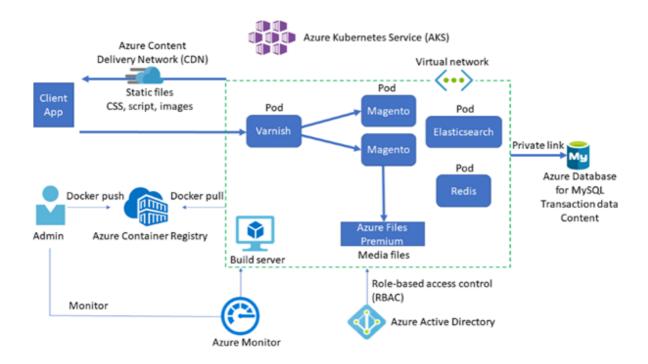


Deploy Magento e-commerce on Azure

This repo contains an Azure Resource Manager (ARM) template designed for developers and architects who are planning to deploy required Azure resouces for Magento. For more details about the architecture, see the <u>Magento e-commerce in Azure Kubernetes Service</u> (AKS) guidance on the Azure Architecture Center.

Solution architecture

The solution architecture for Magento running on Azure is shown in the following diagram.



The Azure services involved in this solution architecture are described below.

- AKS deploys the Kubernetes cluster of Varnish, Magento, Redis, and <u>Elasticsearch</u> in different pods.
- AKS creates a <u>virtual network</u> to deploy the agent nodes. Create the virtual network in advance to set up subnet configuration, private link, and egress restriction.
- Varnish installs in front of the HTTP servers to act as a full-page cache.
- <u>Azure Database for MySQL</u> stores transaction data such as orders and catalogs. Using version 8.0 is recommended.
- <u>Azure Files Premium</u> or an equivalent network-attached storage (NAS) system stores
 media files such as product images. Magento needs a Kubernetes-compatible file
 system such as Azure Files Premium or <u>Azure NetApp Files</u>, which can mount a volume
 in *ReadWriteMany* mode.
- A <u>content delivery network (CDN)</u> serves static content such as CSS, JavaScript, and images. Serving content through a CDN minimizes network latency between users and the datacenter. A CDN can remove significant load from NAS by caching and serving static content.
- <u>Redis</u> stores session data. Hosting Redis on containers is recommended for performance reasons.
- AKS uses an Azure <u>Active Directory (Azure AD)</u> identity to create and manage other Azure resources like Azure load balancers, user authentication, role-based access control, and managed identity.
- <u>Azure Container Registry</u> stores the private <u>Docker</u> images that are deployed to the AKS cluster. You can use other container registries like Docker Hub. Note that the default Magento install writes some secrets to the image.

 <u>Azure Monitor</u> collects and stores metrics and logs, including Azure service platform metrics and application telemetry. Azure Monitor integrates with AKS to collect controller, node, and container metrics, and container and master node logs.

How to deploy the ARM template

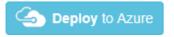
To deploy this ARM template, open the Azure CLI, and then run the following command:

az deployment group create --resource-group <ResourceGroupName> -template-file azuredeploy.json



See this article for troubleshooting the deployment errors.

Alternatively, the following botton will allow you to deploy the APM template from Azure portal.



Parameters

The following table shows a list of parameters to determine how much the cluster can scale. The default values are intentionally scaled down to avoid unnecessary costs for PoC. Values in the rightmost column are the ones we used in our performance test, when we achieved 340 orders per minute using the Magento performance toolkit.

Parameter	Default value	Value in our performance test
aksNodePoolSize	3	10
aksNodePoolVMSize	Standard_DS2_v2	Standard_F8s_v2
mySQLSkuName	MO_Gen5_4	MO_Gen5_16
mySQLSkuTier	MemoryOptimized	MemoryOptimized
mySQLSkuFamily	Gen5	Gen5
mySQLSkuCapacity	4	16
mySQLStorageSize	128000	512000
fileShareQuota	512	16384

Next steps

Once all Azure resources are deployed successfuly, now you can start deploying Magento application, Varnish, Elasticsearch and Redis into the AKS cluster but it's out of scope for this guide. For more details about the architecture, see the Magento e-commerce in Azure Kubernetes Service (AKS) guidance on the Azure Architecture Center.

Cleanup resources

To remove this deployment simply remove the resource group that contains this sample.

Code of Conduct

This project has adopted the <u>Microsoft Open Source Code of Conduct</u>. For more information, see the <u>Code of Conduct FAQ</u> or contact <u>opencode@microsoft.com</u> with any additional questions or comments.

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