Easyweb.com

- By/

- Amr Mahmoud Ezzat
- Mohamed Ghabban
- Ahmed Hassan Ali
- Mahmoud Maher Shahat

Agenda

- Business Case
- Solution strategy
- Solution High level overview
- Traffic Flow
- Design Advantages
- Monitoring
- CRM Integration

Ecommerce website (easyweb.com)

Startup client(retail shop) asked us for proposing a technical design for Azure Cloud e-commerce website (based on WordPress) , as he wants to build his website to the cloud, they doesn't have specialized IT team.

He expect medium average client visits except high traffic during holidays and black Friday.

customer nead a scalable, highly available, secure, cost optimized, easy management, and fast-to-market solution to meet his requirements and to get more new customers trust .

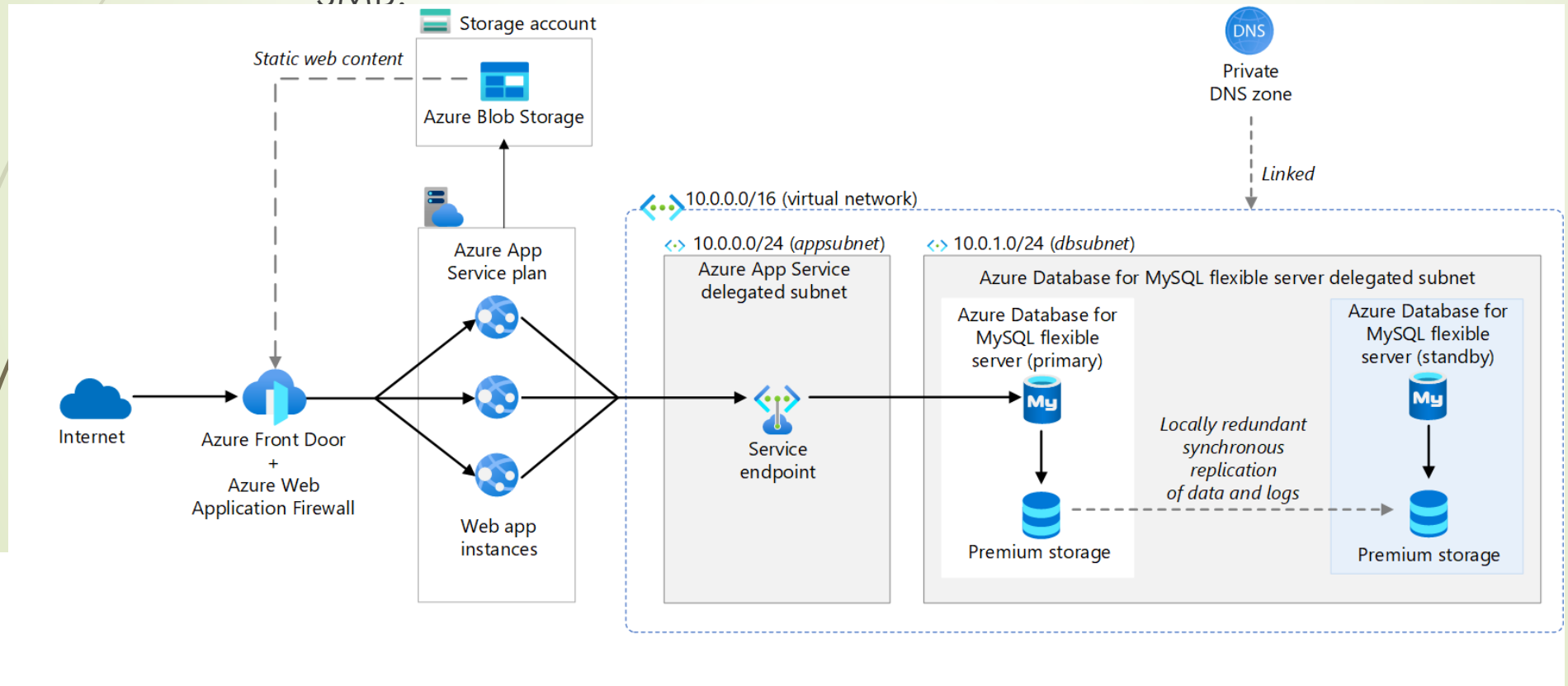
Our solution strategy

Why Azure Cloud Solution?

- Faster time to market.
- Scalability and flexibility.
- Cost savings.
- Better collaboration.
- Advanced security.
- Data loss prevention.
- Integration with MS SaaS as Office 365, Exchange, MS Dynamics and also Azure DevOps.
- Highest physical specs and security for the Azure responsibility part.

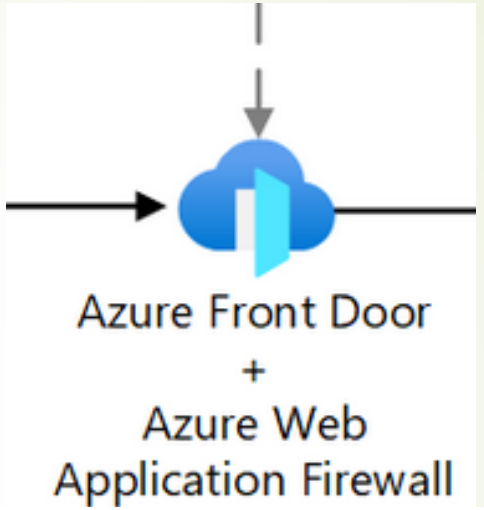
Solution Overview

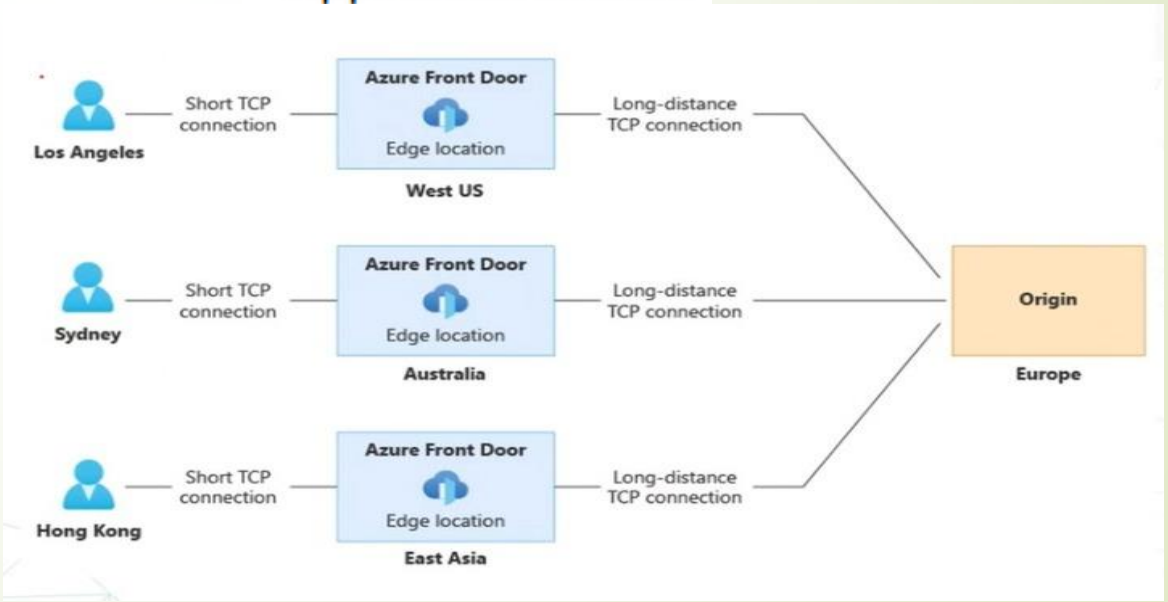
- We decided to use Azure Web APP , Front Door, and MySQL suitable for SMB.



Front door load balancer

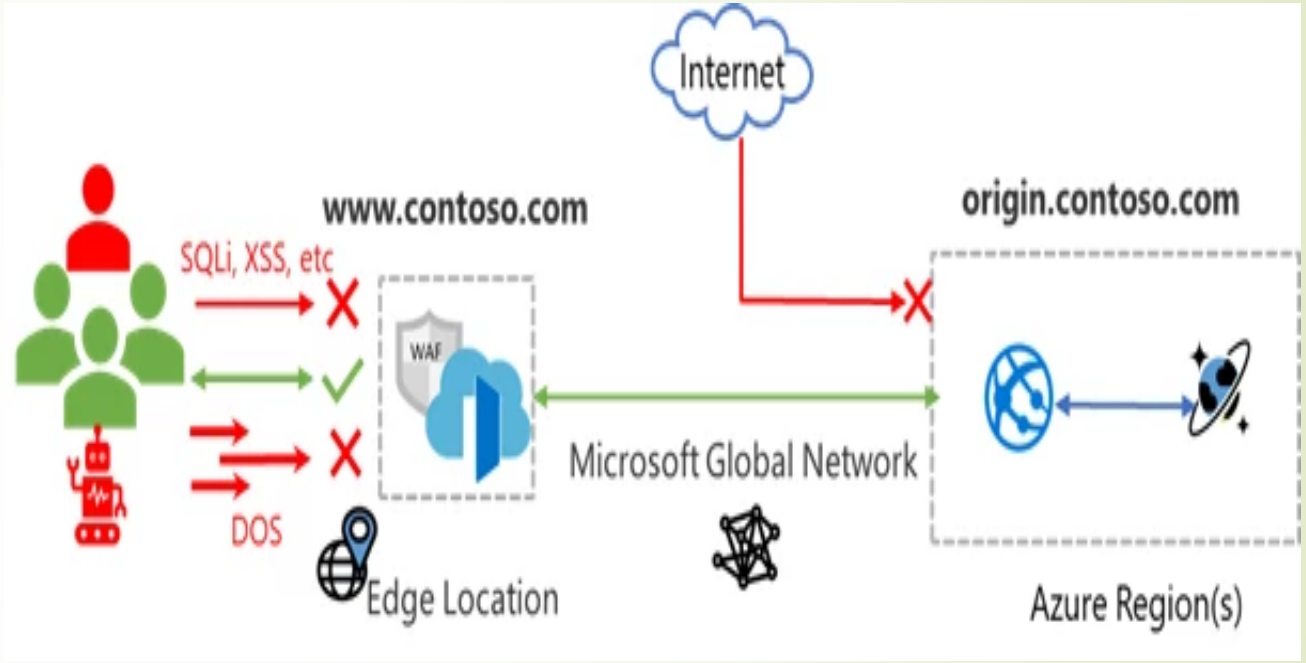
- Traffic Distribution.
- Global Load Balancing.
- Health Monitoring.
- Session Persistence.
- Security Features.(enable WAF)
- Azure CDN integration.





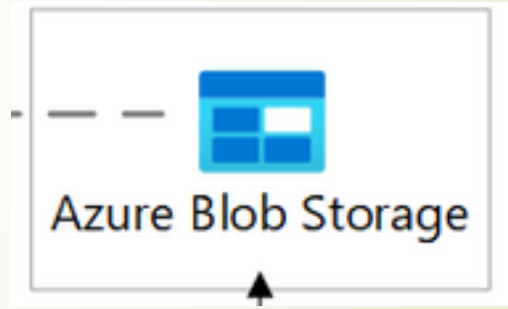
Azure Web Application Firewall

- **Custom Rules.**
- **DDoS Protection.**
- **Real-Time Monitoring and Logging.**



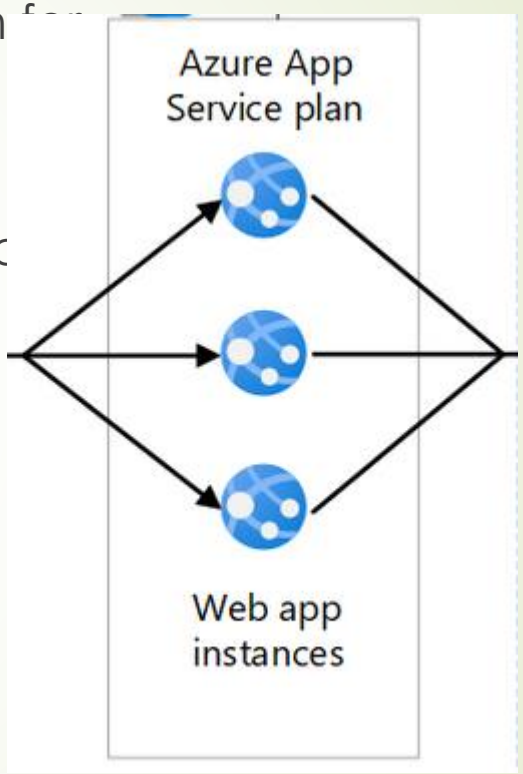
Azure Blob Storage

- Azure Blob Storage is a scalable, secure, and highly available object storage solution provided by Microsoft Azure. It is designed for storing large amounts of unstructured data.
- Encryption at rest by default
- Hot Tier
- Azure Blob Storage automatically scales to store massive amounts of data.
- Replication.



Azure App Service

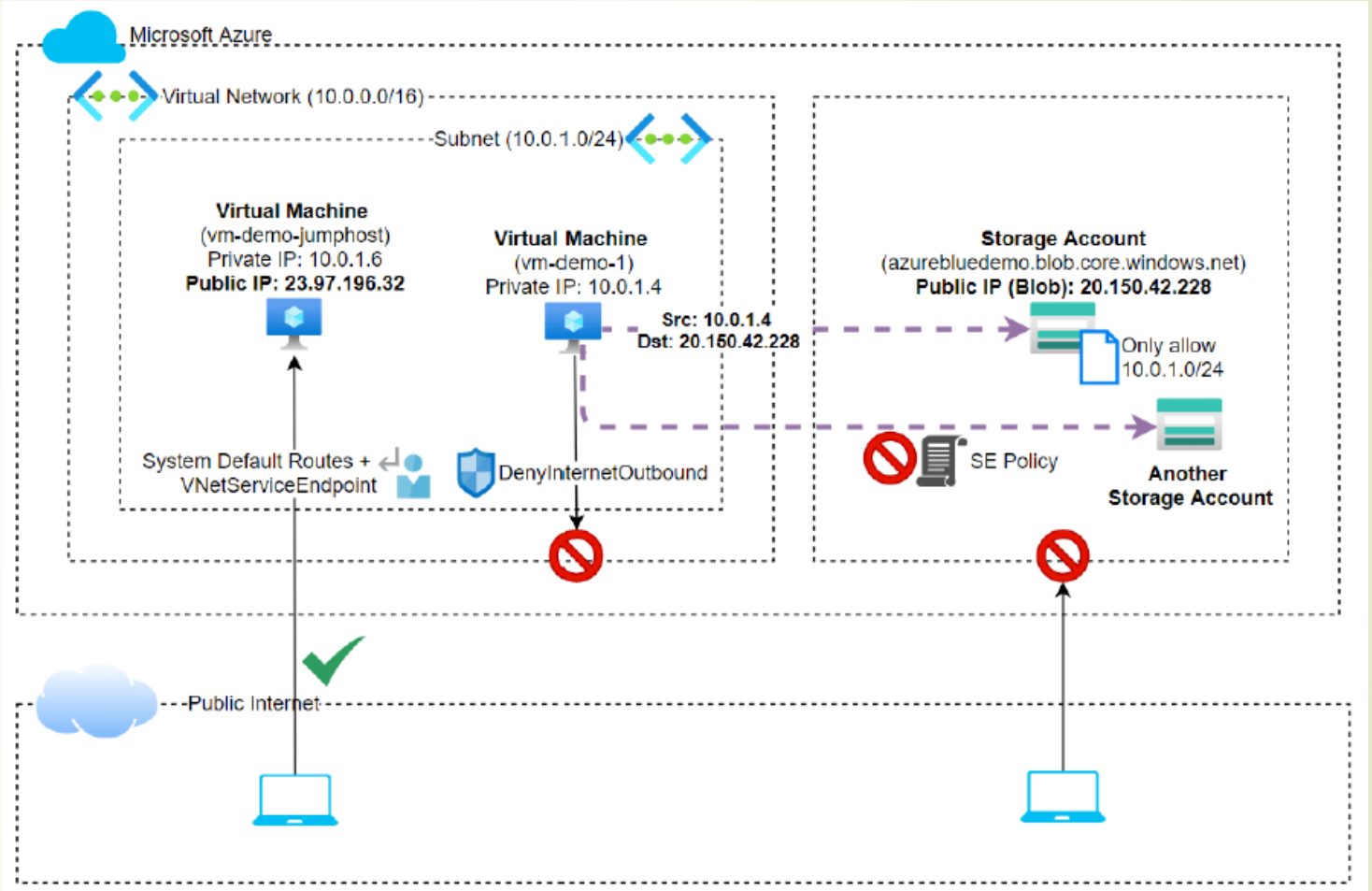
- Azure App Service is a fully managed platform f… building, deploying, and scaling web apps.
- Scale your apps automatically based on traffic demands using horizontal scaling or vertical scaling.
- Standard Tier



Private DNS As we prevented public access for database we will use private domain DNS to ensure that Azure resources in Vnet can resolve dns names to private Ips.

Service Endpoint

- Traffic remains on Azure BB (Perf. , Sec.)
- Allows tight lock down of Azure resources on the network layer
- No additional charges for using Ses.
- No need to expose data to internet, lock down resources on network layer
- Provides direct connectivity to azure services over an optimized route
- Traffic destined to Azure resources will remain always on Azure infra backbone.

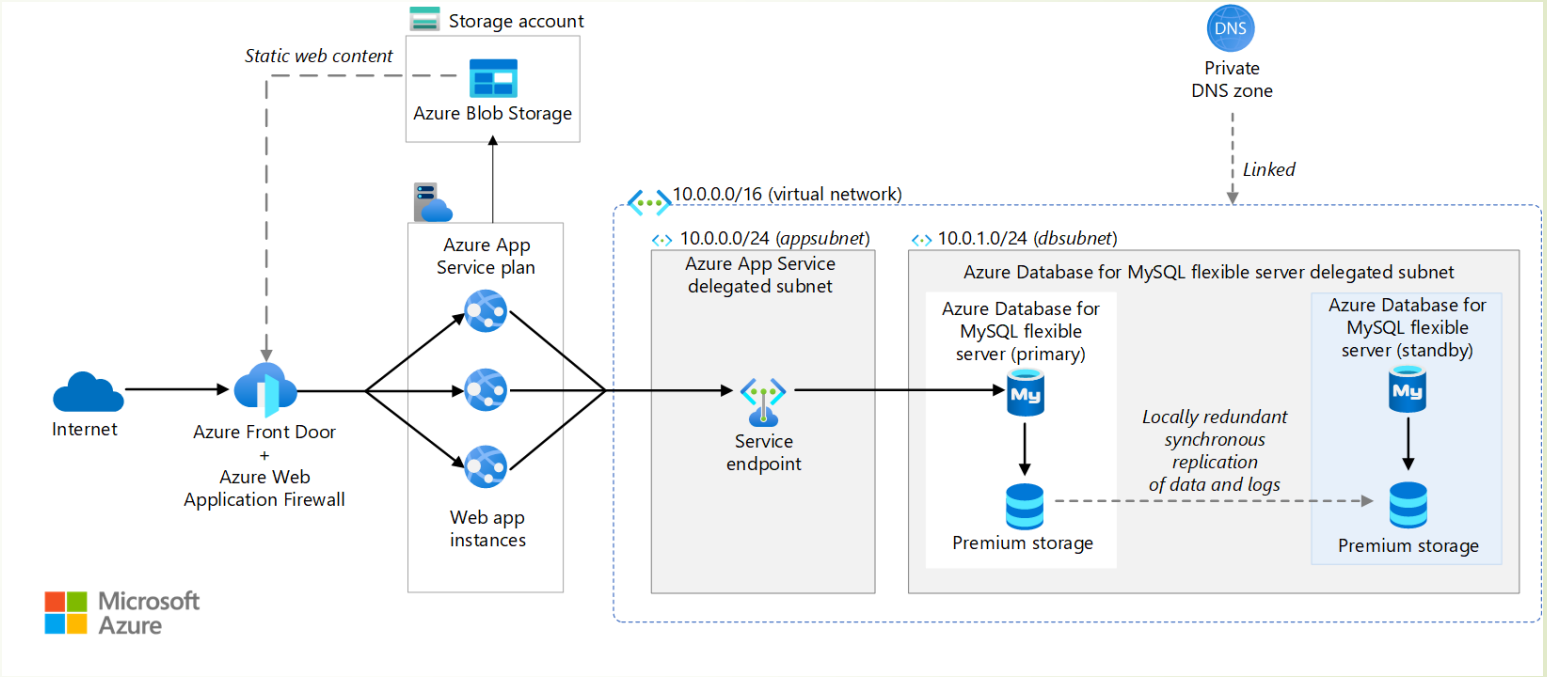


MySQL Flexible Servers

- Free 12-month offer
- fully managed, production-ready relational database service in the Microsoft Cloud
- Zone-redundant and same-zone high availability (HA).
- The ability to schedule maintenance windows.
- Data protection by using automatic backups and point-in-time restore for up to 35 days.
- Enterprise-grade security, compliance, and privacy to help protect sensitive data at rest and in motion.
- Monitoring and automation to simplify management for large-scale deployments.

Traffic Flow

- This scenario covers a scalable installation of WordPress that runs on Azure App Service.
- Users access the front-end website through Azure Front Door with Azure Web Application Firewall enabled.
- Azure Front Door distributes requests across the App Service web apps that WordPress runs on. Azure Front Door retrieves any data that isn't cached from the WordPress web apps.
- The WordPress application uses a service endpoint to access a flexible server instance of Azure Database for MySQL. The WordPress application retrieves dynamic information from the database.
- Locally redundant high availability is enabled for Azure Database for MySQL via a standby server in the same availability zone.
- All static content is hosted in Azure Blob Storage.



Solution Design advantages.

Optimized cost using cloud native components like azure waf, service endpoint , and opensource MySQL.

Optimized security using only Azure Backbone for db access without internet exposure, and using WAF with the network security group filtration on subnet, and FW policy restrictions on db.

High availability using Azure MySQL db replication.

Continuous monitoring.

Monitoring

- Azure Monitor can monitor these types of resources in Azure, other clouds, or on-premises:

- Applications
- Virtual machines
- Guest operating systems
- Containers including Prometheus metrics
- Databases
- Security events in combination with Azure Sentinel

Azure Monitor

Application Insights

Log Analytics workspaces

Q & A

Thank You