

# Design and Implement Azure Application Gateway

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# Overview



## **Recommend Azure Application Gateway deployment options**

- SKU
- Autoscale

## **Configure Azure Application Gateway**

- Routing rules
- TLS



# Planning Azure Application Gateway

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# Azure Application Gateway



## **Regional Layer 7 load balancer**

- HTTP(S) traffic for web applications

## **Autoscaling**

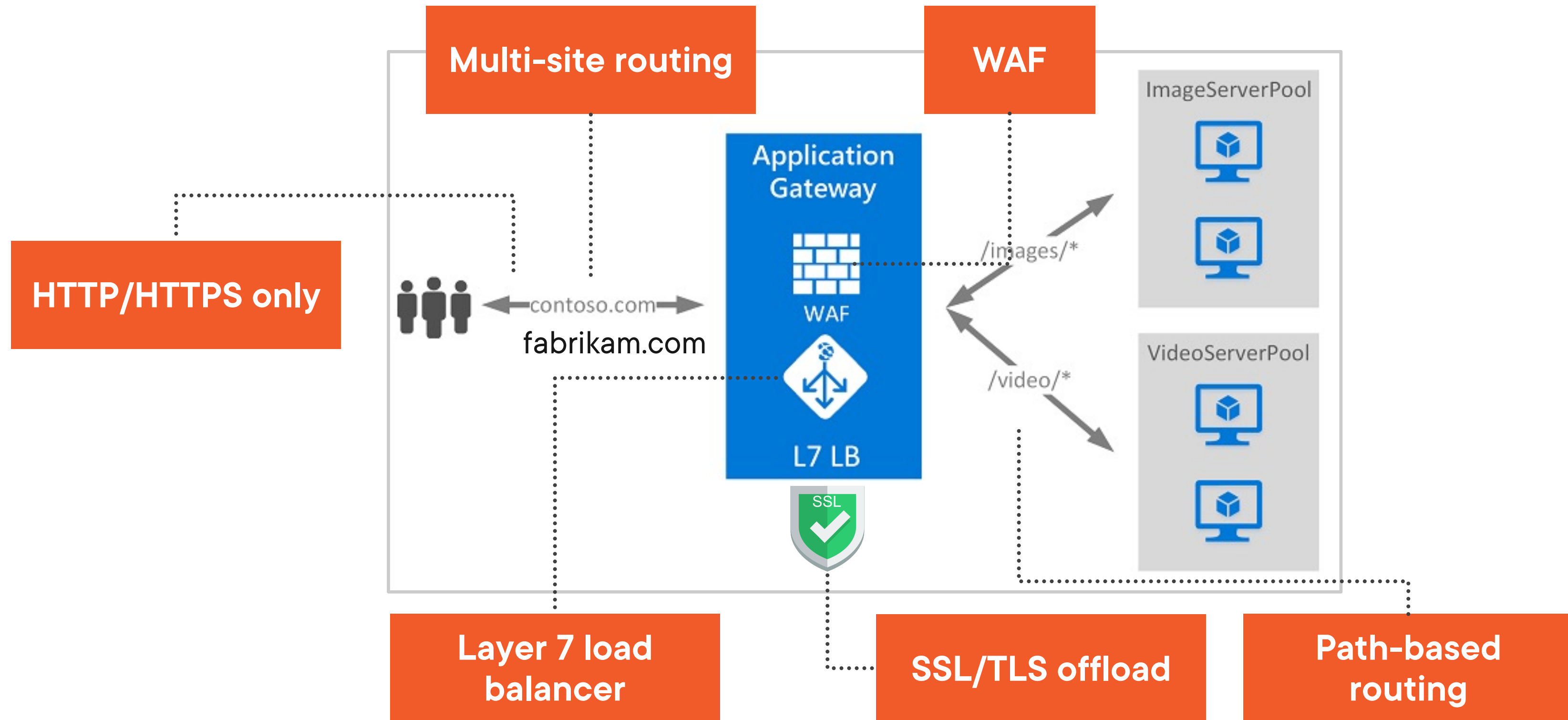
## **Zone redundancy**

## **Internal and public configurations**

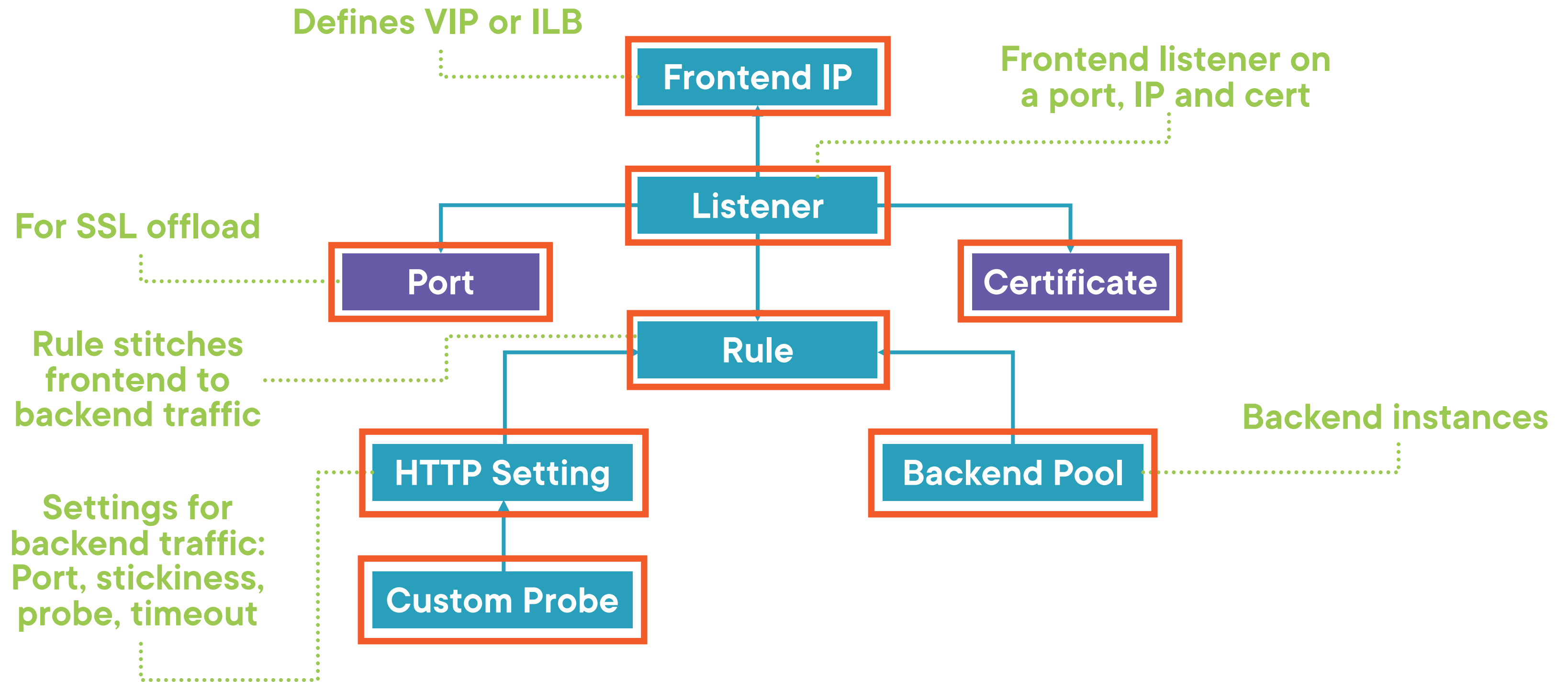
## **Ingress Controller for AKS**



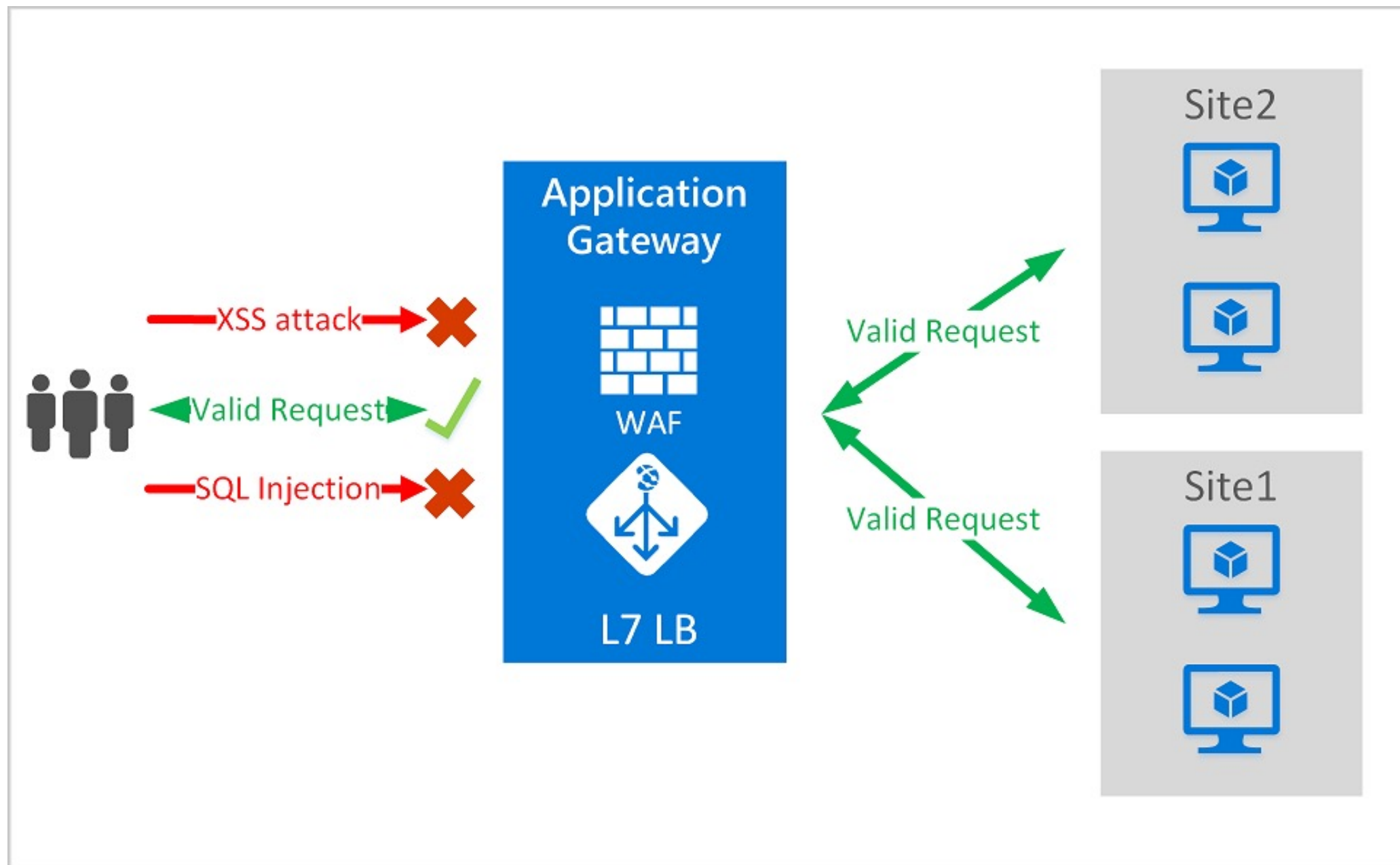
# Azure Application Gateway Features



# Azure Application Gateway Components



# Azure Application Gateway WAF



Source:

## Web Application Firewall

Based on Open Web Application Security Project (OWASP) Core Rule Sets (CRSs)

Protects your web applications from vulnerabilities without modifying your code

WAF policies are very flexible:

- Application Gateway
- Listener (site)
- Path (URI)



# Application Gateway TLS Offload

**TLS is the successor to SSL**

**Improved performance  
(GW autoscale)**

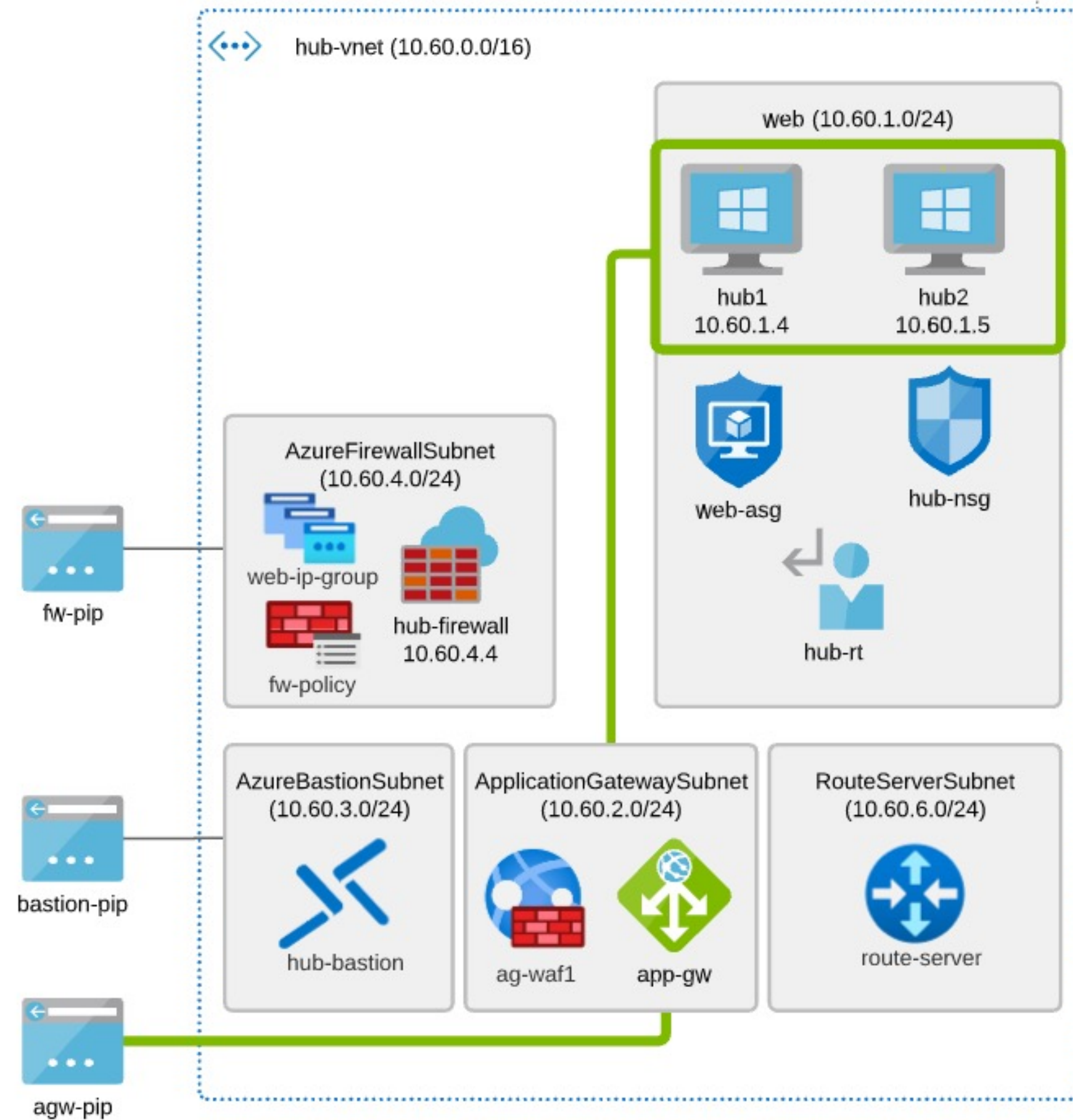
**You can inspect the  
full request content**

**Better utilization of  
backend servers**

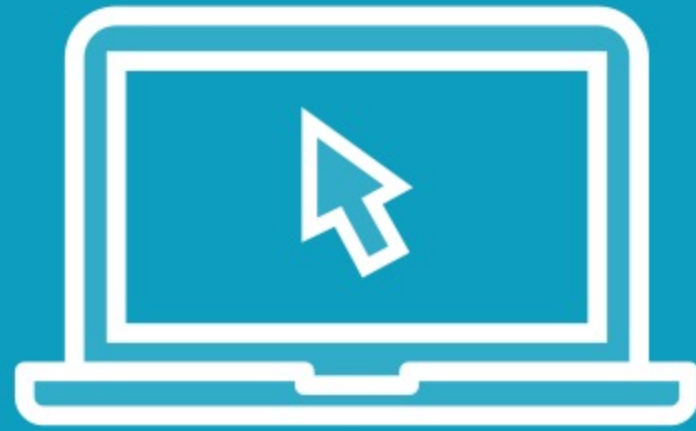




# Our Lab Environment



# Demo



# 1

**Deploy GW with initial configuration**

**TLS offload with SS cert**

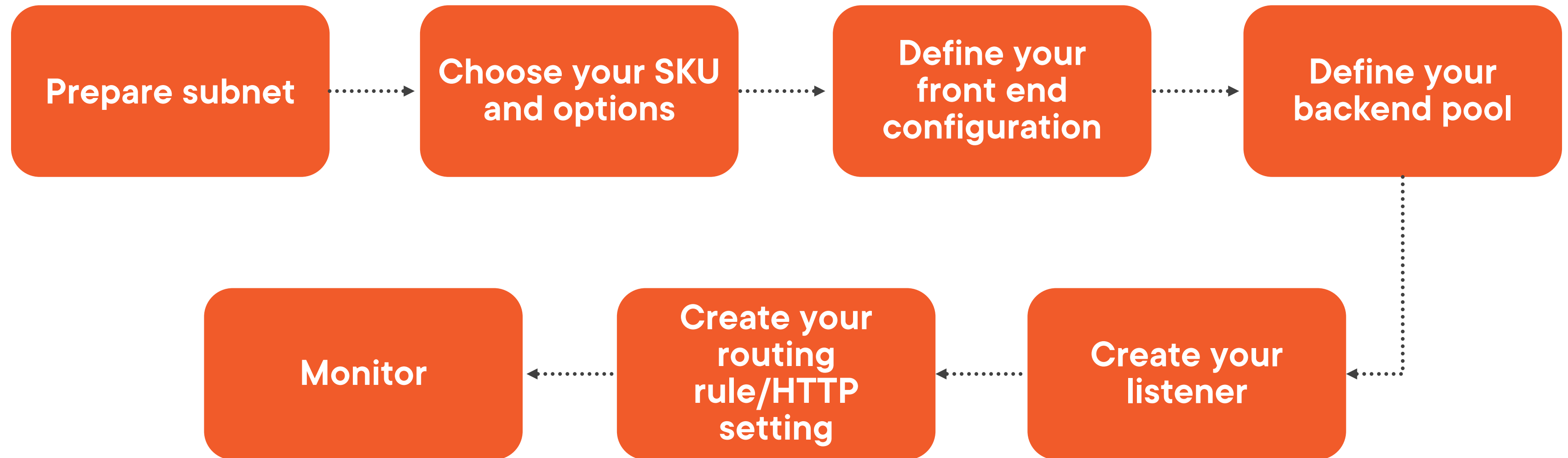


# Configuring Azure Application Gateway

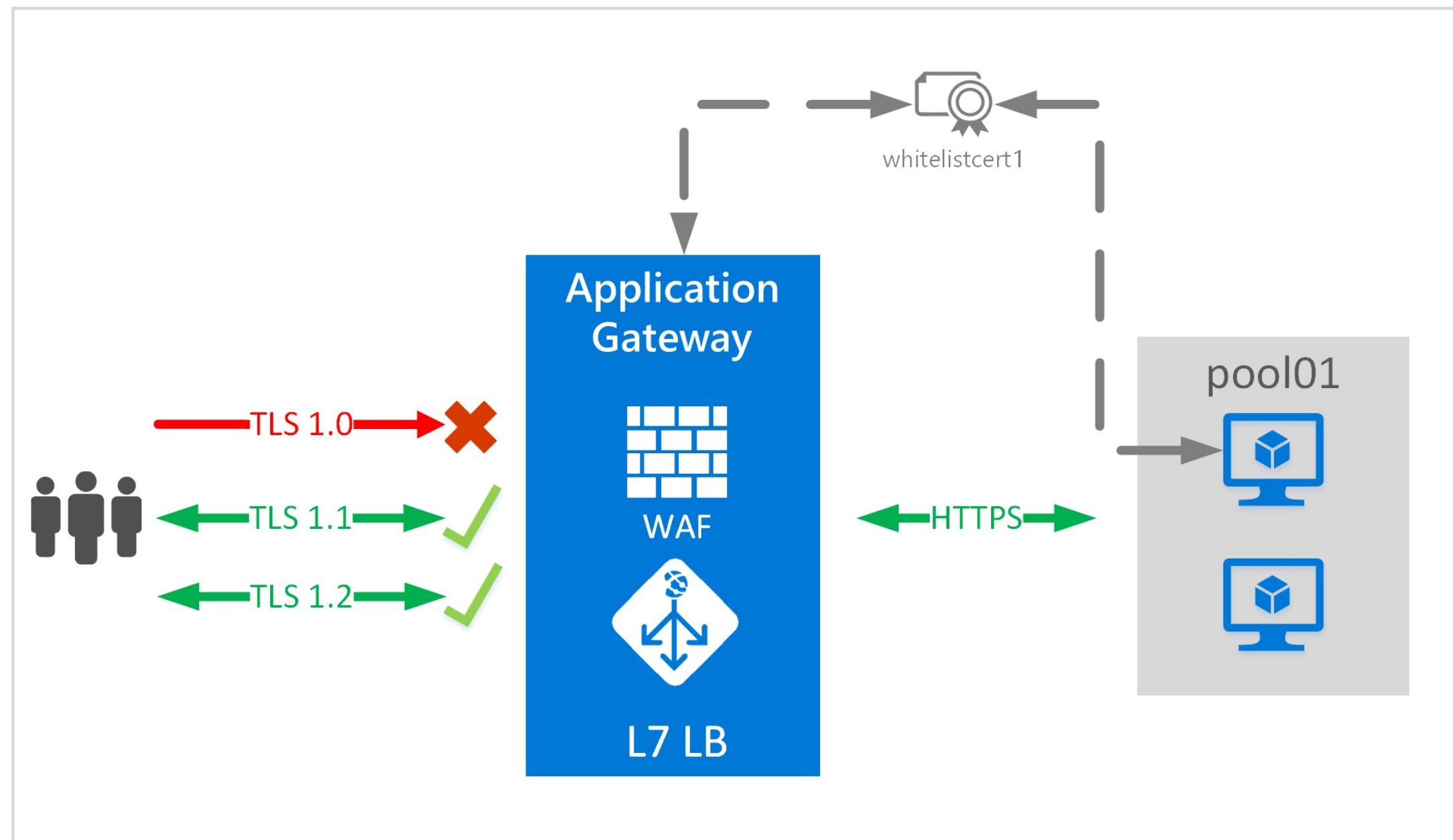
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# Azure Application Gateway Configuration



# Azure Application Gateway End-to-End TLS



**It may be unacceptable to allow unencrypted traffic to your backend pool**

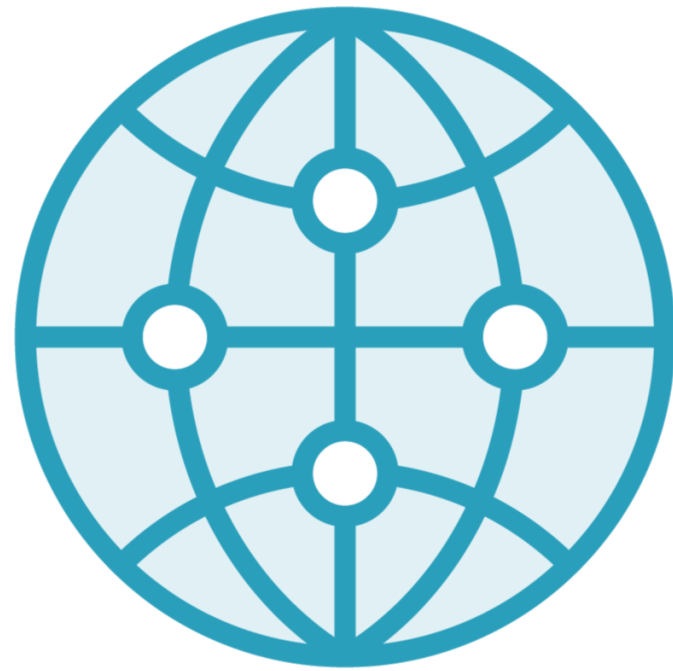
**Can work with well-known or private certificate authorities (CAs)**

**Configure E2E TLS in the HTTP settings object**

Source: [timw.info/ruj](https://timw.info/ruj)



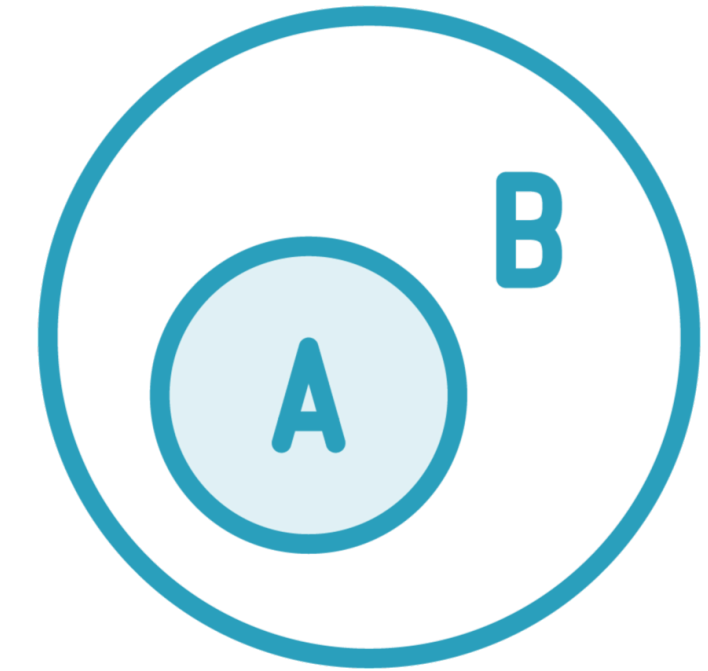
# Azure Application Gateway Redirection



**Global**  
**HTTP-to-HTTPS**  
**listener redirection**  
**for a single site**



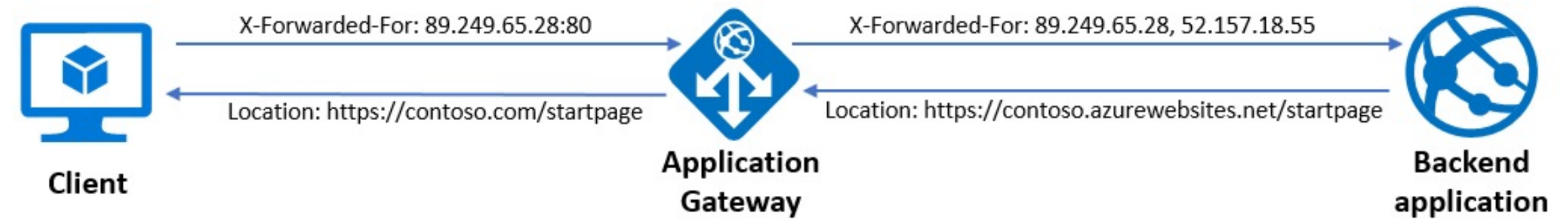
**Path-based**  
**HTTP-to-HTTPS**  
**redirection for a site**  
**area (/cart/\*)**



**External site**  
**Site maintenance**  
**or migration**

# Azure Application Gateway Header Rewrite

**Request and  
response headers**



**URL path and  
query string**



**Delete unwanted  
headers**

The screenshot shows the configuration interface for the 'Do' tab in the Azure Application Gateway. A red box highlights the 'Action type' dropdown, which is set to 'Delete'. Other fields include 'Header type' (Response), 'Header name' (Common header), 'Common header' (Server), and 'Header value' (empty). The 'OK' and 'Cancel' buttons are at the bottom.



# Demo



# 2

**E2E TLS**

**Rewrite**

**Test**





## Summary



**Application Gateway is an excellent “Swiss Army Knife” for web and/or containerized workloads**

**“But what if we have our application distributed across multiple regions and clouds?”**



# Up Next: Implement Azure Front Door

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