Apply Zero Trust principles to Azure laaS infrastructure

A clickable deployment plan in the Zero Trust universe

Deploying Zero Trust to Azure IaaS infrastructure

This poster represents the work of deploying Zero Trust to Azure laaS infrastructure. This work is broken into separate sections and steps corresponding to the key components of infrastructure to deploy common workloads hosted in Azure laaS. Read more at aka.ms/zero-trust-azure-iaas.

Reference architecture with the four key laaS components

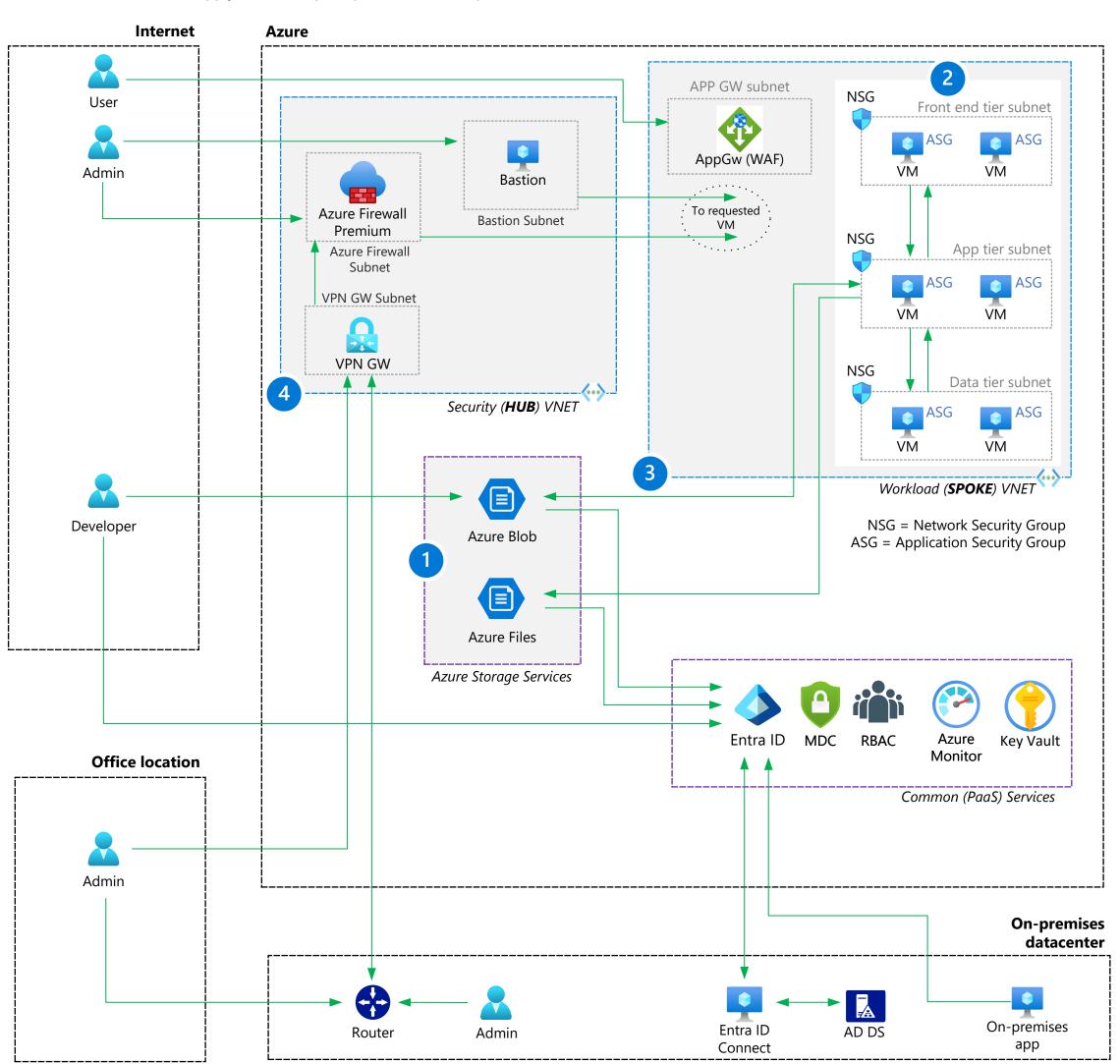
Storage

Spoke VNets

2 Virtual machines

4 Hub VNets

NOTE: You do not have to apply Zero Trust principles to these components in this order.



Steps to apply Zero Trust principles to Azure IaaS infrastructure to each component



- 1. Protect data in all three modes: data at rest, data in transit, data in use
- Verify users and control access to storage data with least privilege
- Logically separate or segregate critical data with network controls
- 4. Use Defender for Storage for automated threat detection and protection

2 Virtual machines

- 1. Configure logical isolation for virtual machines
- 2. Leverage Role Based Access Control (RBAC)3. Secure virtual machine boot components
- 4. Enable customer-managed keys and double encryption
 - 5. Control the applications installed on virtual machines6. Configure secure access
 - 7. Set up secure maintenance of virtual machines
 - 8. Enable advanced threat detection and protection

Spoke VNets

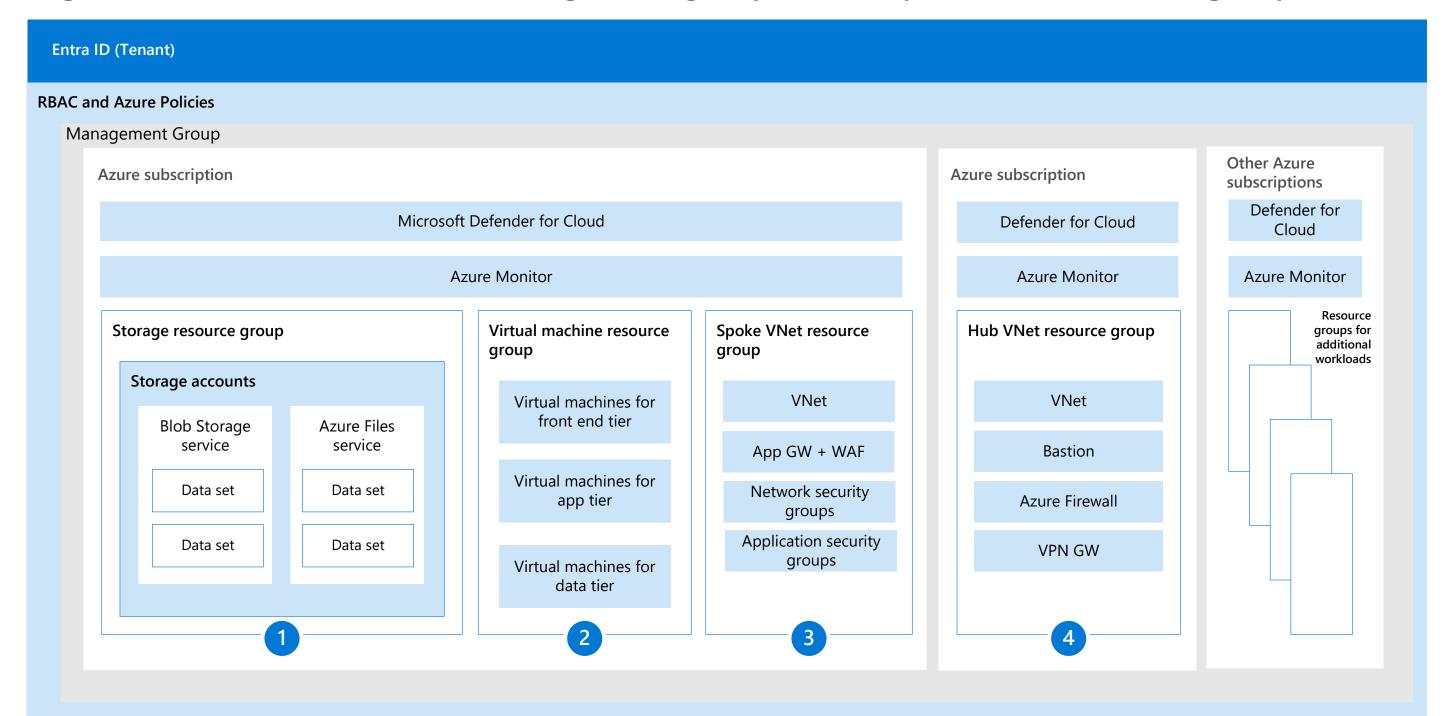
- 1. Leverage Entra ID RBAC or set up custom roles for networking resources
- 2. Isolate infrastructure into its own resource group3. Create a network security group for each subnet
- 4. Create an application security group for each virtual machine role
- 5. Secure traffic and resources within the virtual network6. Secure access to the virtual network and application
- 7. Enable advanced threat detection and protection

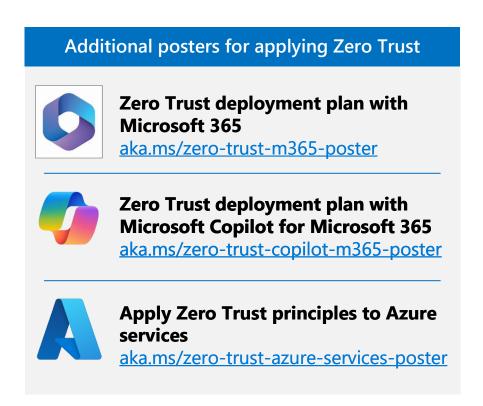
4 Hub VNets

- 1. Secure Azure Firewall
- Premium

 2. Deploy Azure DDoS
- Protection Standard
 3. Configure network gateway
- routing to the firewall
- 4. Threat protection

Logical architecture of tenants, management groups, subscriptions, and resource groups





Threat Protection with Microsoft Defender XDR and Microsoft Defender for Cloud

