

Azure Administrator Capstone Project Az-104

You work as an Azure professional for a Corporation. You are assigned the task of implementing the below architecture for the company's website.

There are three web pages to be deployed:

1. The home page is the default page (VM2)
2. The upload page is where you can upload the files to your Azure Blob Storage (VM1)
3. The error page for 403 and 502 errors

Application Gateway has to be configured in the following manner:

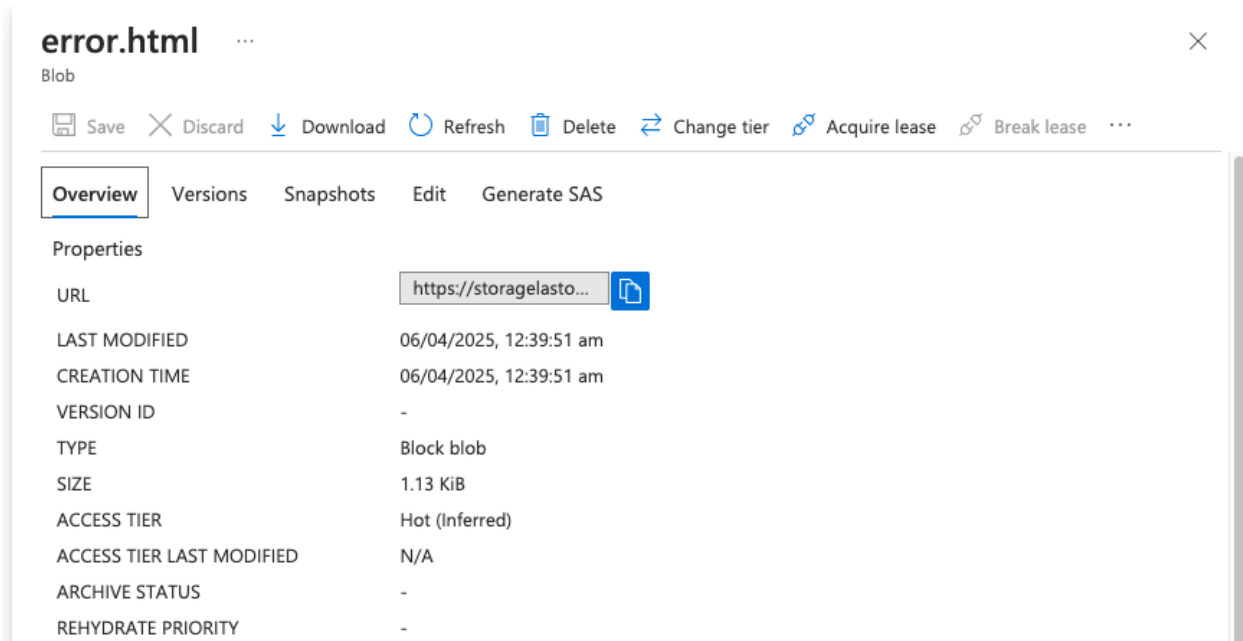
1. Example.com should be pointed to the home page
2. Example.com/upload should be pointed to the upload page
3. Application Gateway's error pages should be pointed to error.html which should be hosted as a static website in Azure Containers. The error.html file is present in the GitHub repository

The term 'Example' here refers to the Traffic Manager's domain name. The client wants you to deploy them in the Central US and the West US regions such that the traffic is distributed optimally between both regions

Storage Account has to be configured in the following manner:

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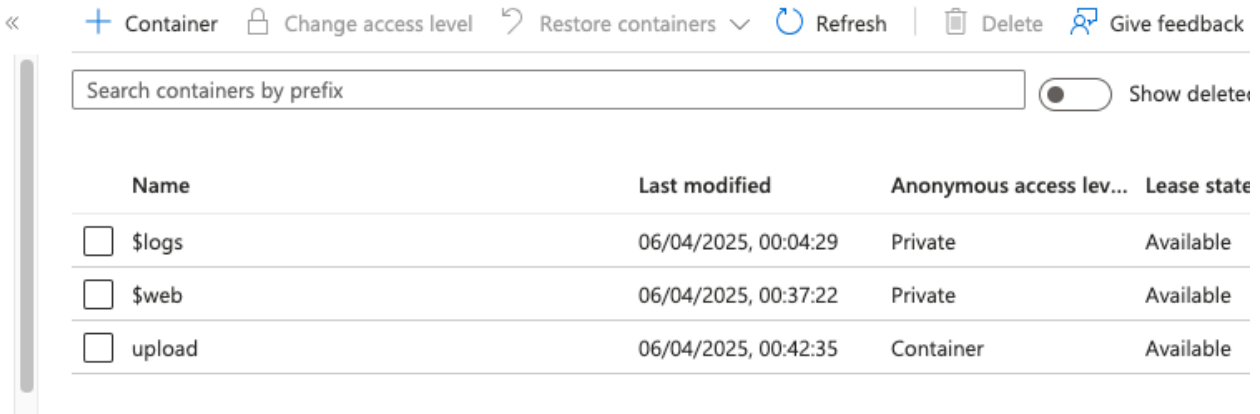
1. You need to host your error.html as a static website here, and then point the application gateway's 403 and 502 errors to it.



The screenshot shows the Azure Storage Explorer interface for a blob named 'error.html'. The 'Overview' tab is selected, displaying the following properties:

Property	Value
URL	https://storagelasto...
LAST MODIFIED	06/04/2025, 12:39:51 am
CREATION TIME	06/04/2025, 12:39:51 am
VERSION ID	-
TYPE	Block blob
SIZE	1.13 KiB
ACCESS TIER	Hot (Inferred)
ACCESS TIER LAST MODIFIED	N/A
ARCHIVE STATUS	-
REHYDRATE PRIORITY	-

2. Create a container named upload, this will be used by your code to upload the files.



The screenshot shows the Azure Storage Explorer interface with a list of containers. The 'upload' container is highlighted.

Name	Last modified	Anonymous access lev...	Lease state
<input type="checkbox"/> \$logs	06/04/2025, 00:04:29	Private	Available
<input type="checkbox"/> \$web	06/04/2025, 00:37:22	Private	Available
<input type="checkbox"/> upload	06/04/2025, 00:42:35	Container	Available

Technical specifications for the deployments are as follows:

1. Deployments in both regions should have VMs inside VNets.

<input type="checkbox"/> <-> Vnet-1centralus	lin1_group	Central US	my-subscriptions
<input type="checkbox"/> <-> Vnet-2westus	lin1_group	West US	my-subscriptions

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2. Clone the GitHub repo <https://github.com/azcloudberg/azproject> to all the VMs.

```
Reading state information... Done
78 packages can be upgraded. Run 'apt list --upgradable' to see them.
[azureuser@VM-1-westus:~$ git clone https://github.com/azcloudberg/azproject.git
Cloning into 'azproject'...
remote: Enumerating objects: 229, done.
remote: Counting objects: 100% (26/26), done.
remote: Compressing objects: 100% (12/12), done.
```

3. On VM1, please run vm1.sh this will deploy the upload page, on VM2 please run VM2.sh, this will install the home page.

4. For running the scripts, please run the following command inside the GitHub directory from the terminal.

VM1: ./vm1.sh

VM2: ./vm2.sh

5. After running the scripts, please edit the config.py file on VM1, and enter the details related to your storage account where the files will be uploaded.

```
azureuser@VM-1-westus:~/azproject$ ls
README.md  app.py  config.py  error.html  index.html  templates  vm1.sh
azureuser@VM-1-westus:~/azproject$ sudo nano config.py
azureuser@VM-1-westus:~/azproject$ ./vm1.sh
Rules updated
Rules updated (v6)
Hit:1 http://azure.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://azure.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://azure.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://azure.archive.ubuntu.com/ubuntu focal-security InRelease
```

6. Once done, please run the following command: `sudo python3 app.py`

```
us-2.2.0 zipp-3.20.2
[azureuser@VM-1-centralus:~/azproject$ sudo python3 app.py
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:80
* Running on http://10.0.0.4:80
Press CTRL+C to quit
10.0.1.7 - - [05/Apr/2025 20:32:27] "GET / HTTP/1.1" 200 -
10.0.1.6 - - [05/Apr/2025 20:32:27] "GET / HTTP/1.1" 200 -
10.0.1.7 - - [05/Apr/2025 20:32:57] "GET / HTTP/1.1" 200 -
10.0.1.6 - - [05/Apr/2025 20:32:57] "GET / HTTP/1.1" 200 -
10.0.1.7 - - [05/Apr/2025 20:33:27] "GET / HTTP/1.1" 200 -
10.0.1.6 - - [05/Apr/2025 20:33:27] "GET / HTTP/1.1" 200 -
10.0.1.7 - - [05/Apr/2025 20:33:57] "GET / HTTP/1.1" 200 -
10.0.1.6 - - [05/Apr/2025 20:33:57] "GET / HTTP/1.1" 200 -
10.0.1.7 - - [05/Apr/2025 20:34:27] "GET / HTTP/1.1" 200 -
10.0.1.6 - - [05/Apr/2025 20:34:27] "GET / HTTP/1.1" 200 -
```

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```
README.md  app.py  config.py  error.html  index.html  templates  vml.sh  vm2.sh
azureuser@VM-1-westus:~/azproject$ sudo python3 app.py
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:80
* Running on http://20.1.0.5:80
Press CTRL+C to quit
20.1.1.6 - - [05/Apr/2025 20:31:58] "GET / HTTP/1.1" 200 -
20.1.1.7 - - [05/Apr/2025 20:31:58] "GET / HTTP/1.1" 200 -
20.1.1.6 - - [05/Apr/2025 20:32:28] "GET / HTTP/1.1" 200 -
20.1.1.7 - - [05/Apr/2025 20:32:28] "GET / HTTP/1.1" 200 -
20.1.1.6 - - [05/Apr/2025 20:32:58] "GET / HTTP/1.1" 200 -
20.1.1.7 - - [05/Apr/2025 20:32:58] "GET / HTTP/1.1" 200 -
20.1.1.6 - - [05/Apr/2025 20:33:28] "GET / HTTP/1.1" 200 -
20.1.1.7 - - [05/Apr/2025 20:33:28] "GET / HTTP/1.1" 200 -
20.1.1.6 - - [05/Apr/2025 20:33:58] "GET / HTTP/1.1" 200 -
20.1.1.7 - - [05/Apr/2025 20:33:58] "GET / HTTP/1.1" 200 -
20.1.1.6 - - [05/Apr/2025 20:34:28] "GET / HTTP/1.1" 200 -
20.1.1.7 - - [05/Apr/2025 20:34:28] "GET / HTTP/1.1" 200 -
27.207.200.35 - - [05/Apr/2025 20:34:47] "POST /GoonForm/diag_Form2images/ HTTP/1.1" 404 -
```

7. Both regions should be connected to each other using VNet-VNet Peering.

The screenshot displays two Azure Portal windows showing VNet-VNet Peering configurations. The top window is for 'Vnet-1centralus' and the bottom window is for 'Vnet-2westus'. Both windows show a single peering connection named 'link' that is 'Fully Synchronized' and 'Connected'.

Vnet-1centralus | Peerings

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. The virtual networks appear as one for connectivity purposes. [Learn more](#)

Filter by name...

Showing all 1 items

<input type="checkbox"/>	Name	Peering status	Peering connection	Remote VNet	Virtual network	Cross-tenant
<input type="checkbox"/>	link	Fully Synchronized	Connected	Vnet-2w...	Disabled	No

Vnet-2westus | Peerings

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. The virtual networks appear as one for connectivity purposes. [Learn more](#)

Filter by name...

Showing all 1 items

<input type="checkbox"/>	Name	Peering status	Peering connection	Remote VNet	Virtual network	Cross-tenant
<input type="checkbox"/>	link	Fully Synchronized	Connected	Vnet-1ce...	Disabled	No

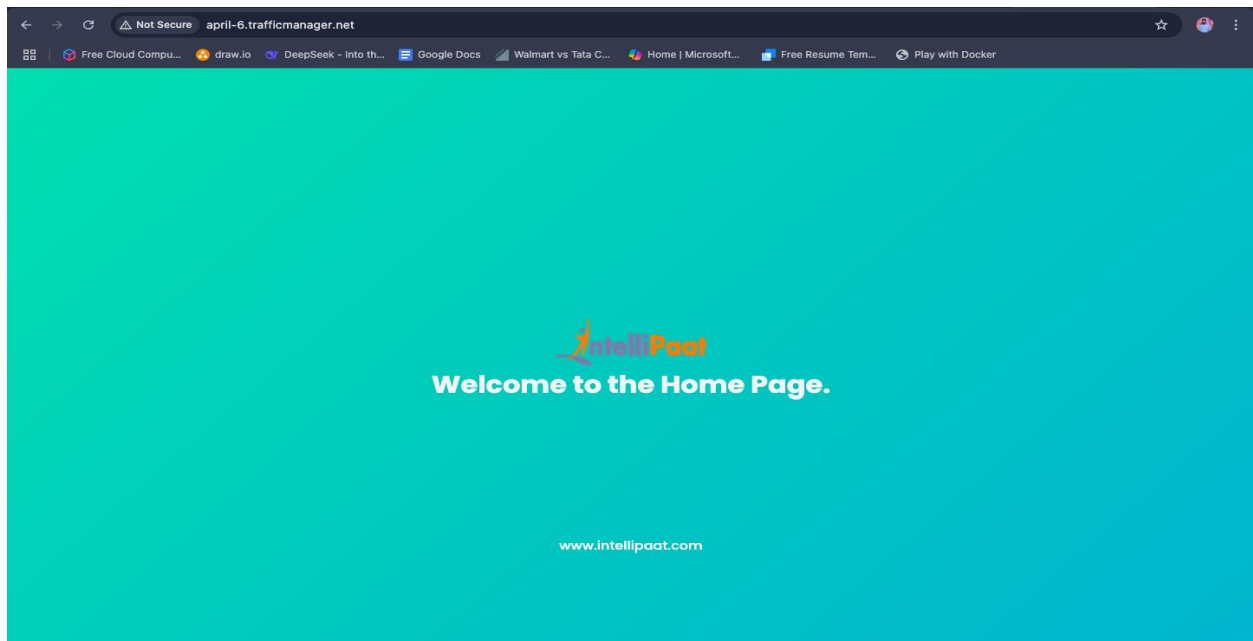
8. Finally, your Traffic Manager should be pointing to the application gateway of

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both the regions.

Name ↕	Status ↕	Monitor Status ↕	Type ↕	Location ↕
ep-1	Enabled	Online	Azure endpoint	Central US
ep-2	Enabled	Online	Azure endpoint	West US

Home page



Upload page

