

# Troubleshooting AKS Clusters

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Data Passionist

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# Overview



**Application Specific Issues**

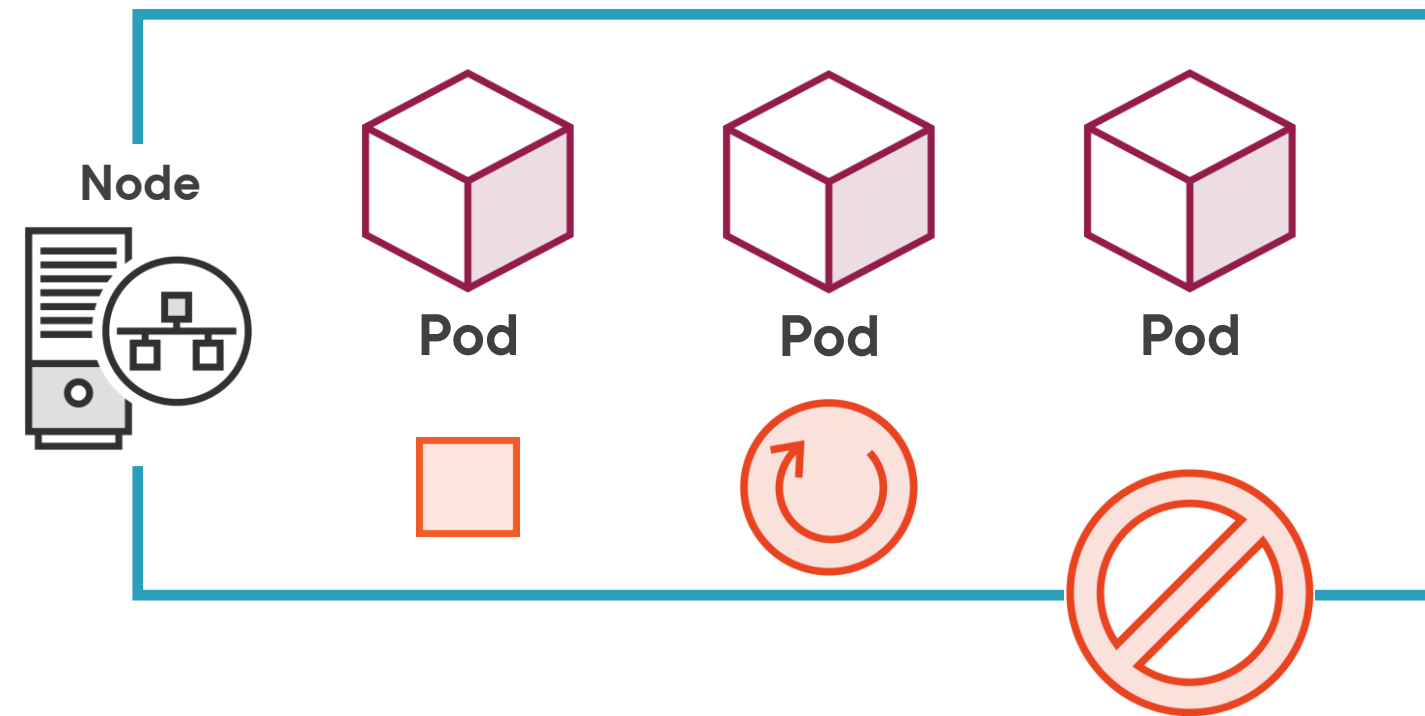
**Common AKS Issues**

**Troubleshooting the Control Plane**

**Troubleshooting Worker Nodes**



# Application Specific Issues

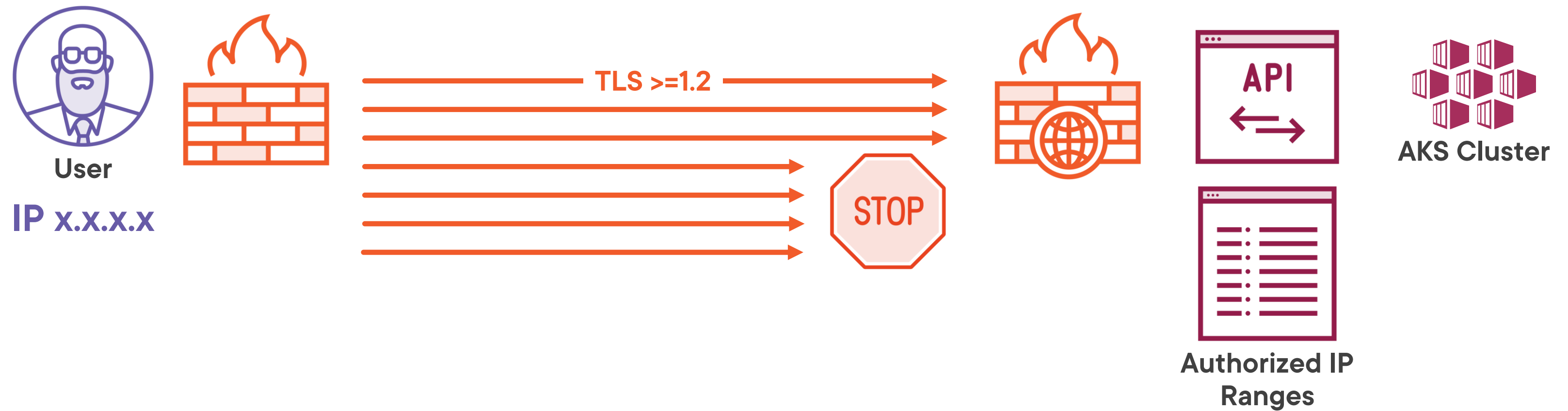


Start with `kubectl get` / `kubectl describe` / `kubectl logs`

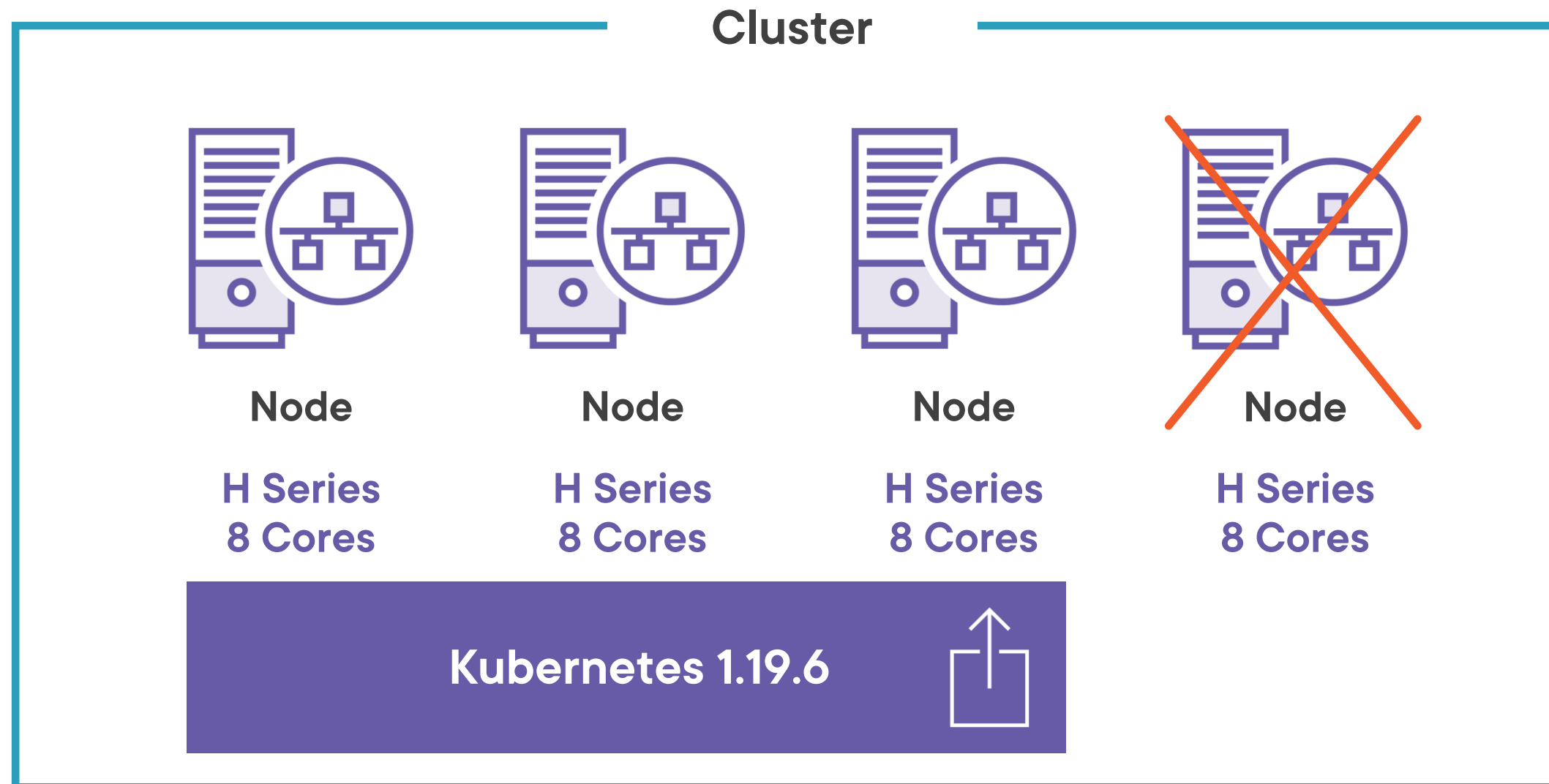
Also check <https://status.azure.com/>



# API Access



# VM Quota

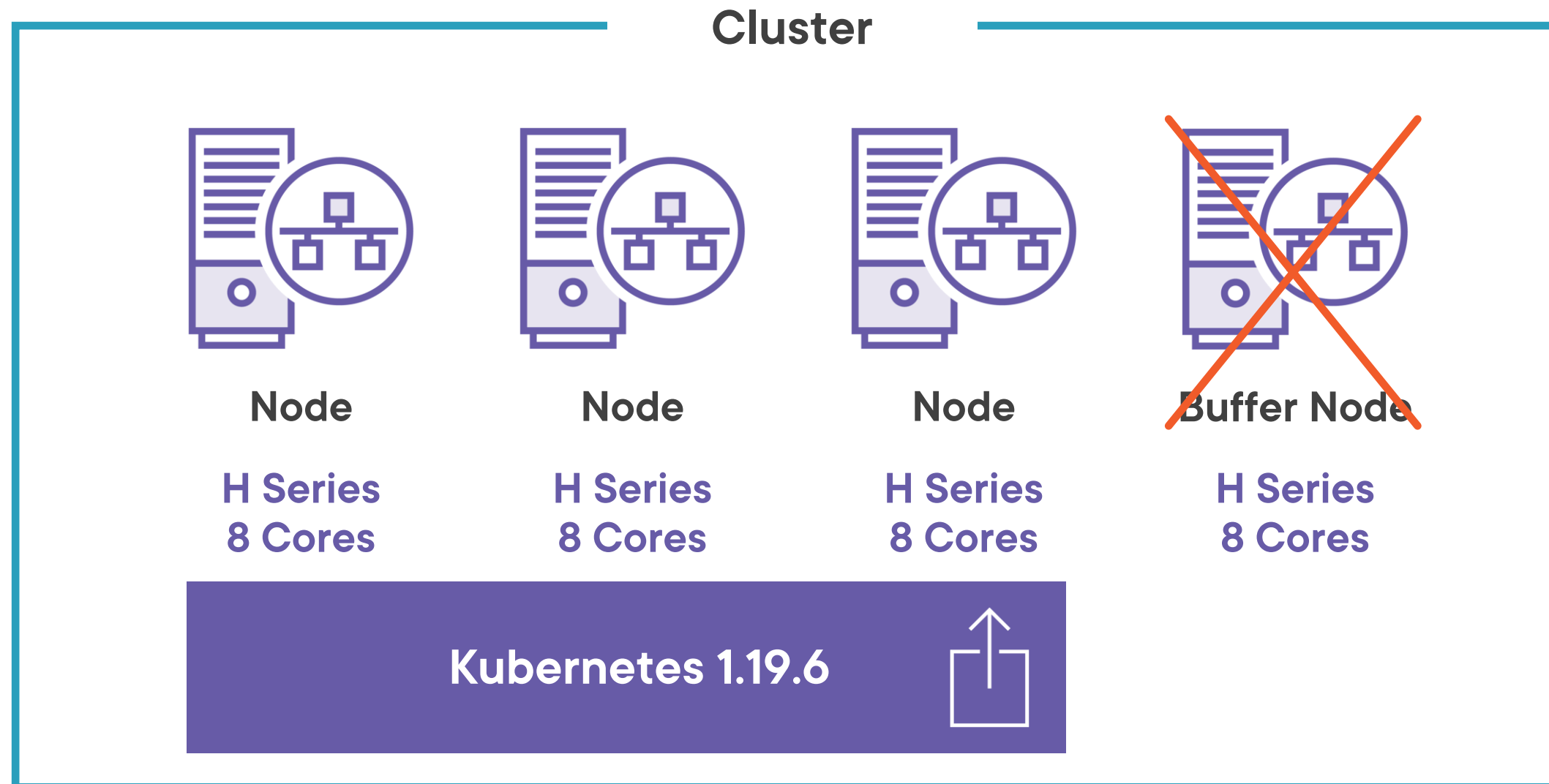


**Subscription  
Quota**

**H Series  
max. 24 Cores**



# VM Quota

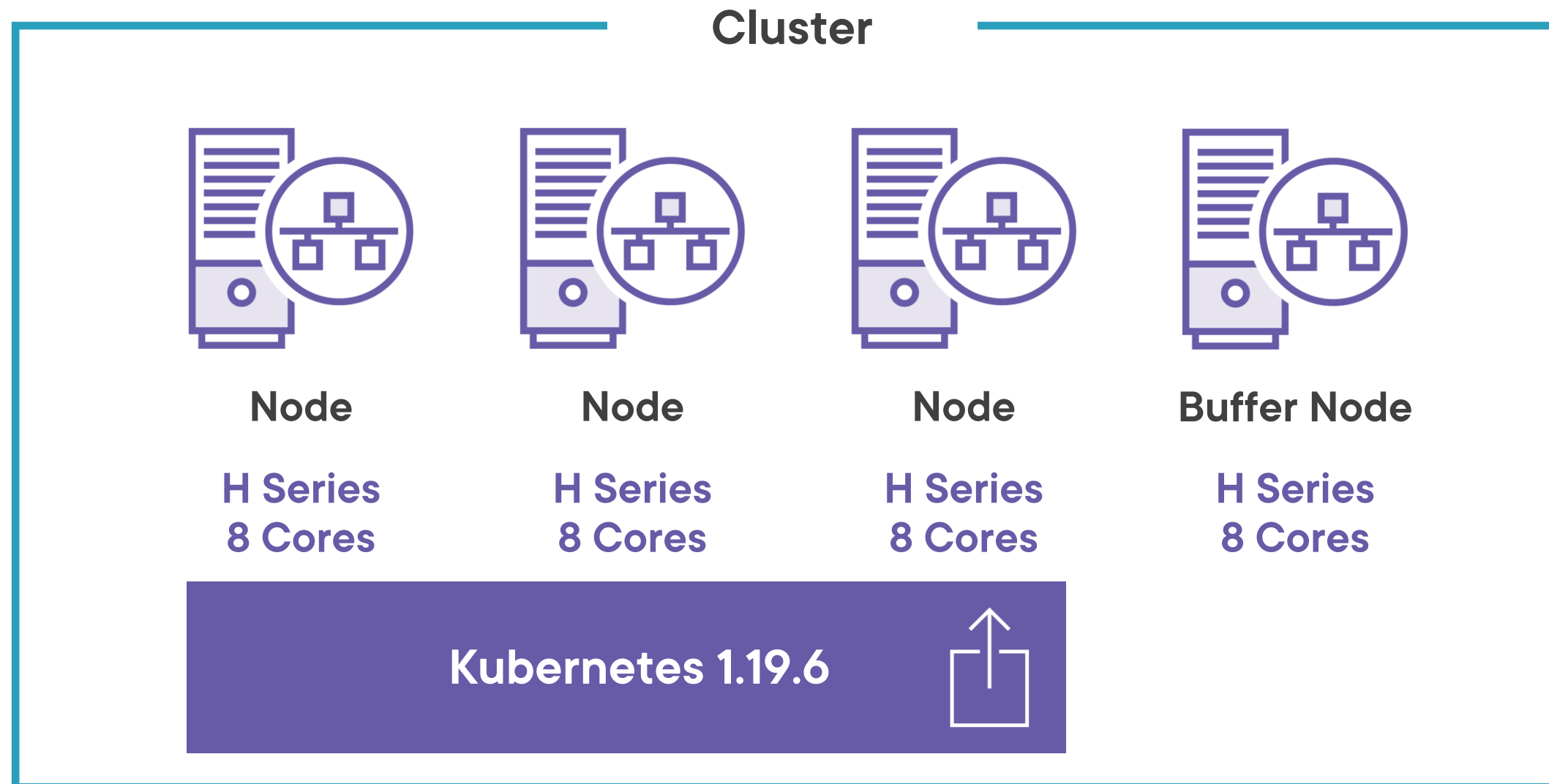


**Subscription  
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# VM Quota

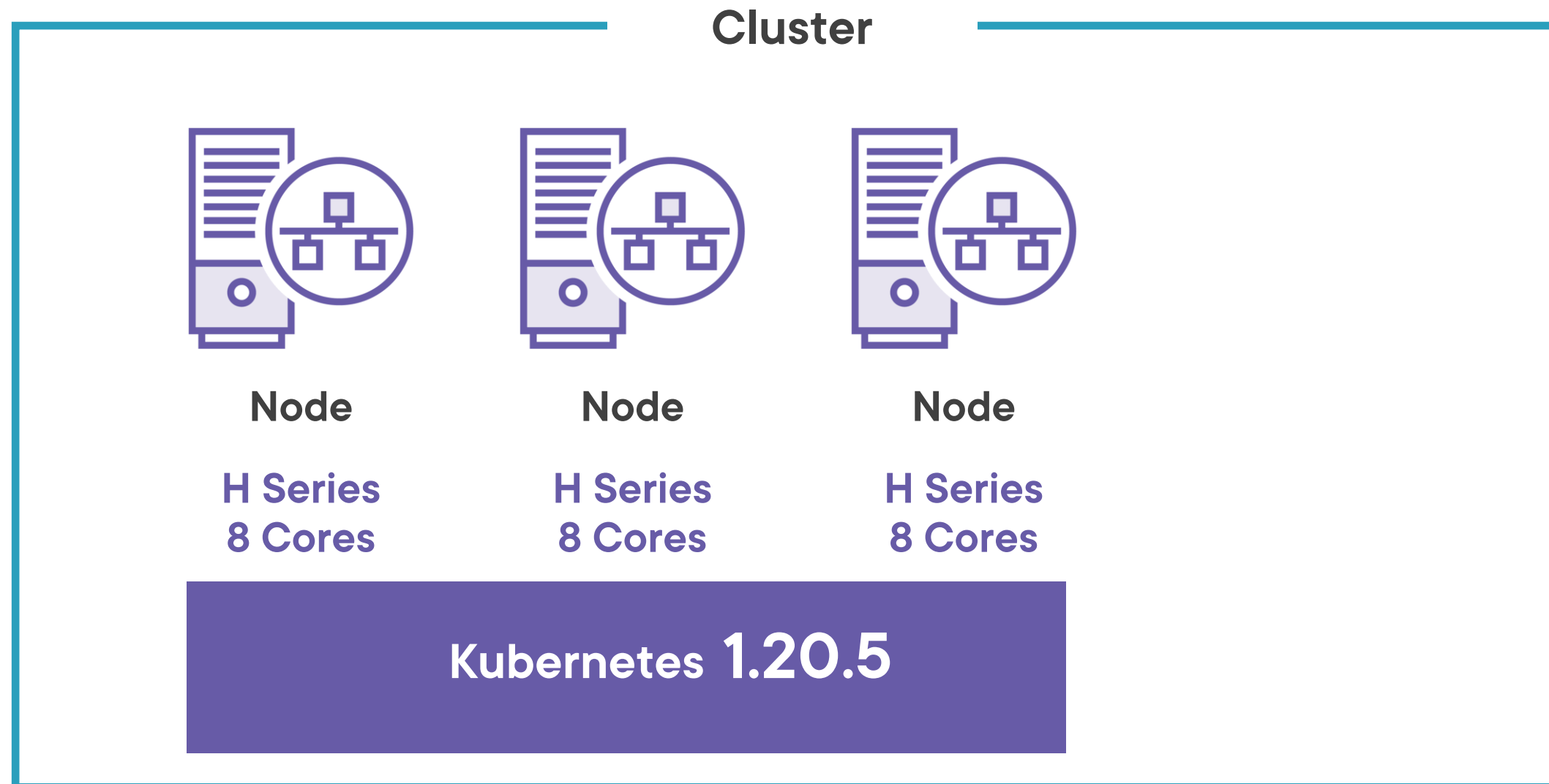


**Subscription  
Quota**

**H Series  
max. 32 Cores**



# VM Quota



**Subscription  
Quota**

**H Series  
max. 32 Cores**

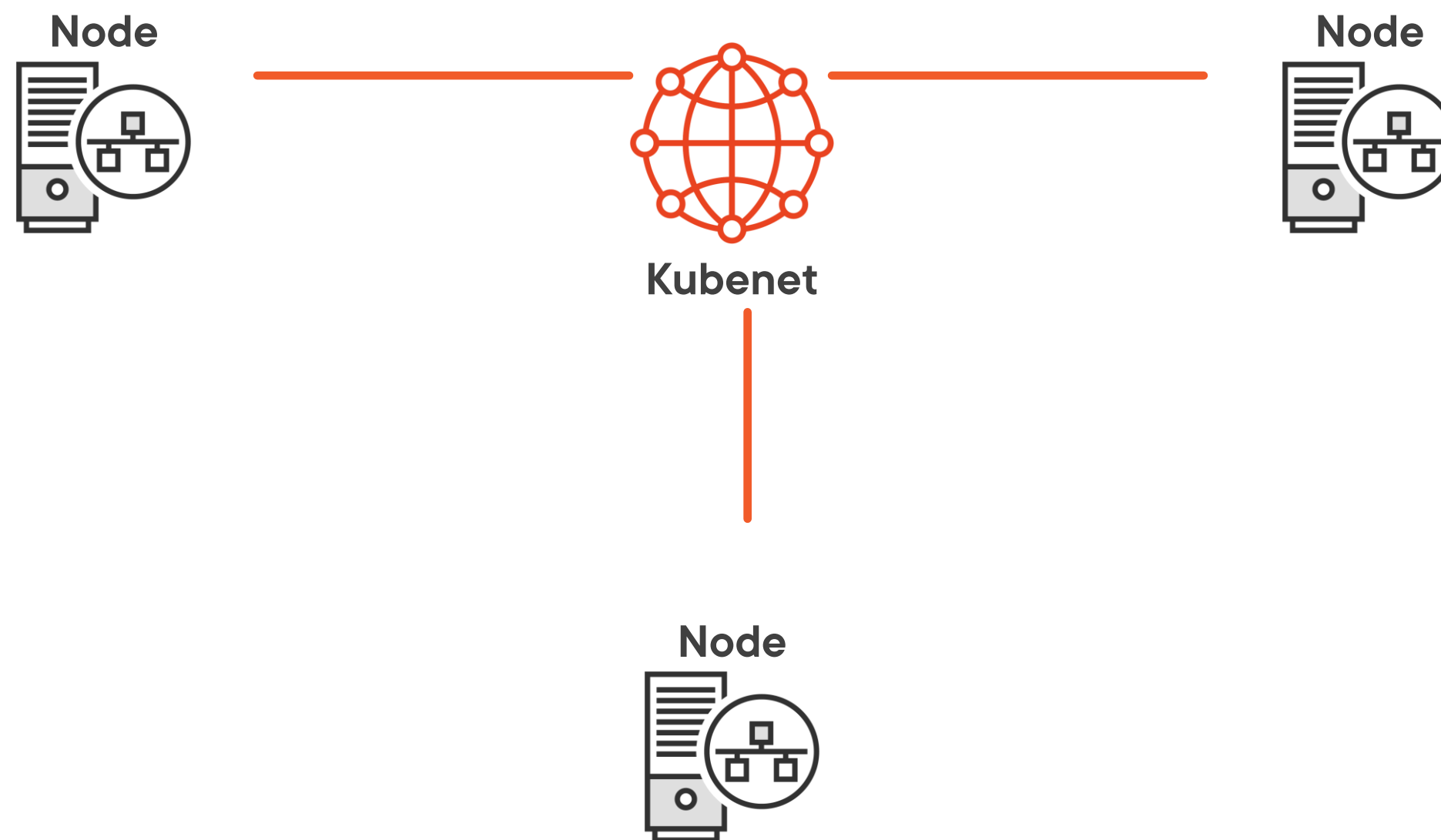


Also consider the total vCPU Quota

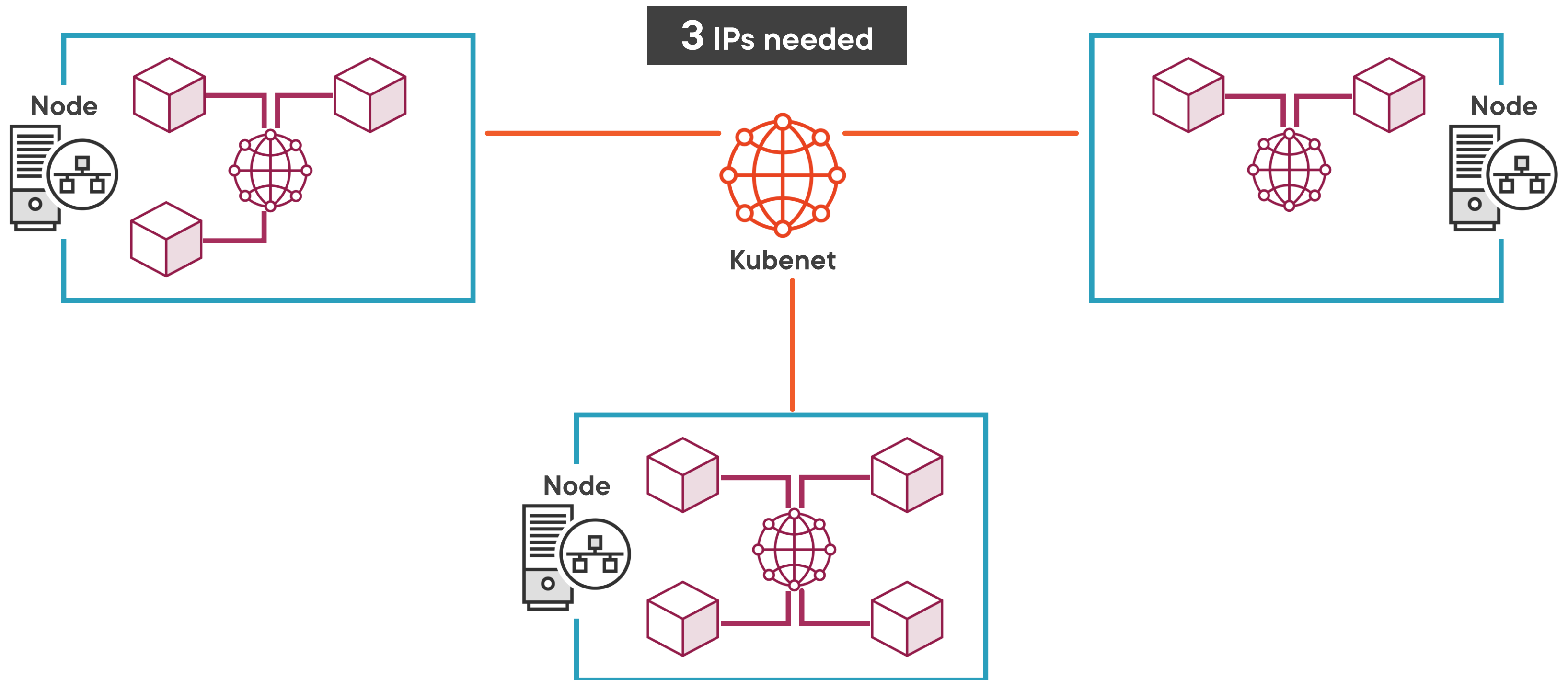




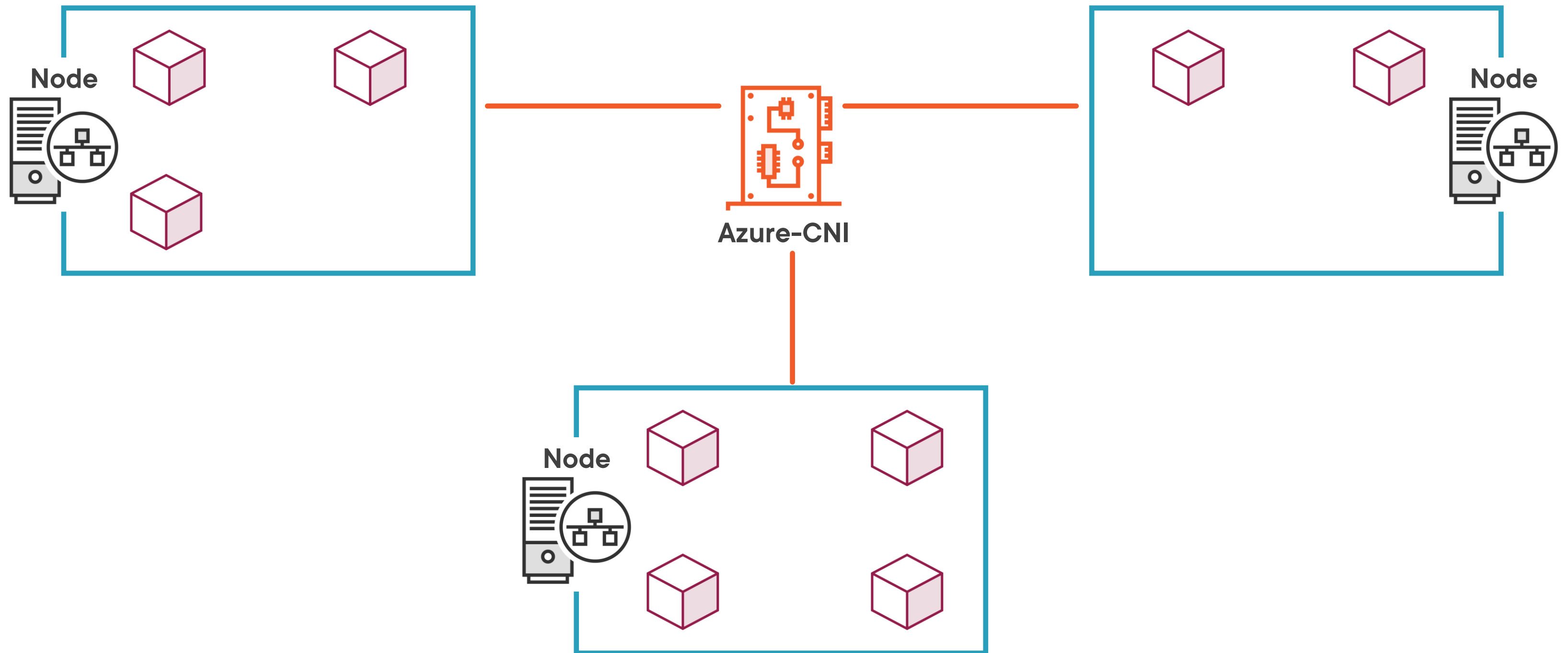
# Insufficient IP Addresses



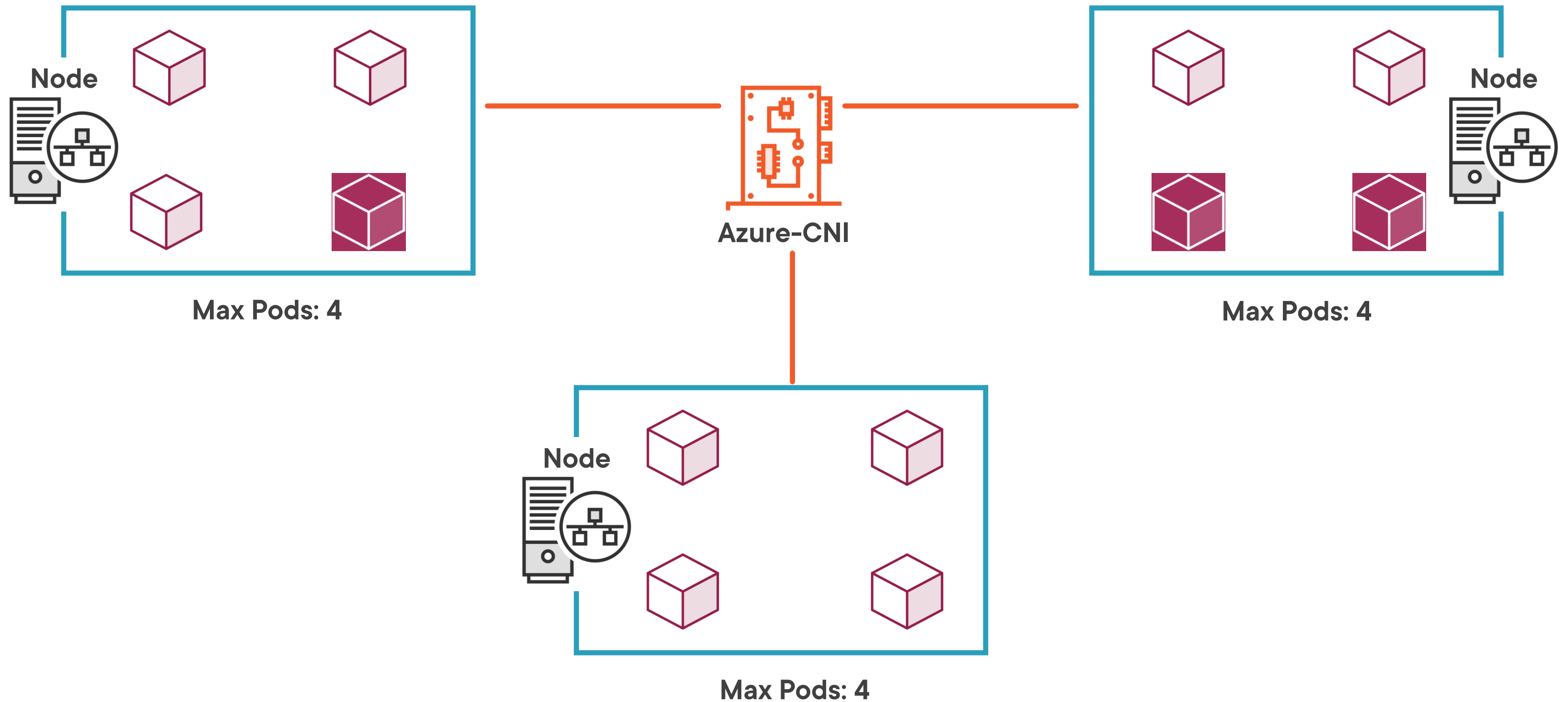
# Insufficient IP Addresses



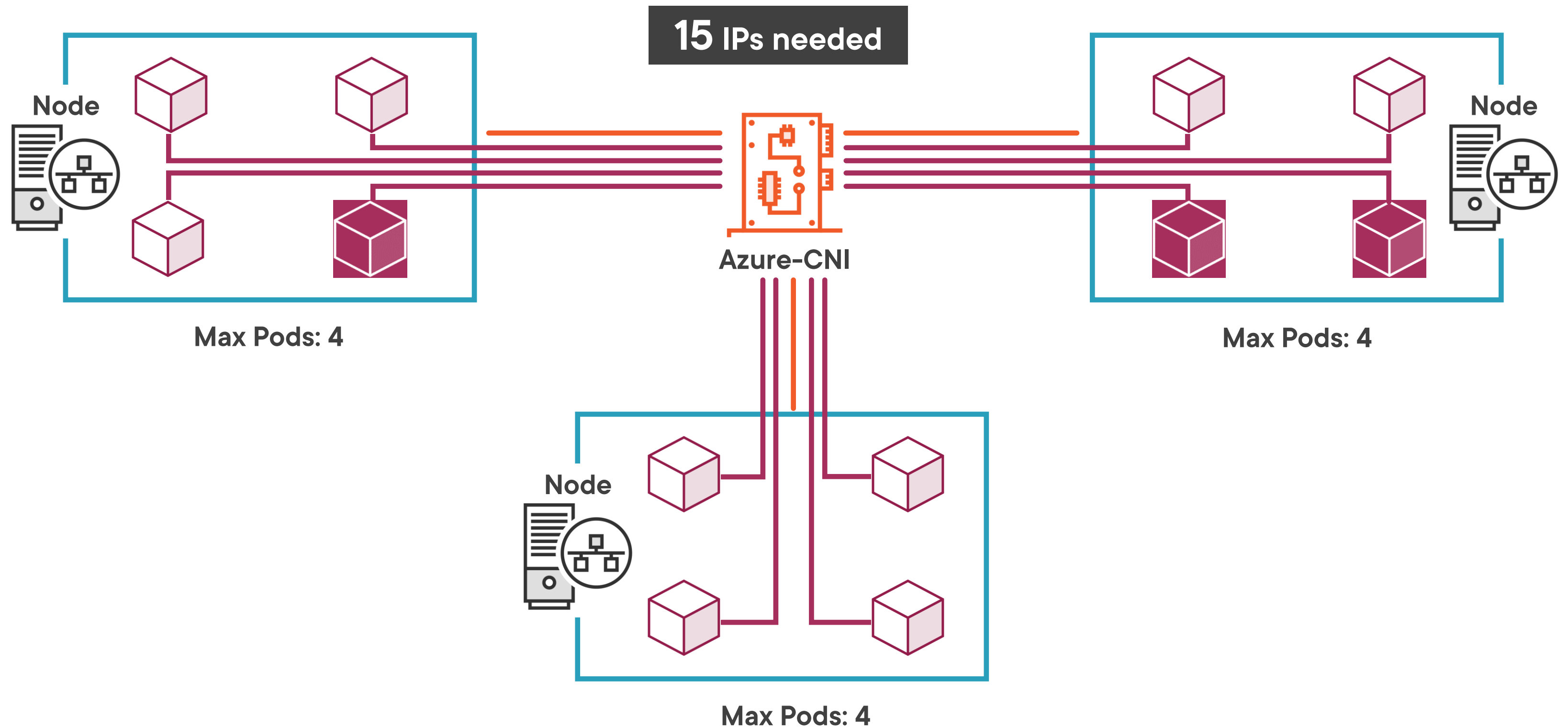
# Insufficient IP Addresses



# Insufficient IP Addresses



# Insufficient IP Addresses



# Common Storage Issues

**Reached maximum disk count**

**Detach/Attach taking too long**

**Trying to multi attach a disk**

**Updated storage account key**

**Applications requiring unsupported file security when using Azure Files**



Course: Deploying Applications in  
Azure Kubernetes Service (AKS)



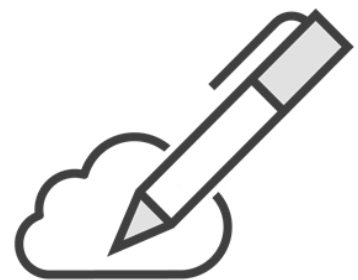
# Other Common Issues



**Pending Operations**



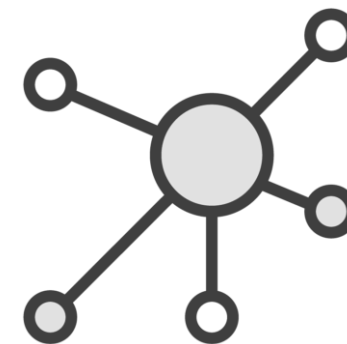
**Naming Restrictions**



**Moved AKS from  
Subscription or Tenant**



**Service Principal expired or  
not properly propagated**



**Insufficient or wrong  
feature selection at  
deployment**



**Changes made to  
MC Resource Group**



Issues fixed in later releases?

<https://docs.microsoft.com/en-us/azure/aks/troubleshooting>



# Demo



**Maximum Pod Count**

**Changing Storage Account Keys**

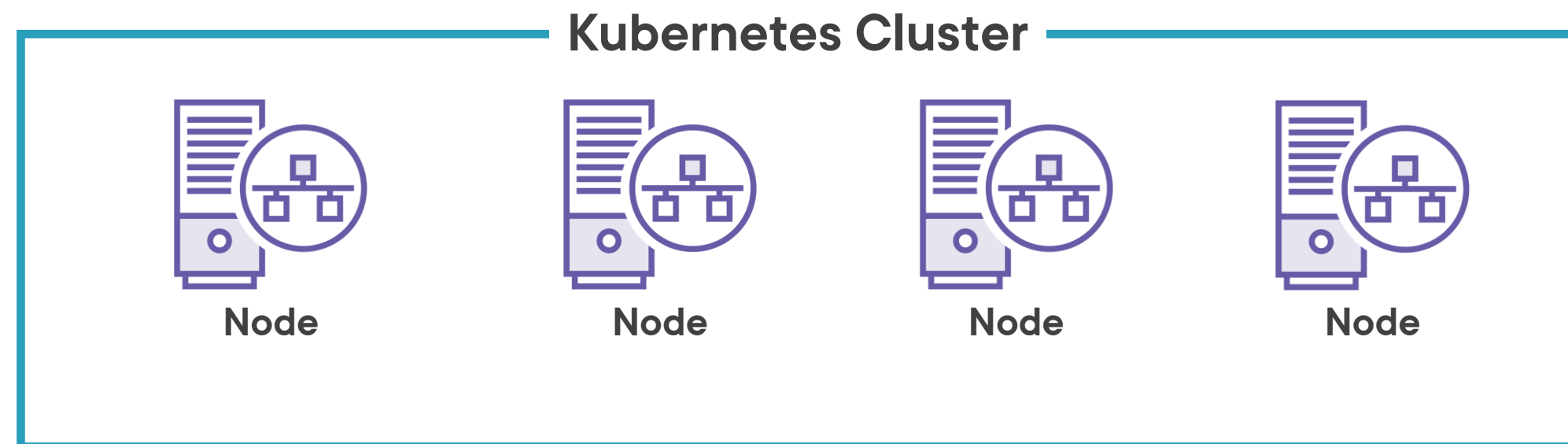
**VM Family or vCPU Quotas**

**Maximum IP Address Count**

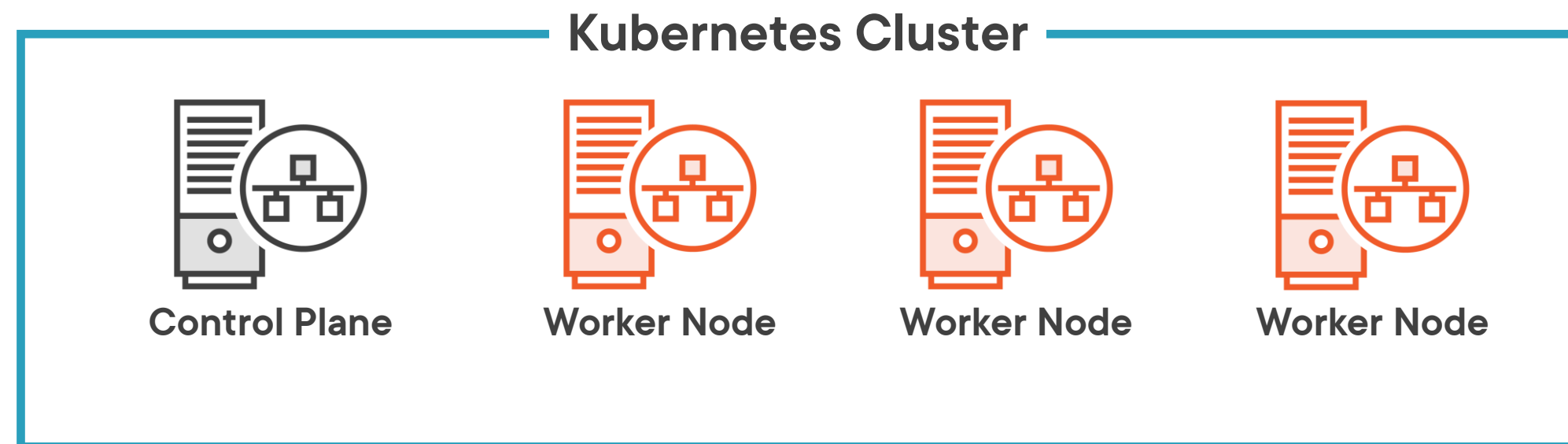




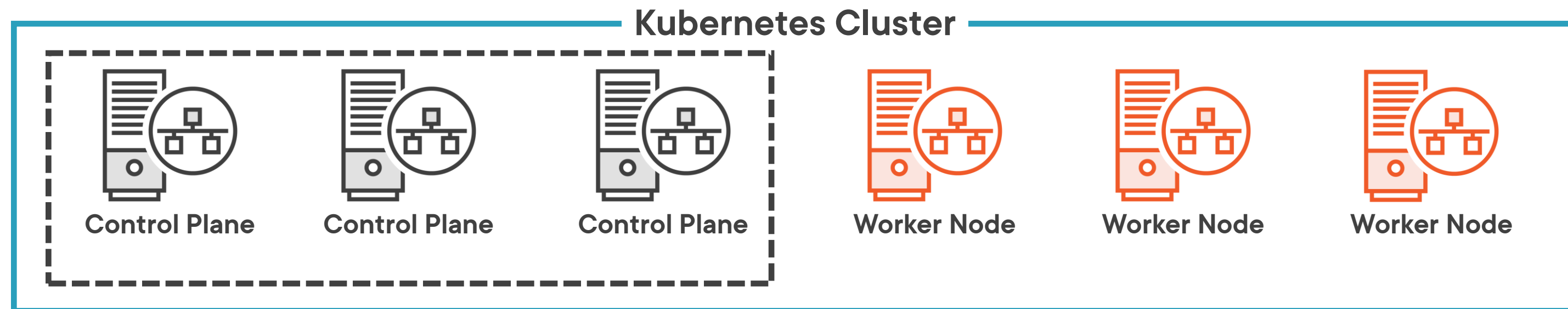
# Troubleshooting the Control Plane



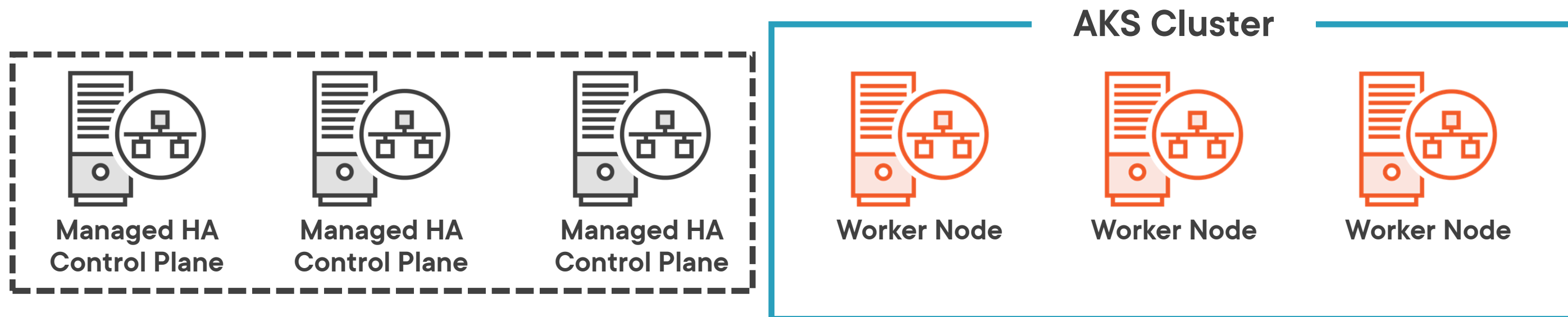
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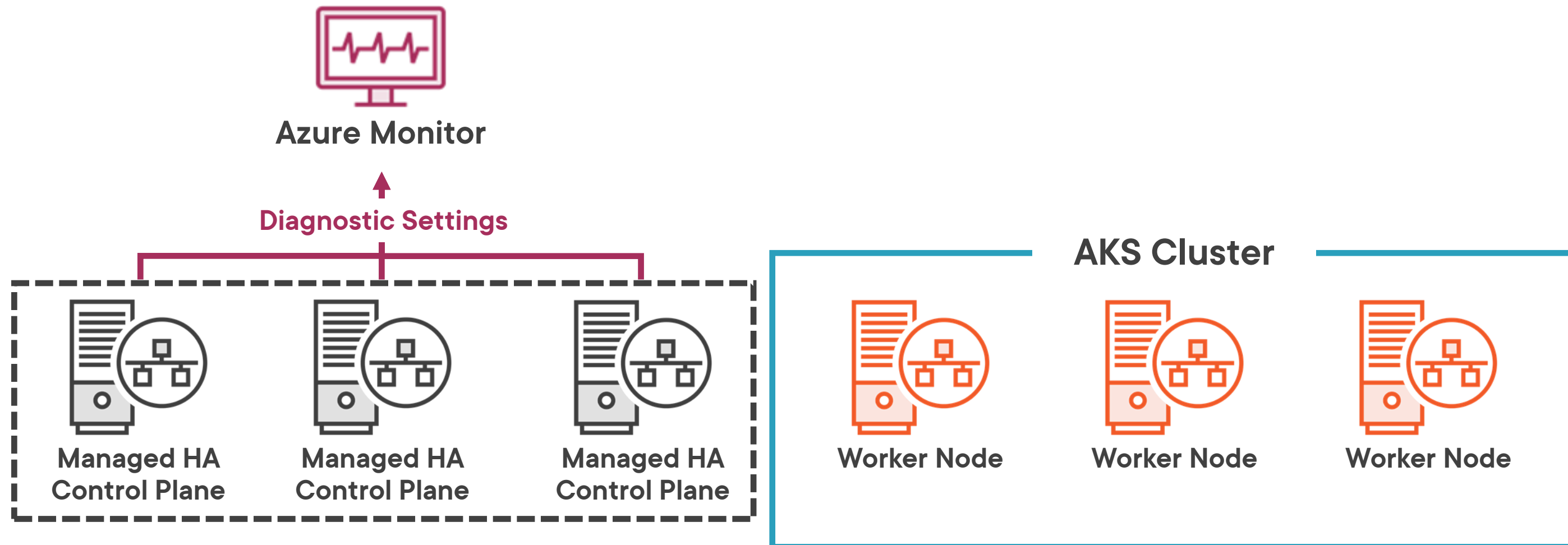
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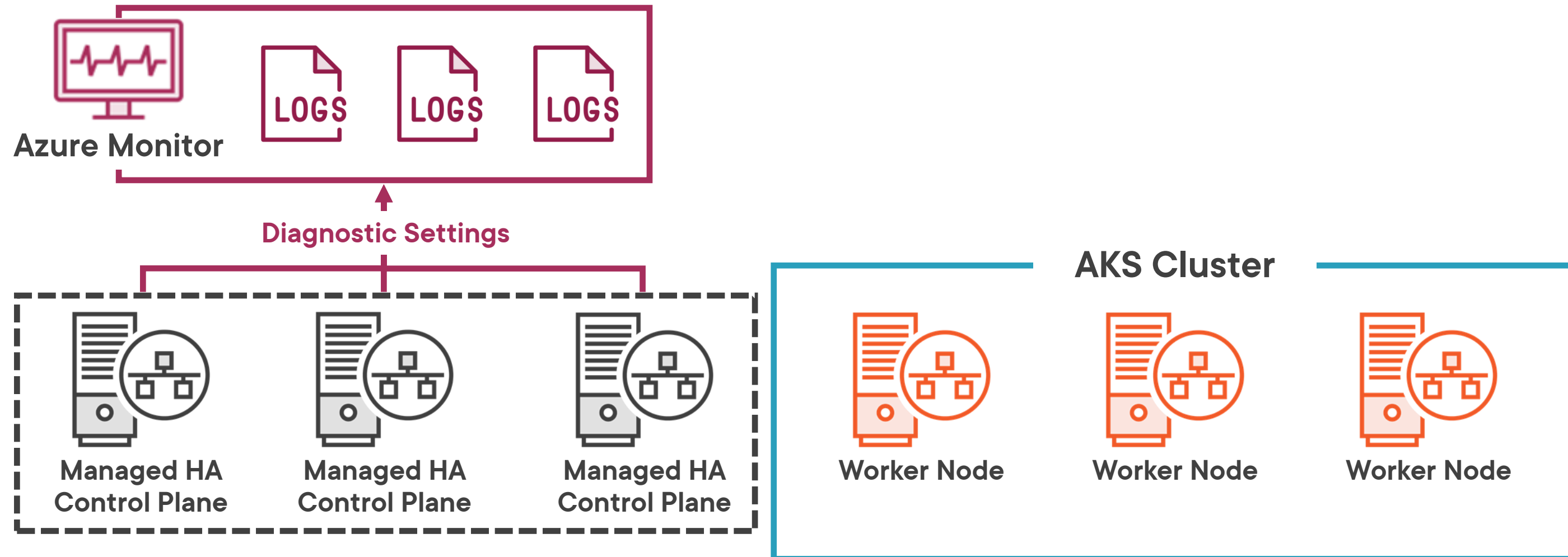
# Troubleshooting the Control Plane



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# Troubleshooting the Control Plane



No direct access to Control Planes



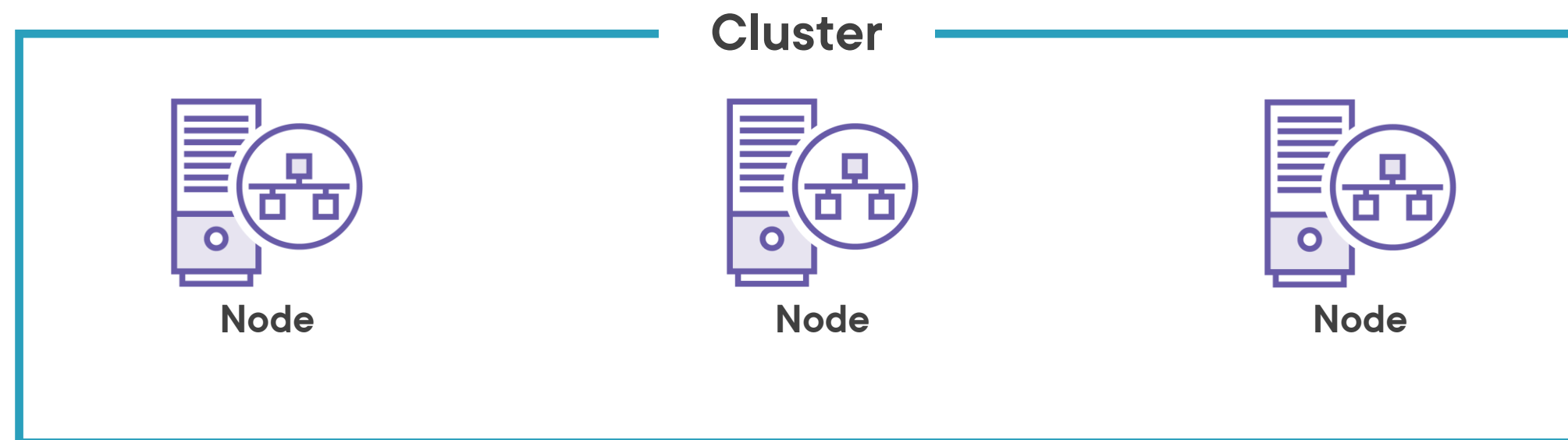
# Demo



## Retrieving Control Plane Logs

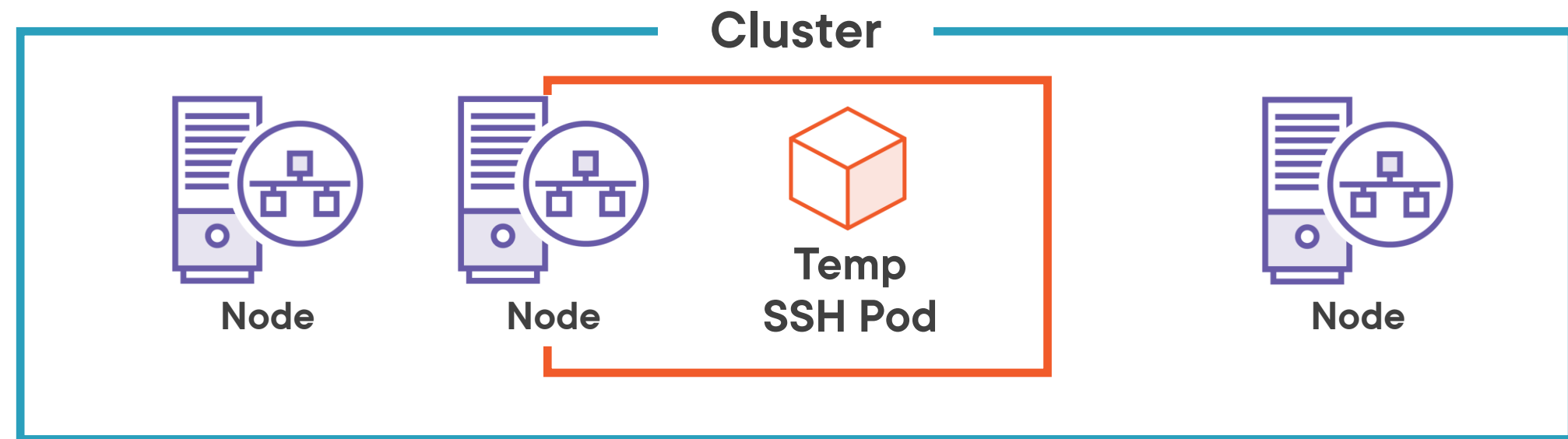


# Troubleshooting Worker Nodes

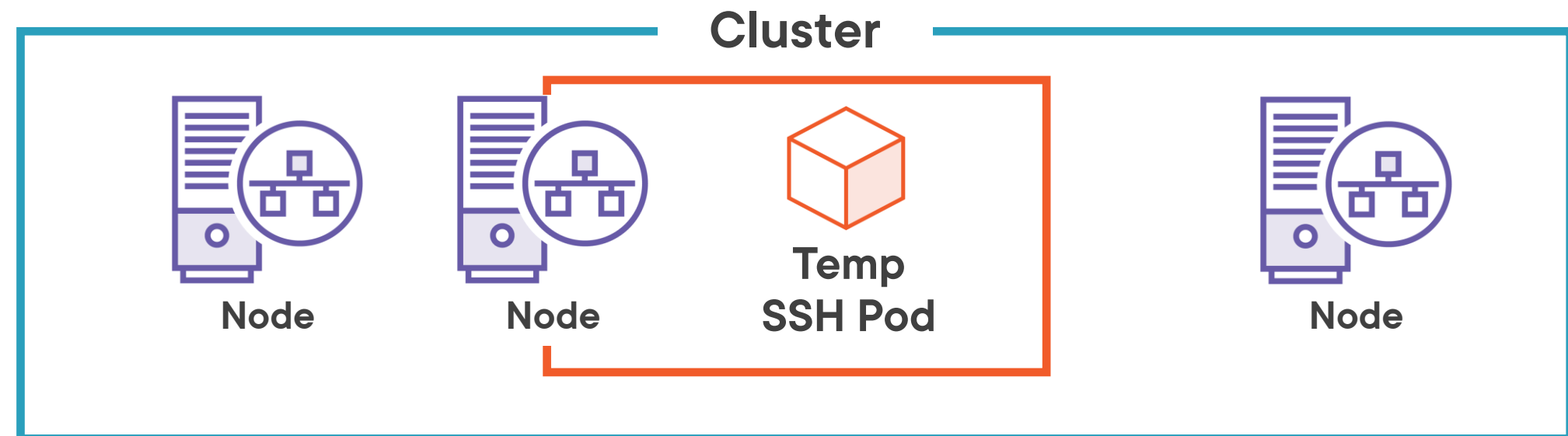
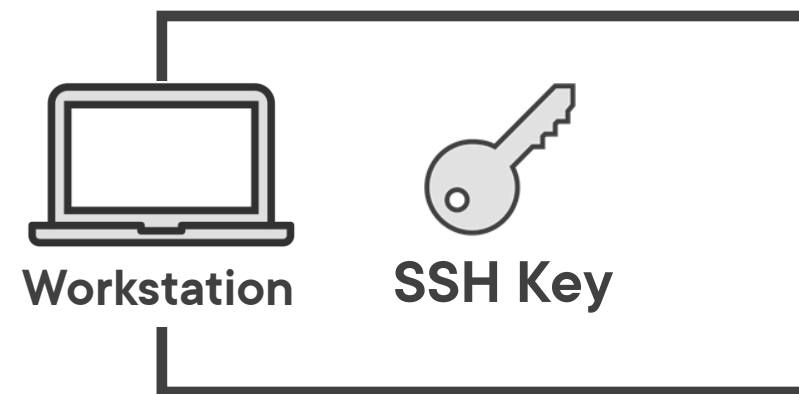




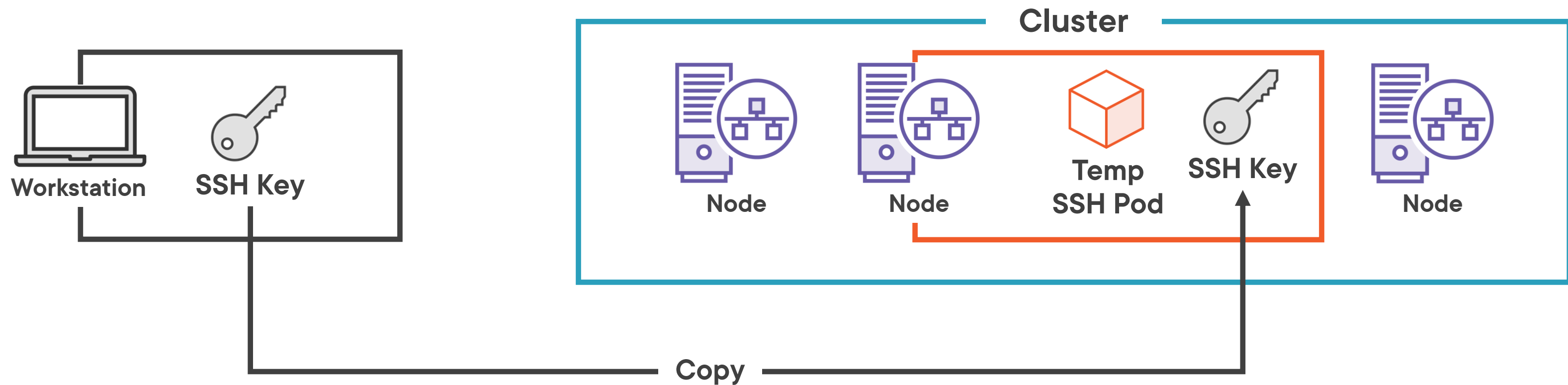
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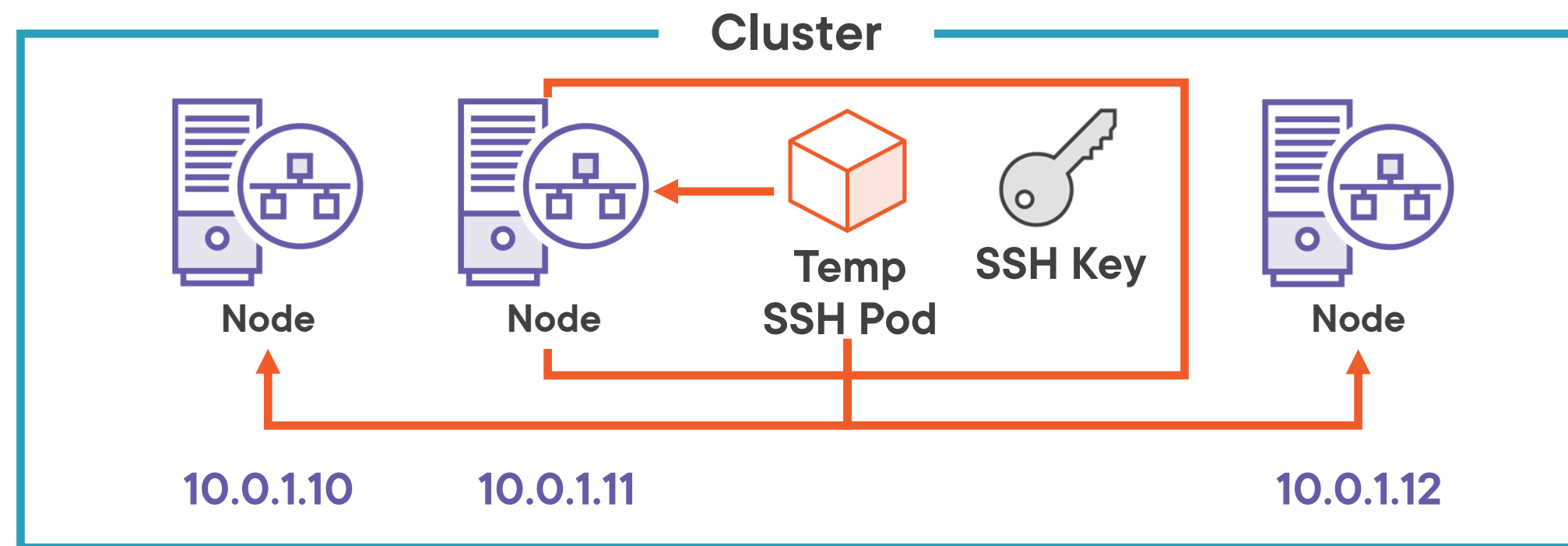
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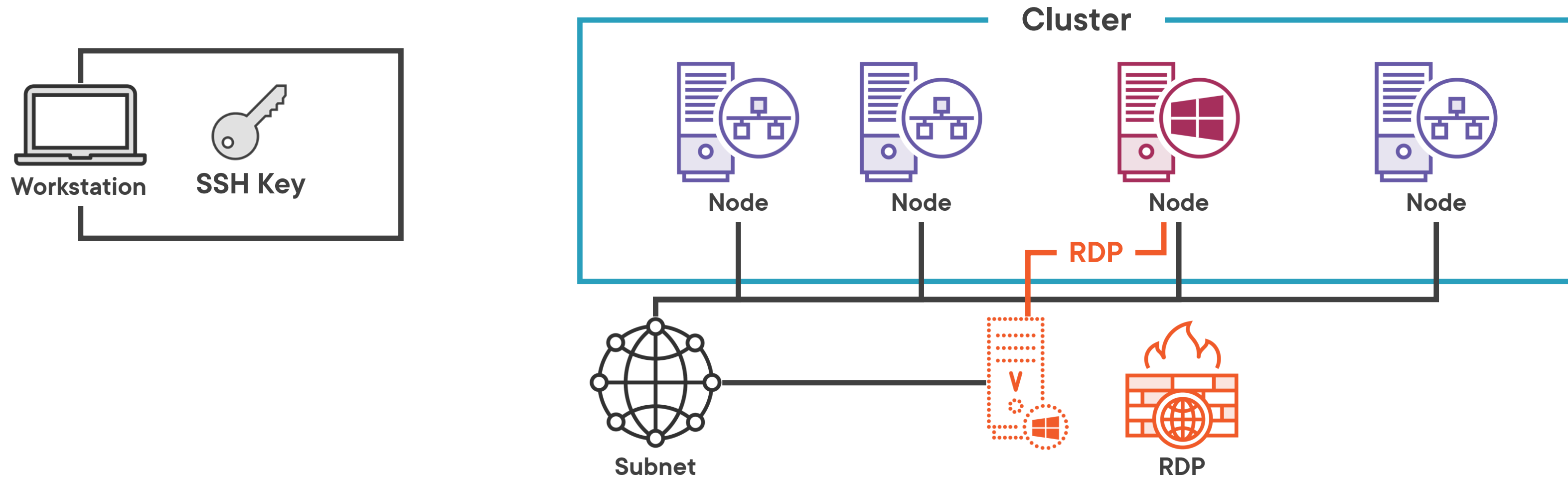
# Troubleshooting Worker Nodes



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# Troubleshooting Worker Nodes



<https://docs.microsoft.com/en-us/azure/aks/rdp>



# Demo



## Retrieving Worker Node Logs



## Summary



- **Check for:**
  - **generic Kubernetes issues**
  - **Azure outages**
  - **insights from monitoring**
  - **newer Kubernetes version**
- **Many issues can be avoided by designing your cluster with appropriate capacity incl. required Quota for upgrades**
- **Some issues require a ticket**

