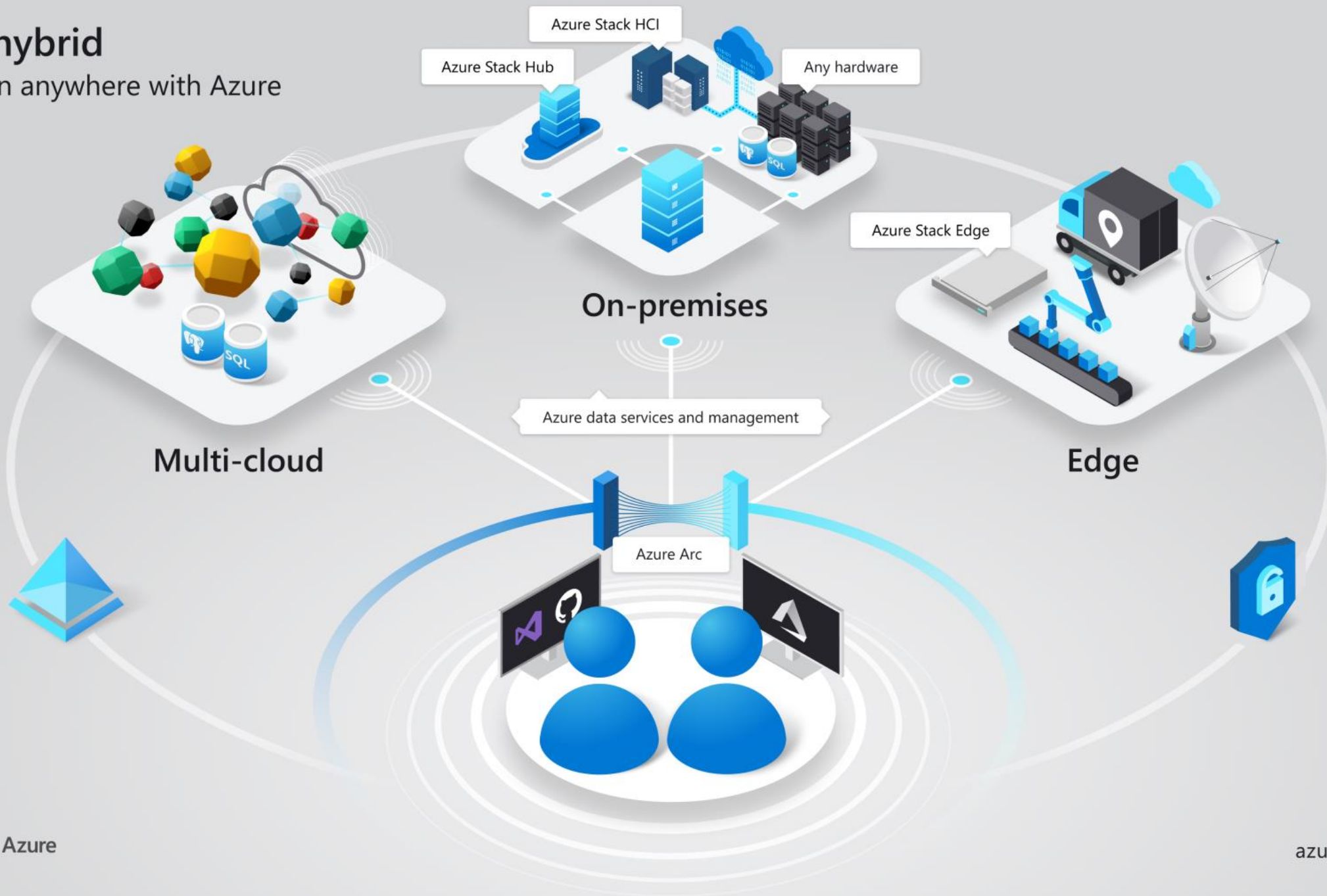
[@SQL_au_HH](https://twitter.com/SQL_au_HH)

Azure Arc

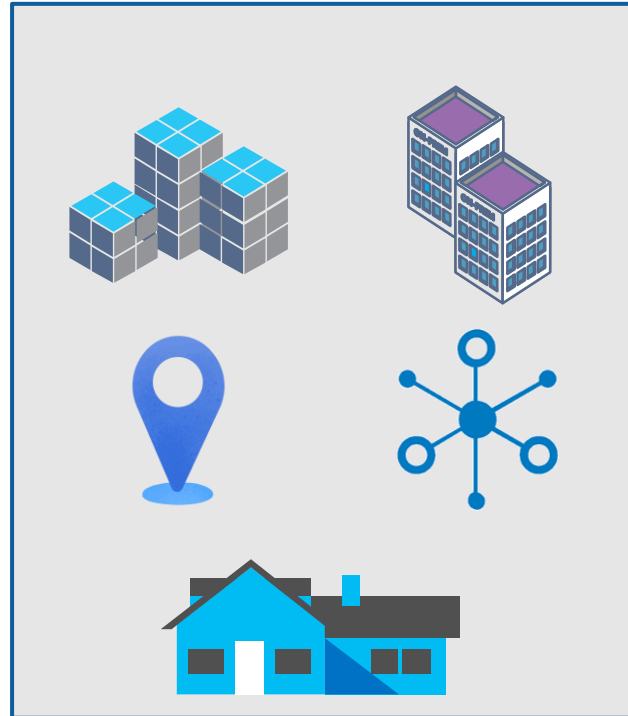
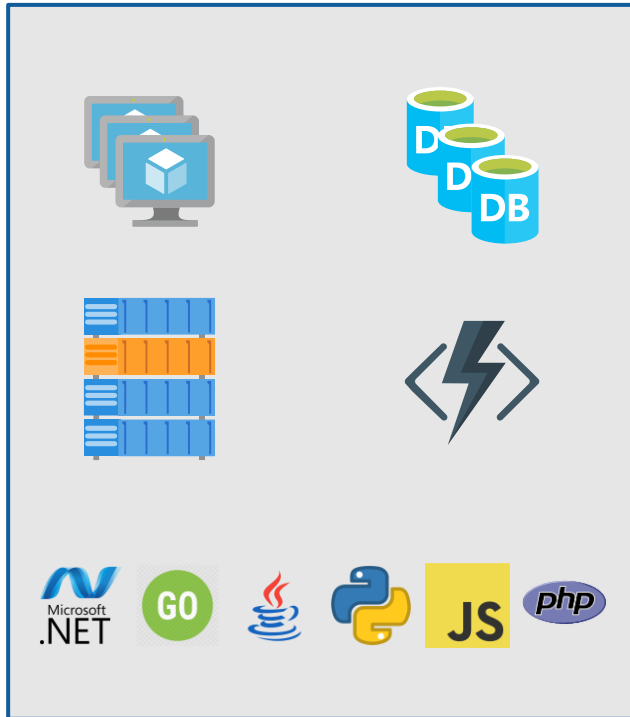


Azure hybrid

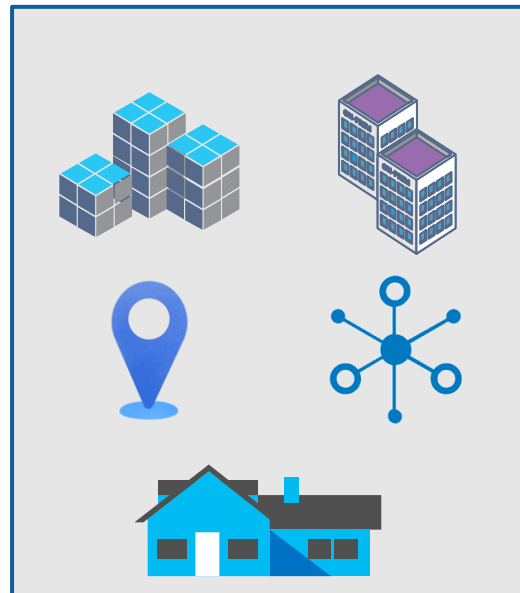
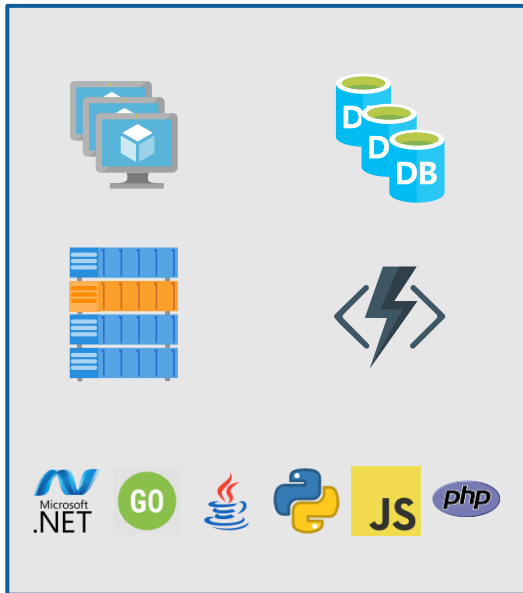
Innovation anywhere with Azure



Customer environment and requirements



Customer environment and requirements



Single control plane with Azure Arc

Azure Arc – Availability – GA or Preview

General Available

Azure Arc-enabled Servers

Windows and Linux

Inventory and
Organization

Governance and
Security

Role-Based
Operation

General Available

Azure Arc-enabled Kubernetes

Always Current

Elastic Scale

Unified-
Management

Support for
disconnected
mode

General Available

Azure Arc-enabled data services

Azure SQL
Managed Instance

Azure PostgreSQL
Hyperscale
(still preview)

General Available

Azure Arc-enabled SQL Server

Inventory and
Organization

Governance and
Security

Public Preview

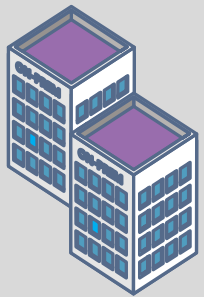
Azure Arc-enabled Application Services

Azure Arc-enabled Machine Learning

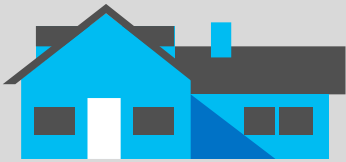
Hybrid environment with Azure Arc

or how to benefit on-premises from Azure services

Bring Azure services to any infrastructure



Google Cloud



vmware®



Organize & Govern
Secure
Protect
Monitor
Automate
Deploy

**At any location, at any
scale with diverse
resources in traditional
AND public clouds**

Bring Azure services to any infrastructure



Azure Portal	Azure Resource Manager	Azure Lighthouse	Azure Backup
Azure Resource Graph	Azure Policy	Azure Cost Management	Azure Recovery Service
Azure Monitor	Powershell	Azure Functions	Azure Templates
Azure Automanage	Azure Update	Azure Blueprints	Azure Templates Specs

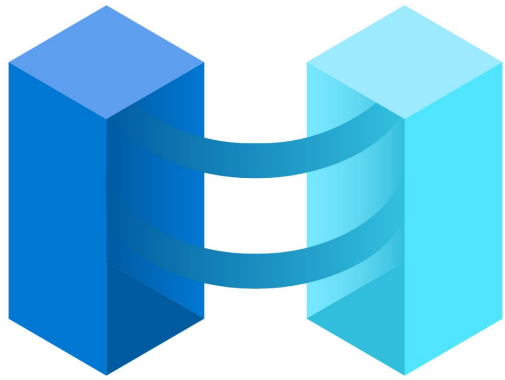
SQL in a hybrid environment

Azure
Arc-enabled
Data Services

Azure
Arc-enabled
SQL Server

Starting with **Azure Arc Data Services**

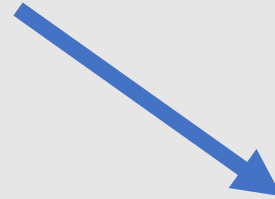
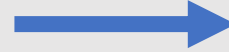
or how to deploy a SQL Managed Instance in your own datacenter



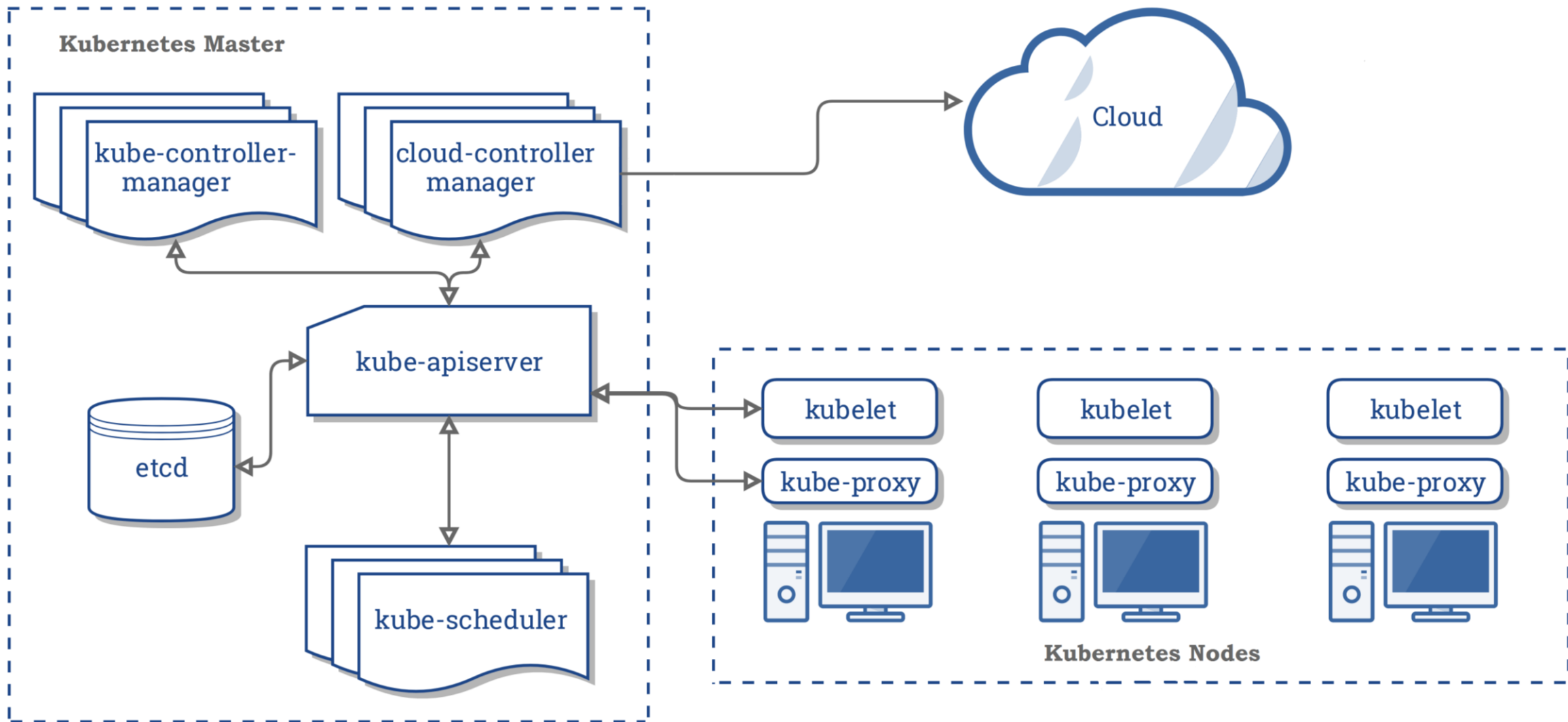
kubernetes



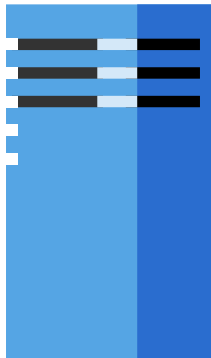
Azure Arc
Data Controller



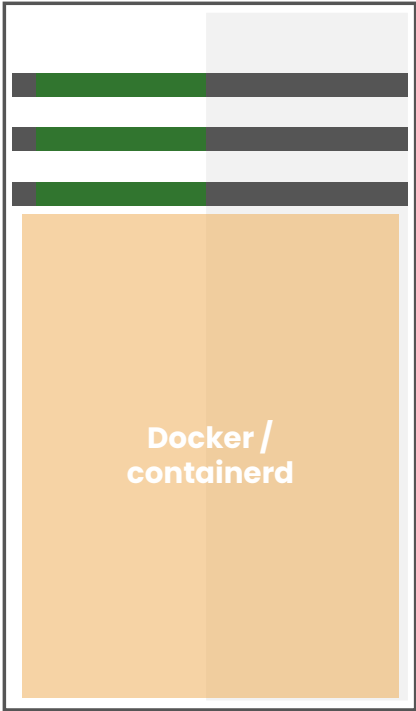
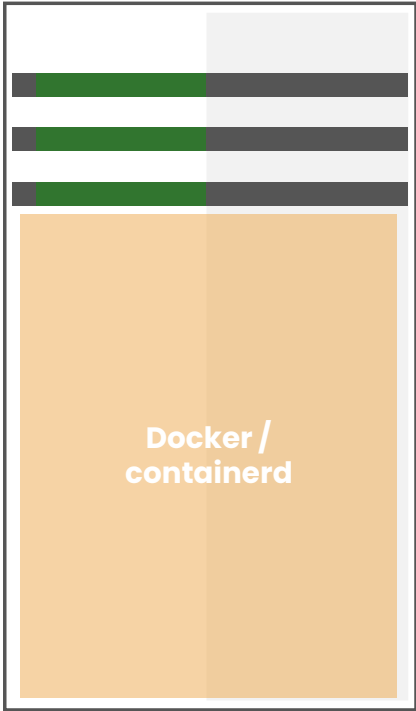
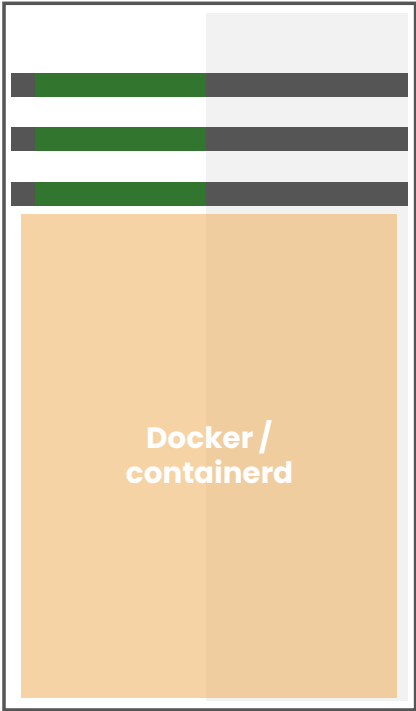
What is this **Kubernetes** ?



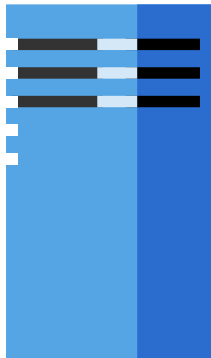
Master aka
Control Plane Node(s)



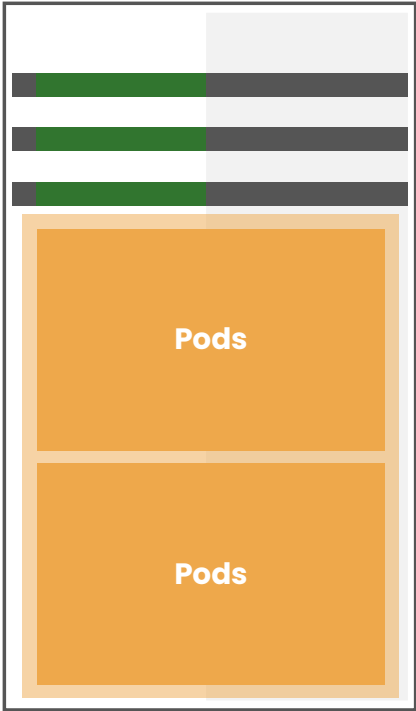
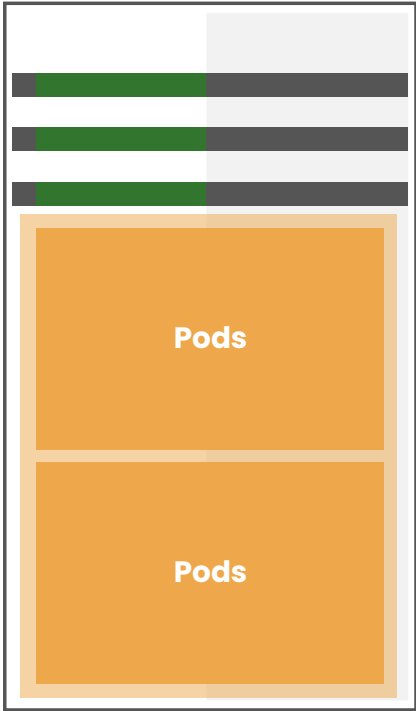
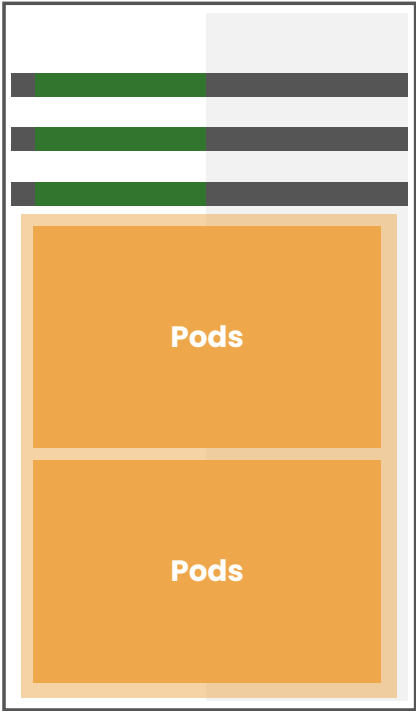
Worker-Nodes



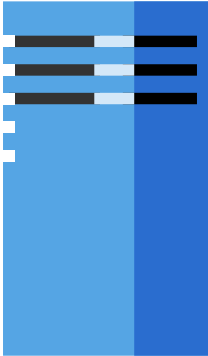
Master aka
Control Plane Node(s)



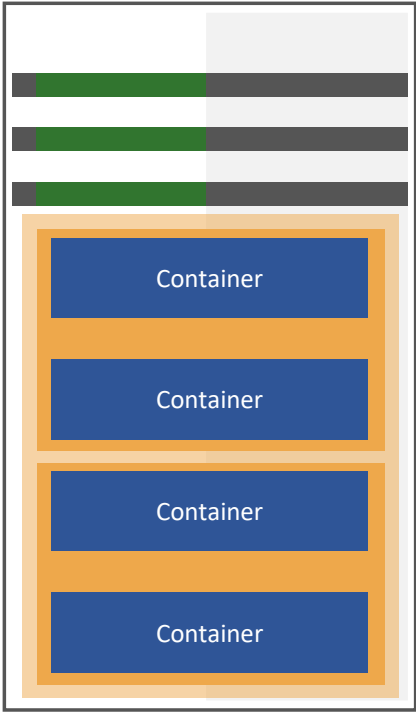
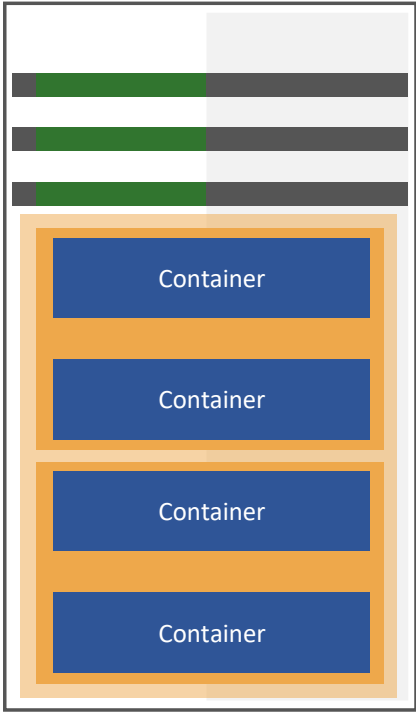
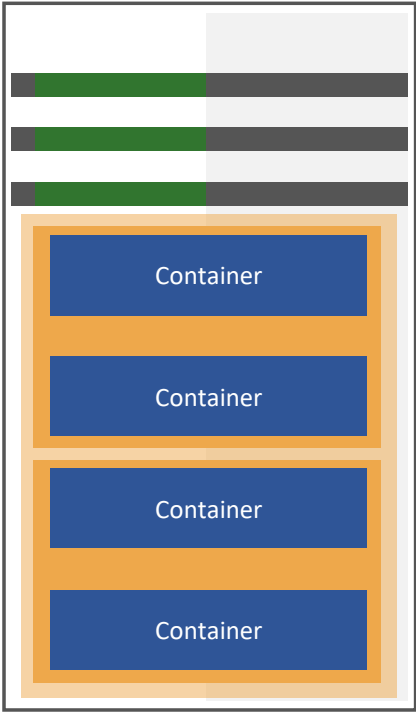
Worker-Nodes



Master aka
Control Plane Node(s)



Worker-Nodes



What are the **Requirements ?**

Data Controller – Connection Mode

indirectly

directly
Public Preview

Installation requirements

Azure CLI (az)

arcdata extension for Azure (az) CLI

Azure Data Studio

Azure Arc extension for Azure Data Studio

PostgreSQL extension in Azure Data Studio

Kubernetes CLI (kubectl)

curl

oc

Installation requirements – AZ CLI

az login

az ad sp create-for-rbac -n "http://AzureArcData" --role contributor

az group create --name Arc-Data-Demo --location "East US"

```
az deployment group create \  
  --resource-group Arc-Data-Demo \  
  --name arcdata \  
  --template-uri https://raw.githubusercontent.com/.../.../azuredploy.json \  
  --parameters azuredploy.parameters.json \  
  --parameters  
    templateBaseUrl="https://raw.githubusercontent.com/.../.../arm_template/"
```

Installation requirements – kubectl

```
kubectl create -f https://raw.githubusercontent.com/microsoft/.../custom-resource-definitions.yaml
```

```
kubectl create namespace arc
```

```
kubectl create --namespace arc -f  
https://raw.githubusercontent.com/.../.../bootstrapper.yaml
```

Create a credential yaml – username/password

```
kubectl create --namespace arc -f .\controller-login-secret.yaml
```

Create a webhook yaml

```
kubectl create -n arc -f .\web-hook.yaml
```

Create a datacontroller yaml

```
kubectl create --namespace arc -f .\data-controller.yaml
```

Extracted from automation steps on a Jumpstart Scenario:
https://azurearcjumpstart.io/azure_arc_jumpstart/azure_arc_data/

**Let me
show you**



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