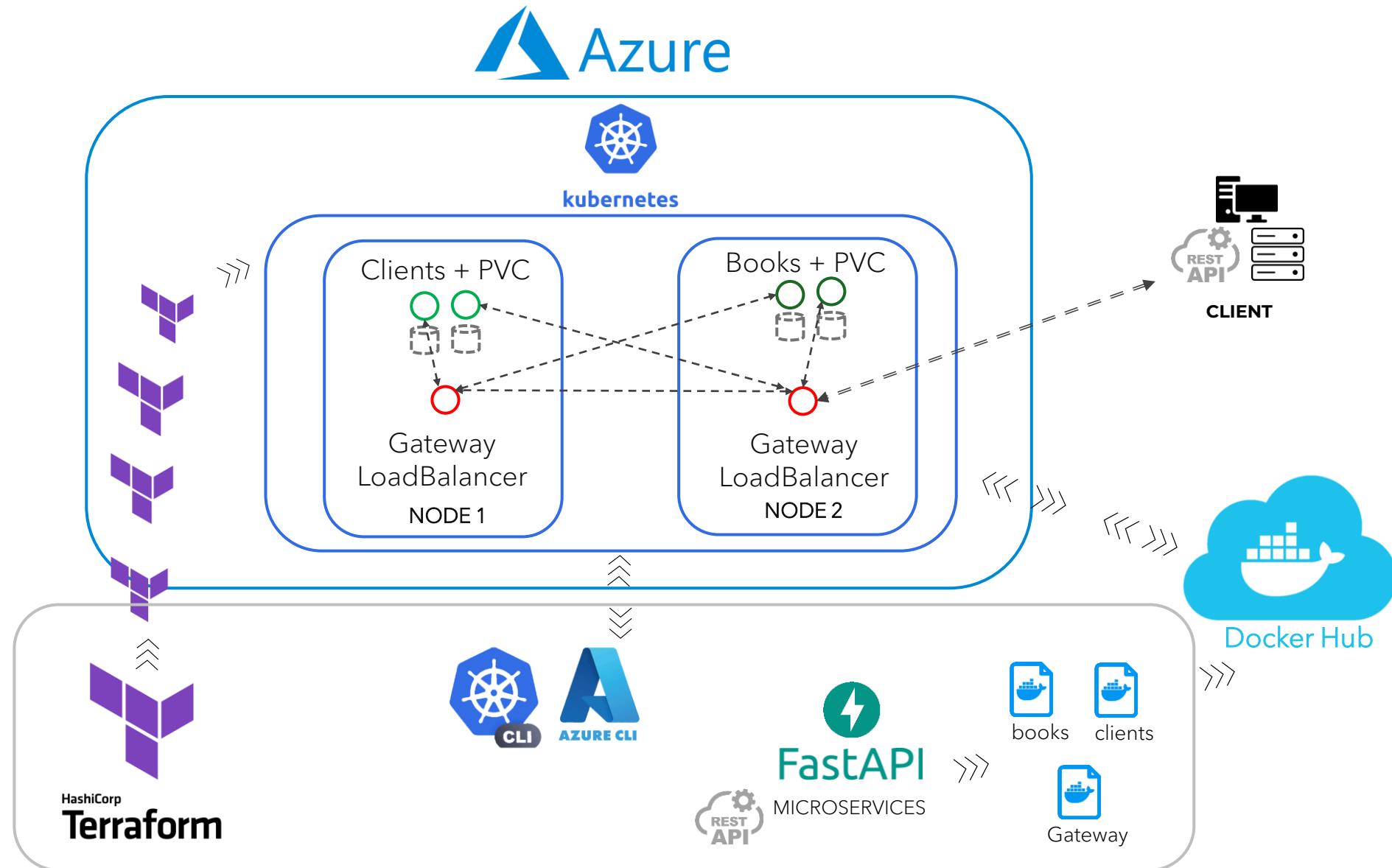


Deploying FastAPI Microservices on Azure Kubernetes Service (AKS) using Terraform



TM Terraform_AKS_FastAPI_Microservices master Current File ▶ ⚡ ⚡ ⚡

Project Terraform_AKS_FastAPI_Microservices

- books
- clients
- gateway
- k8s
- Terraform_Scripts_AKS
 - main.tf
 - outputs.tf
 - provider.tf
 - ssh.tf
 - variables.tf

venv library root .gitignore External Libraries Scratches and Consoles

provider.tf ssh.tf main.tf ✘ variables.tf outputs.tf clients\...\main.py

```
1 resource "random_pet" "rg_name" {
2     prefix = var.resource_group_name_prefix
3 }
4
5 resource "azurerm_resource_group" "rg" {
6     location = var.resource_group_location
7     name     = random_pet.rg_name.id
8 }
9
10 resource "random_pet" "azurerm_kubernetes_cluster_name" {
11     prefix = "cluster"
12 }
13
14 resource "random_pet" "azurerm_kubernetes_cluster_dns_prefix" {
15     prefix = "dns"
16 }
17
18 resource "azurerm_kubernetes_cluster" "k8s" {
19     location      = azurerm_resource_group.rg.location
20     name         = random_pet_azurerm_kubernetes_cluster_name.id
21     resource_group_name = azurerm_resource_group.rg.name
22     dns_prefix    = random_pet_azurerm_kubernetes_cluster_dns_prefix.id
}
resource azurerm_kubernetes_cluster k8s
```

Terminal Local

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd .\Terraform_Scripts_AKS\
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> az login
A web browser has been opened at https://login.microsoftonline.com/organizations/oauth2/v2.0/authorize. Please continue the login in the web browser. If no web browser is available or if the web browser fails to open, use dev
code flow with `az login --use-device-code`.
[{"cloudName": "AzureCloud", "homeTenantId": "68519e48-83f3-435f-a38a-1a7aa77ba987", "id": "9e3c713b-0d42-41e5-81ca-d778fd001da7", "isDefault": true, "managedByTenants": [], "name": "Azure for Students", "state": "Enabled", "name": "Azure for Students", "state": "Enabled"}, {"cloudName": "AzureCloud", "homeTenantId": "68519e48-83f3-435f-a38a-1a7aa77ba987", "id": "9e3c713b-0d42-41e5-81ca-d778fd001da7", "isDefault": true, "managedByTenants": [], "name": "Azure for Students", "state": "Enabled", "name": "Azure for Students", "state": "Enabled"}]
```

Project ▾

Terraform_AKS_FastAPI_Microservices

provider.tf ssh.tf main.tf variables.tf outputs.tf

1 output "resource_group_name" {
2 value = azurerm_resource_group.rg.name
3 }
4
5 output "kubernetes_cluster_name" {
6 value = azurerm_kubernetes_cluster.k8s.name
7 }
8
9 output "client_certificate" {
10 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
11 sensitive = true
12 }
13
14 output "client_key" {
15 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
16 sensitive = true
17 }
18
19 output "cluster_ca_certificate" {
20 value = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
21 sensitive = true
22 }
23
24 output client_key

Terminal Local +

Too many command line arguments. Did you mean to use -chdir?
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> **terraform init**

Initializing the backend...

Initializing provider plugins...

- Finding hashicorp/time versions matching "0.9.1"...
- Finding azure/azapi versions matching "~> 1.5"...
- Finding hashicorp/azurerm versions matching "~> 3.0"...
- Finding hashicorp/random versions matching "~> 3.0"...
- Installing hashicorp/time v0.9.1...
- Installed hashicorp/time v0.9.1 (signed by HashiCorp)
- Installing azure/azapi v1.12.1...
- Installed azure/azapi v1.12.1 (signed by a HashiCorp partner, key ID 6F0B91BDE98478CF)
- Installing hashicorp/azurerm v3.99.0...

Project ▾

- provider.tf
- ssh.tf
- main.tf
- variables.tf
- outputs.tf

Terraform_AKS_FastAPI_Microservices

- books
- clients
- gateway
- Terraform_Scripts_AKS
 - .terraform
 - k8s
 - .terraform.lock.hcl
 - main.tf
 - outputs.tf
 - provider.tf
 - ssh.tf
 - variables.tf

venv library root

.gitignore

External Libraries

Scratches and Consoles

```
1 output "resource_group_name" {
2     value = azurerm_resource_group.rg.name
3 }
4
5 output "kubernetes_cluster_name" {
6     value = azurerm_kubernetes_cluster.k8s.name
7 }
8
9 output "client_certificate" {
10    value      = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
11    sensitive = true
12 }
13
14 output "client_key" {
15    value      = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
16    sensitive = true
17 }
18
19 output "cluster_ca_certificate" {
20    value      = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
21    sensitive = true
22 }
```

output client_key

Terminal Local ×

Terraform has created a lock file `.terraform.lock.hcl` to record the provider selections it made above. Include this file in your version control repository so that Terraform can guarantee to make the same selections by default when you run `"terraform init"` in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running `"terraform plan"` to see any changes that are required for your infrastructure. All Terraform commands should now work.

If you ever set or change modules or backend configuration for Terraform, rerun this command to reinitialize your working directory. If you forget, other commands will detect it and remind you to do so if necessary.

(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> █

PC Terraform_AKS_FastAPI_Microservices master

Project

-o Terraform_AKS_FastAPI_Microservi
 books
 clients
 gateway
 Terraform_Scripts_AKS
 .terraform
 k8s
 .terraform.lock.hcl
 main.tf
 main.tfplan
 outputs.tf
 provider.tf
 ssh.tf
 variables.tf
 venv library root
 .gitignore
External Libraries
Scratches and Consoles

provider.tf ssh.tf main.tf variables.tf outputs.tf

8
9 output "client_certificate" {
10 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
11 sensitive = true
12 }
13
14 output "client_key" {
15 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
16 sensitive = true
17 }
18
19 output "cluster_ca_certificate" {
20 value = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
21 sensitive = true
22 }
23
24 output "cluster_password" {
25 value = azurerm_kubernetes_cluster.k8s.kube_config[0].password
26 sensitive = true
output client_key

Terminal Local + ×

commands will detect it and remind you to do so if necessary.
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> **terraform plan -out main.tfplan**

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
+ create

Terraform will perform the following actions:

azapi_resource.ssh_public_key will be created
+ resource "azapi_resource" "ssh_public_key" {
 + body = jsonencode({})
 + id = (Known after apply)
 + ignore_casing = false
 + ignore_missing_property = true
 + location = "eastus"
 + name = (known after apply)
 + output = (known after apply)
 + parent_id = (known after apply)
 + removing_special_chars = false
 + resource_type = azapi_resource
 + tags = (known after apply)

Project ▾

- provider.tf
- ssh.tf
- main.tf
- variables.tf
- outputs.tf

Terraform_AKS_FastAPI_Microservice

- books
- clients
- gateway
- Terraform_Scripts_AKS
 - .terraform
 - k8s
 - .terraform.lock.hcl

main.tf

main.tfplan

outputs.tf

provider.tf

ssh.tf

variables.tf

venv library root

.gitignore

External Libraries

Scratches and Consoles

```
8
9     output "client_certificate" {
10        value      = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
11        sensitive = true
12    }
13
14    output "client_key" {
15        value      = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
16        sensitive = true
17    }
18
19    output "cluster_ca_certificate" {
20        value      = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
21        sensitive = true
22    }
23
24    output "cluster_password" {
25        value      = azurerm_kubernetes_cluster.k8s.kube_config[0].password
26        sensitive = true
27
28    output client_key
```

Terminal Local × + ▾

Changes to Outputs:

```
+ client_certificate      = (sensitive value)
+ client_key              = (sensitive value)
+ cluster_ca_certificate = (sensitive value)
+ cluster_password        = (sensitive value)
+ cluster_username        = (sensitive value)
+ host                     = (sensitive value)
+ key_data                = (known after apply)
+ kube_config              = (sensitive value)
+ kubernetes_cluster_name = (known after apply)
+ resource_group_name     = (known after apply)
```

Saved the plan to: main.tfplan

To perform exactly these actions, run the following command to apply:

```
terraform apply "main.tfplan"
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS>
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> █
```

Terraform_AKS_FastAPI_Microservices master

Project ▾

- provider.tf
- ssh.tf
- main.tf
- variables.tf
- outputs.tf ×

8 output "client_certificate" {
9 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
10 sensitive = true
11 }
12
13 output "client_key" {
14 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
15 sensitive = true
16 }
17
18 output "cluster_ca_certificate" {
19 value = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
20 sensitive = true
21 }
22
23 output "cluster_password" {
24 value = azurerm_kubernetes_cluster.k8s.kube_config[0].password
25 sensitive = true
26 }
output client_key

main.tf

main.tfplan

outputs.tf

provider.tf

ssh.tf

variables.tf

venv library root

.gitignore

External Libraries

Scratches and Consoles

Terminal Local × + ▾

```
+ kubernetes_cluster_name = (known after apply)
+ resource_group_name      = (known after apply)
```

Saved the plan to: main.tfplan

To perform exactly these actions, run the following command to apply:

```
terraform apply "main.tfplan"
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS>
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> terraform apply main.tfplan
random_pet.azurem_kubernetes_cluster_name: Creating...
random_pet.ssh_key_name: Creating...
random_pet.azurem_kubernetes_dns_prefix: Creating...
random_pet.rg_name: Creating...
random_pet.azurem_kubernetes_cluster_name: Creation complete after 0s [id=cluster-relaxing-ant]
random_pet.rg_name: Creation complete after 0s [id=rg-eternal-sculpin]
random_pet.ssh_key_name: Creation complete after 0s [id=sshmagicaltiger]
random_pet.azurem_kubernetes_dns_prefix: Creation complete after 0s [id=dns-kind-mantis]
```

TM Terraform_AKS_FastAPI_Microservices master

Project ▾

- provider.tf
- ssh.tf
- main.tf
- variables.tf
- outputs.tf ×

8 output "client_certificate" {
9 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
10 sensitive = true
11 }
12
13
14 output "client_key" {
15 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
16 sensitive = true
17 }
18
19 output "cluster_ca_certificate" {
20 value = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
21 sensitive = true
22 }
23
24 output "cluster_password" {
25 value = azurerm_kubernetes_cluster.k8s.kube_config[0].password
26 sensitive = true
27
28 output client_key

main.tf

main.tfplan

outputs.tf

provider.tf

ssh.tf

terraform.tfstate

variables.tf

venv library root

citatione

Terminal Local + ▾

```
random_pet.azure_rm_kubernetes_cluster_dns_prefix: Creating...
random_pet.rg_name: Creating...
random_pet.azure_rm_kubernetes_cluster_name: Creation complete after 0s [id=cluster-relaxing-ant]
random_pet.rg_name: Creation complete after 0s [id=rg-eternal-sculpin]
random_pet.ssh_key_name: Creation complete after 0s [id=sshmagicaltiger]
random_pet.azure_rm_kubernetes_cluster_dns_prefix: Creation complete after 0s [id=dns-kind-mantis]
azurerm_resource_group.rg: Creating...
azurerm_resource_group.rg: Creation complete after 2s [id=/subscriptions/9e3c713b-0d42-41e5-81ca-d778fd001da7/resourceGroups/
azapi_resource.ssh_public_key: Creating...
azapi_resource.ssh_public_key: Creation complete after 4s [id=/subscriptions/9e3c713b-0d42-41e5-81ca-d778fd001da7/resourceGro
azapi_resource_action.ssh_public_key_gen: Creating...
azapi_resource_action.ssh_public_key_gen: Creation complete after 1s [id=/subscriptions/9e3c713b-0d42-41e5-81ca-d778fd001da7/
Pair]
azurerm_kubernetes_cluster.k8s: Creating...
azurerm_kubernetes_cluster.k8s: Still creating... [10s elapsed]
azurerm_kubernetes_cluster.k8s: Still creating... [20s elapsed]
azurerm_kubernetes_cluster.k8s: Still creating... [30s elapsed]
azurerm_kubernetes_cluster.k8s: Still creating... [40s elapsed]
azurerm_kubernetes_cluster.k8s: Still creating... [50s elapsed]
```

Terraform_AKS_FastAPI_Microservices master

Project provider.tf ssh.tf main.tf variables.tf outputs.tf

8
9 output "client_certificate" {
10 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client
11 sensitive = true
12 }
13
14 output "client_key" {
15 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client
16 sensitive = true
17 }
18
19 output "cluster_ca_certificate" {
20 value = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster
21 sensitive = true
22 }
23
24 output "cluster_password" {
25 value = azurerm_kubernetes_cluster.k8s.kube_config[0].password
26 sensitive = true
27 }
28
29 output client_key

main.tf main.tfplan outputs.tf provider.tf ssh.tf terraform.tfstate variables.tf

venv library root

Pair] azurerm_kubernetes_cluster.k8s: Creating... azurerm_kubernetes_cluster.k8s: Still creating... [10s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [20s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [30s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [40s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [50s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [1m0s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [1m10s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [1m20s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [1m30s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [1m40s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [1m50s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [2m0s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [2m10s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [2m20s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [2m30s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [2m40s elapsed] azurerm_kubernetes_cluster.k8s: Still creating... [2m50s elapsed]

Terraform_AKS_FastAPI_Microservices master

Project

- Terraform_AKS_FastAPI_Microservi
 - books
 - clients
 - gateway
- Terraform_Scripts_AKS
 - .terraform
 - k8s
 - .terraform.lock.hcl
- main.tf
- main.tfplan
- outputs.tf
- provider.tf
- ssh.tf
- terraform.tfstate
- variables.tf

venv library root

.gitignore

External libraries

provider.tf ssh.tf main.tf variables.tf outputs.tf main.tfplan .gitignore

```
8
9     output "client_certificate" {
10         value      = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
11         sensitive = true
12     }
13
14     output "client_key" {
15         value      = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
16         sensitive = true
17     }
18
19     output "cluster_ca_certificate" {
20         value      = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
21         sensitive = true
22     }
23
24     output "cluster_password" {
25         value      = azurerm_kubernetes_cluster.k8s.kube_config[0].password
26         sensitive = true
27
28     output client_key
```

Terminal Local + ▾

```
azurerm_kubernetes_cluster.k8s: Still creating... [4m0s elapsed]
azurerm_kubernetes_cluster.k8s: Creation complete after 4m5s [id=/subscriptions/9e3c713b-0d42-41e5-81ca-d778fd001da7/resourceGroups/rg-eternal-sculpin/providers/Microsoft...
```

```
Apply complete! Resources: 8 added, 0 changed, 0 destroyed.
```

Outputs:

```
client_certificate = <sensitive>
client_key = <sensitive>
cluster_ca_certificate = <sensitive>
cluster_password = <sensitive>
cluster_username = <sensitive>
host = <sensitive>
key_data = "ssh-rsa AAAAB3NzaC1yc2EAAAQABAAQgQDHpM4rWbHBr4g4CbCsBi2U0dtS7iUXwHbHPSY6aKxaE2gCL+wOhKJVCQnlM1Nohl69W3zA0lN/vJViyCZhB262Car0hsT++byH5K0WFjhC4gAgxgrsa3HCZyhnQAuw4SmxyDjPrtMjh6CPilHpjshxcUg/FhbsAIvKvqz4e3S1Whh8mRfHCh9uu8bnqHC+C5K09DnZwyIAHYAG7S6TDx0TqlExa+XJGoNK+JSHUj4Ih+VtmigvZFZvLWLnp78nL77CmjG9S6q5J0vs61MdtxFFg2LS9uzDZV8o20gIEbsTz0KV36wnM6MeA2pkGR7xD9Nx0qDx1/bXNS9uQkxfB804wcyoh5dvhQhSxR3MDRIP02x0kA1QXcBHWRWZVBat1wgiwmLUW9qu0= generated-by-azure"
kube_config = <sensitive>
kubernetes_cluster_name = "cluster-relaxing-ant"
resource_group_name = "rg-eternal-sculpin"
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> ▾
```

← → C portal.azure.com/#home

Articulos APIs aws BBDD Empleo Forecasting GITHUB Learning My Web NOISE PROJECT MASTER OPENAI Python

Microsoft Azure X

All Services (14) Resources (1) More (4)

Azure services

Create a resource

Storage accounts

Services

- Kubernetes services
- Kubernetes fleet manager
- Kubernetes - Azure Arc
- Kubernetes Clusters (Operator Nexus)

Resources

- kubernetes Load balancer

Marketplace

- Azure Kubernetes Service (AKS)
- Container Instances

factories Firewalls Resource groups

More services

Recent Favorite

Name

Last Viewed

Continue searching in Microsoft Entra ID

Searching all subscriptions.

Give feedback

JoseRafael.Vera@tajama...
TAJAMAR (TAJAMAR365.COM)

Microsoft Azure

Search resources, services, and docs (G+/)

JoseRafael.Vera@tajama...
TAJAMAR (TAJAMAR365.COM)

Home >

Kubernetes services

Tajamar (tajamar365.com)

Create Manage view Refresh Export to CSV Open query Assign tags

Filter for any field... Subscription equals all Type equals all Resource group equals all Location equals all Add filter

Showing 1 to 1 of 1 records.

Name ↑↓	Type ↑↓	Resource group ↑↓	Kuberne... ↑↓	Location ↑↓	Subscription ↑↓
<input type="checkbox"/> cluster-relaxing-ant	Kubernetes service	rg-eternal-sculpin	1.28.5	East US	Azure for Students

Microsoft Azure

Search resources, services, and docs (G+)

JoseRafael.Vera@tajama...
TAJAMAR (TAJAMAR365.COM)

Home > Kubernetes services >

Kubernetes services

Tajamar (tajamar365.com)

+ Create ▾ Manage view ▾ ...

Filter for any field...

Name ↑

cluster-relaxing-ant ...

cluster-relaxing-ant Kubernetes service

Search

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Microsoft Defender for Cloud

Kubernetes resources Namespaces Workloads Services and ingresses Storage Configuration Custom resources Events Run command

Settings Node pools Cluster configuration Networking Extensions + applications

cluster-relaxing-ant

Cluster name: cluster-relaxing-ant

Resource group: rg-eternal-sculpin

Status: Succeeded (Running)

Subscription: Azure for Students

Location: East US

Subscription ID: 9e3c713b-0d42-41e5-81ca-d778fd001da7

Kubernetes version: 1.28.5

API server address: dns-kind-mantis-k1kbejnc.hcp.eastus.azmk8s.io

Network type (plugin): kubenet

Node pools: 1 node pool

Tags (edit): Add tags

Get started Properties Monitoring Capabilities (5) Recommendations (0) Tutorials

Kubernetes services

Encryption type: Encryption at-rest with a platform-managed key

Virtual node pools: Not enabled

Node pools

Node pools: 1 node pool

Kubernetes versions: 1.28.5

Node sizes: Standard_D2_v2

Configuration

Kubernetes version: 1.28.5

Auto Upgrade Type: Disabled

Automatic upgrade scheduler: -

Networking

API server address: dns-kind-mantis-k1kbejnc.hcp.eastus.azmk8s.io

Network type (plugin): kubenet

Pod CIDR: 10.244.0.0/16

Service CIDR: 10.0.0.0/16

DNS service IP: 10.0.0.10

Docker bridge CIDR: -

Network Policy: None

Load balancer: standard

HTTP application routing: Not enabled

Private cluster: Not enabled

Authorized IP ranges: Not enabled

Application Gateway ingress controller: Not enabled

Microsoft Azure

Search resources, services, and docs (G+)

JoseRafael.Vera@tajama...
TAJAMAR (TAJAMAR365.COM)

Home > Kubernetes services >

Kubernetes services

Tajamar (tajamar365.com)

+ Create Manage view ...

Filter for any field...

Name ↑

cluster-relaxing-ant ...

cluster-relaxing-ant

Kubernetes service

Search

+ Create Connect Start Stop Delete Refresh Open in mobile Give feedback

Overview

Essentials

Resource group : rg-eternal-sculpin Kubernetes version

Status : Succeeded (Running) API server address

Subscription : Azure for Students Network type (

Location : East US Node pools

Subscription ID : 9e3c713b-0d42-41e5-81ca-d778fd001da7

Tags (edit) : Add tags

Get started Properties Monitoring Capabilities (5) Recommendations (0) Tutorials

Kubernetes services

Encryption type : Encryption at-rest with a platform-managed key

Virtual node pools : Not enabled

Node pools

Node pools : 1 node pool

Kubernetes versions : 1.28.5

Node sizes : Standard_D2_v2

Configuration

Kubernetes version : 1.28.5

Cloud shell Azure CLI Run command

Connect to cluster-relaxing-ant

Cloud shell Azure CLI Run command

Connect to your cluster using command line tooling to interact directly with cluster using kubectl, the command line tool for Kubernetes. Kubectl is available within the Azure Cloud Shell by default and can also be installed locally.

Set cluster context

- 1 Open Cloud Shell
- 2 Run the following commands

Set the cluster subscription

```
az account set --subscription 9e3c713b-0d42-41e5-81ca-d778fd001da7
```

Download cluster credentials

```
az aks get-credentials --resource-group rg-eternal-sculpin --name cluster-relaxing-ant
```

Sample commands

Once you have run the command above to connect to the cluster, you can run any kubectl commands. Here are a few examples of useful commands you can try.

List all deployments in all namespaces

```
kubectl get deployments --all-namespaces=true
```

List all deployments in a specific namespace

```
kubectl get deployments --namespace=your-namespace
```



Connect to cluster-relaxing-ant

Cloud shell Azure CLI Run command

Connect to your cluster using command line tooling to interact directly with cluster using kubectl, the command line tool for Kubernetes. Kubectl is available within the Azure Cloud Shell by default and can also be installed locally.

Set cluster context

- 1 [Open Cloud Shell](#)
- 2 Run the following commands

[Set the cluster subscription](#)

[Copy to clipboard](#)

```
az account set --subscription 9e3c713b-0d42-41e5-81ca-d778fd001da7
```



☰ TM Terraform_AKS_FastAPI_Microservices master

Project ▾

- ▷ Terraform_AKS_FastAPI_Microservi
 - > books
 - > clients
 - > gateway
- ▷ Terraform_Scripts_AKS
 - > .terraform
 - > k8s
 - ≡ .terraform.lock.hcl
- ▷ main.tf
- ?] main.tfplan
- ?] outputs.tf
- ?] provider.tf
- ?] ssh.tf
- ≡ terraform.tfstate
- ?] variables.tf

> venv library root

∅ .gitignore

> External Libraries

provider.tf ssh.tf main.tf variables.tf outputs.tf

```
8
9     output "client_certificate" {
10        value      = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
11        sensitive = true
12    }
13
14    output "client_key" {
15        value      = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
16        sensitive = true
17    }
18
19    output "cluster_ca_certificate" {
20        value      = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
21        sensitive = true
22    }
23
24    output "cluster_password" {
25        value      = azurerm_kubernetes_cluster.k8s.kube_config[0].password
26        sensitive = true
27    }
28
29    output client_key
```

Terminal Local × Local (2) × +

Windows PowerShell

Copyright (C) Microsoft Corporation. Todos los derechos reservados.

Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSWindows>

(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> az account set --subscription 9e3c713b-0d42-41e5-81ca-d778fd001da7



Connect to cluster-relaxing-ant

Cloud shell Azure CLI Run command

Connect to your cluster using command line tooling to interact directly with cluster using kubectl, the command line tool for Kubernetes. Kubectl is available within the Azure Cloud Shell by default and can also be installed locally.

Set cluster context

- 1 [Open Cloud Shell](#)
- 2 Run the following commands

Set the cluster subscription

```
az account set --subscription 9e3c713b-0d42-41e5-81ca-d778fd001da7
```



[Copy to clipboard](#)

[Download cluster credentials](#)

```
az aks get-credentials --resource-group rg-eternal-sculpin --name cluster-relaxi...
```



Terraform_AKS_FastAPI_Microservices master

Project provider.tf ssh.tf main.tf variables.tf outputs.tf

8 output "client_certificate" {
9 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_certificate
10 sensitive = true
11 }
12
13 output "client_key" {
14 value = azurerm_kubernetes_cluster.k8s.kube_config[0].client_key
15 sensitive = true
16 }
17 }
18
19 output "cluster_ca_certificate" {
20 value = azurerm_kubernetes_cluster.k8s.kube_config[0].cluster_ca_certificate
21 sensitive = true
22 }
23
24 output "cluster_password" {
25 value = azurerm_kubernetes_cluster.k8s.kube_config[0].password
26 sensitive = true
27 }
28
29 output client_key

main.tf main.tfplan outputs.tf provider.tf ssh.tf .terraform.lock.hcl .terraform.lock.hcl .tfstate .tfstate venv library root .gitignore External libraries

Terminal Local Local (2)

Windows PowerShell
Copyright (C) Microsoft Corporation. Todos los derechos reservados.

Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSWindows>

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> az account set --subscription 9e3c713b-0d42-41e5-81ca-d778fd001da7
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> az aks get-credentials --resource-group rg-eternal-sculpin --name cluster-relaxing-ant --overwrite-existing
Merged "cluster-relaxing-ant" as current context in C:\Users\jrver\.kube\config
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> 
```

Project provider.tf ssh.tf main.tf variables.tf outputs.tf

provider.tf

ssh.tf

main.tf

variables.tf

outputs.tf

Terraform_AKS_FastAPI_Microservices

books

clients

gateway

Terraform_Scripts_AKS

.terraform

k8s

.terraform.lock.hcl

main.tf

main.tfplan

outputs.tf

provider.tf

ssh.tf

terraform.tfstate

variables.tf

venv library root

.gitignore

External libraries

Terminal Local Local (2) +

Windows PowerShell

Copyright (C) Microsoft Corporation. Todos los derechos reservados.

Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSWindows>

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> az account set --subscription 9e3c7d6f-4a3b-4a8a-8a3d-0a3a2a3a3a3a
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> az aks get-credentials --resource-group cluster-relaxing-ant
Merged "cluster-relaxing-ant" as current context in C:\Users\jrver\.kube\config
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> kubectl get
You must specify the type of resource to get. Use "kubectl api-resources" for a complete list of supported resources.

error: Required resource not specified.
Use "kubectl explain <resource>" for a detailed description of that resource (e.g. kubectl explain pods).
See 'kubectl get -h' for help and examples
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> kubectl get nodes
NAME                  STATUS   ROLES   AGE     VERSION
aks-agentpool-41747915-vmss000000   Ready    agent   12m    v1.28.5
aks-agentpool-41747915-vmss000001   Ready    agent   12m    v1.28.5
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices>
```

Project ▾

main.yml books-data-pvc.yml books-deployment.yml × clients-data-pvc.yml clients...

books

app data src Dockerfile

clients

app data src main.py requirements.txt

Document 1/1 > spec:

```
7   app: books-example
8   service: books-api
9
10  spec:
11    replicas: 1
12    selector:
13      matchLabels:
14        app: books-example
15        service: books-api
16    template:
17      metadata:
18        labels:
```

Terminal Local × Local (2) × +

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd .\books\
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books> docker login
Authenticating with existing credentials...
Login Succeeded
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books> docker build . -t jrvm/books-books-api:1.0.0
[+] Building 0.1s (1/1) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 2B
ERROR: failed to solve: failed to read dockerfile: open Dockerfile: no such file or directory

View build details: docker-desktop://dashboard/build/default/default/em4sbfgj4jqiqaaddt235vgt37
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books> cd app
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app> docker build . -t jrvm/books-books-api:1.0.0
[+] Building 33.4s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 182B
=> [internal] load metadata for docker.io/library/python:3.11
=> [auth] library/python:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/4] FROM docker.io/library/python:3.11@sha256:db07fba48daaf1c68c03676aadc73866414d25b4c278029f9873c784517613bf
=> => resolve docker.io/library/python:3.11@sha256:db07fba48daaf1c68c03676aadc73866414d25b4c278029f9873c784517613bf
=> => sha256:609c73876867487da051ad470002217da69bb052e2538710ade0730d893ff51f 49.56MB / 49.56MB
=> => sha256:7247ea8d81e671d079d67f3a9909315ef4641b45db90d62a1b18e3430c1937d4 24.05MB / 24.05MB
=> => sha256:be374d06f38273b62ddd7aa5bc3ce3f9c781fd49a1f5a5dd94a46d2986920d7a 64.14MB / 64.14MB
=> => sha256:db07fba48daaf1c68c03676aadc73866414d25b4c278029f9873c784517613bf 2.14kB / 2.14kB
=> => sha256:21d1a3d86b1656a745a9ccffd3a0797a694c9d48450e65734127183506a38e8c 2.01kB / 2.01kB
```

```
Terminal Local × Local (2) × + ▾  
=> => naming to docker.io/jrvm/books-books-api:1.0.0  
  
View build details: docker-desktop://dashboard/build/default/default/si06ijzj2b5rsnvq5vauz1xcr  
  
What's Next?  
  View a summary of image vulnerabilities and recommendations → docker scout quickview  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app> docker push jrvm/books-books-api:1.0.0  
The push refers to repository [docker.io/jrvm/books-books-api]  
343242f8e5cc: Pushed  
ebe44a5873b2: Pushed  
cdf91d0357b0: Pushed  
5b27be74430a: Mounted from library/python  
908767f880ef: Mounted from library/python  
0daee1324246: Mounted from library/python  
86388e04a96b: Mounted from library/python  
893507f6057f: Mounted from library/python  
2353f7120e0e: Mounted from library/python  
51a9318e6edf: Mounted from library/python  
c5bb35826823: Mounted from library/python  
1.0.0: digest: sha256:9c2df24c8e186547ea55ead689a59e7f4512b8bac7f5a25d3c7a80eea2b33e46 size: 2633  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app>
```



jrvm/books-books-api

Updated 2 minutes ago

books microservice

API MANAGEMENT

Docker commands

To push a new tag to this repository:

[Public View](#)

```
docker push jrvm/books-books-api:tagname
```

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
1.0.0		Image	--	2 minutes ago

[See all](#)

Automated Builds

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions. [Read more about automated builds](#).

[Upgrade](#)

Repository overview INCOMPLETE

An overview describes what your image does and how to run it. It displays in [the public view of your repository](#) once you have pushed some content.

[Add overview](#)

Project ▾

- > src
- Dockerfile
- clients
- < app
- > data
- < src
- main.py
- requirements.txt
- Dockerfile
- < gateway
- < app
- > conf.d
- < src
- main.py

main.yml books-data-pvc.yml books-deployment.yml clients-data-pvc.yml clients-deployment

```
13     matchLabels:  
14         app: books-example  
15         service: clients-api  
16     template:  
17         metadata:  
18             labels:  
19                 app: books-example  
20                 service: clients-api  
21         spec:  
22             containers:  
23                 - name: api  
24                     env:  
25                         - name: DATA_FILE  
26                             value: /data/clients.csv
```

Document 1/1 > spec: > selector:

Terminal Local × Local (2) × + ▾

```
c5bb35826823: Mounted from library/python  
1.0.0: digest: sha256:9c2df24c8e186547ea55ead689a59e7f4512b8bac7f5a25d3c7a80eea2b33e46 size: 2633  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app> cd ..  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books> cd ..  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd clients  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients> cd app  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients\app> docker build . -t jrvm/books-clients-api:1.0.0  
[+] Building 6.9s (10/10) FINISHED  
=> [internal] load build definition from Dockerfile  
=> => transferring dockerfile: 182B  
=> [internal] load metadata for docker.io/library/python:3.11  
=> [auth] library/python:pull token for registry-1.docker.io  
=> [internal] load .dockerignore  
=> => transferring context: 2B  
=> [1/4] FROM docker.io/library/python:3.11@sha256:db07fba48daaf1c68c03676aadc73866414d25b4c278029f9873c784517613bf  
=> [internal] load build context  
=> => transferring context: 5.42kB  
=> CACHED [2/4] WORKDIR /app  
=> [3/4] COPY src /app/  
=> [4/4] RUN pip install -r requirements.txt  
=> exporting to image  
=> => exporting layers  
=> => writing image sha256:2ebbe4d15b7c1326301c2a13e256941e1565a774b838e43ae10affc7adcd87a  
=> => naming to docker.io/jrvm/books-clients-api:1.0.0
```

What's Next?

```
View a summary of image vulnerabilities and recommendations → docker scout quickview
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients\app> docker push jrvm/books-clients-api:1.0.0
The push refers to repository [docker.io/jrvm/books-clients-api]
ccf2aa2f34d6: Pushed
e1b2856ffe8d: Pushed
cdf91d0357b0: Mounted from jrvm/books-books-api
5b27be74430a: Mounted from jrvm/books-books-api
908767f880ef: Mounted from jrvm/books-books-api
0daee1324246: Mounted from jrvm/books-books-api
86388e04a96b: Mounted from jrvm/books-books-api
893507f6057f: Mounted from jrvm/books-books-api
2353f7120e0e: Mounted from jrvm/books-books-api
51a9318e6edf: Mounted from jrvm/books-books-api
c5bb35826823: Mounted from jrvm/books-books-api
1.0.0: digest: sha256:7350fab1c822e2498eedf87cdd238ad01000e074bfb7d101a67a6901e116c509 size: 2633
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients\app>
```



jrvm/books-clients-api

Updated 1 minute ago

clients microservice

API MANAGEMENT

Docker commands

To push a new tag to this repository:

[Public View](#)

```
docker push jrvm/books-clients-api:tagname
```

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
1.0.0		Image	--	a minute ago

[See all](#)

Automated Builds

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions. [Read more about automated builds](#).

[Upgrade](#)

Repository overview INCOMPLETE

An overview describes what your image does and how to run it. It displays in [the public view of your repository](#) once you have pushed some content.

[Add overview](#)

Terraform_AKS_FastAPI_Microservices master

Project	main.yml	books-data-pvc.yml	books-deployment.yml	clients-data-pvc.yml	clients-deployment.yml
app	apiVersion: apps/v1 kind: Deployment metadata:				
conf.d					
src					
main.py					

Document 1/1 > spec: > template: > metadata: > labels: > app: > books

Terminal Local Local (2) +

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app> docker build . -t jrvm/books-gateway-api:1.0.0
2024/04/17 15:18:38 http2: server: error reading preface from client //./pipe/docker_engine: file has already been closed
[+] Building 7.4s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 182B
=> [internal] load metadata for docker.io/library/python:3.11
=> [auth] library/python:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/4] FROM docker.io/library/python:3.11@sha256:db07fba48daaf1c68c03676aadc73866414d25b4c278029f9873c784517613bf
=> [internal] load build context
=> => transferring context: 10.92kB
=> CACHED [2/4] WORKDIR /app
=> [3/4] COPY src /app/
=> [4/4] RUN pip install -r requirements.txt
=> exporting to image
=> => exporting layers
=> => writing image sha256:52dd44ce38f585708a194d15e8d3ffa9b1926af000e45a7763546807b7888d73
=> => naming to docker.io/jrvm/books-gateway-api:1.0.0
```

View build details: docker-desktop://dashboard/build/default/default/sgxsl5vpky8ph2042w8o5y9fh

What's Next?

View a summary of image vulnerabilities and recommendations → [docker scout quickview](#)

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app> docker push jrvm/books-gateway-api:1.0.0
```

The push refers to repository [docker.io/jrvm/books-gateway-api]

aa8e7d600dd8: Pushed

1907f4db983f: Pushed

cdf91d0357b0: Mounted from jrvm/books-clients-api

5b27be74430a: Mounted from jrvm/books-clients-api

908767f880ef: Mounted from jrvm/books-clients-api

0daee1324246: Mounted from jrvm/books-clients-api

86388e04a96b: Mounted from jrvm/books-clients-api

893507f6057f: Mounted from jrvm/books-clients-api

2353f7120e0e: Mounted from jrvm/books-clients-api



jrvm/books-gateway-api

Updated 5 minutes ago

apigateway

API MANAGEMENT

Docker commands

To push a new tag to this repository:

[Public View](#)

```
docker push jrvm/books-gateway-api:tagname
```

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
1.0.0		Image	--	6 minutes ago

[See all](#)

Automated Builds

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions. [Read more about automated builds](#) .

[Upgrade](#)

Repository overview

An overview describes what your image does and how to run it. It displays in [the public view of your repository](#) once you have pushed some content.

[Add overview](#)

```
Windows PowerShell
```

```
Copyright (C) Microsoft Corporation. Todos los derechos reservados.
```

```
Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. https://aka.ms/PSWindows
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd .\Terraform_Scripts_AKS\k8s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl create -f books-deployment.yml
deployment.apps/books-api created
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get deployment
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
books-api  0/2     2           0           15s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s>
```

Terraform_AKS_FastAPI_Microservices master

books-data-pvc.yml ssh.tf books-deployment.yml provider.tf out clients-deployment.yml

Terminal Local (2) Local (3) +

```
books-api-689c477fc5-n8khv  0/1    Pending   0      2m
books-api-689c477fc5-tpkwm  0/1    Pending   0      2m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl create -f books-data-pvc.yml
persistentvolumeclaim/books-data created
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get deployment
NAME      READY  UP-TO-DATE  AVAILABLE  AGE
books-api  0/2    2           0          3m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME      READY  STATUS    RESTARTS  AGE
books-api-689c477fc5-n8khv  0/1    Pending   0      3m17s
books-api-689c477fc5-tpkwm  0/1    Pending   0      3m17s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl logs books-api-689c477fc5-tpkwm
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl logs books-api-689c477fc5-n8khv
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME      READY  STATUS    RESTARTS  AGE
books-api-689c477fc5-n8khv  0/1    Pending   0      6m4s
books-api-689c477fc5-tpkwm  0/1    Pending   0      6m4s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl apply -f books-deployment.yml
Warning: resource deployments/books-api is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by kubectl apply. kubectl apply should either kubectl create --save-config or kubectl apply. The missing annotation will be patched automatically.
deployment.apps/books-api configured
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME      READY  STATUS    RESTARTS  AGE
books-api-689c477fc5-n8khv  0/1    Pending   0      6m26s
books-api-689c477fc5-tpkwm  0/1    Pending   0      6m26s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl create -f books-deployment.yml
Error from server (AlreadyExists): error when creating "books-deployment.yml": deployments.apps "books-api" already exists
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl delete deployment books-deployment.yml
Error from server (NotFound): deployments.apps "books-deployment.yml" not found
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl delete pod books-api-689c477fc5-n8khv
pod "books-api-689c477fc5-n8khv" deleted
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl delete pod books-api-689c477fc5-tpkwm
pod "books-api-689c477fc5-tpkwm" deleted
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME      READY  STATUS    RESTARTS  AGE
books-api-689c477fc5-9fzs5  0/1    Pending   0      7s
books-api-689c477fc5-bqnf9  0/1    Pending   0      26s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl top nodes
```

TM Terraform_AKS_FastAPI_Microservices master

Project books-data-pvc.yml ssh.tf books-deployment.yml provider.tf out clients-deployment.yml

Terminal Local Local (2) Local (3) +

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl top nodes
NAME           CPU(cores)   CPU%   MEMORY(bytes)  MEMORY%
aks-agentpool-41747915-vmss000000  172m      9%    1173Mi        25%
aks-agentpool-41747915-vmss000001  171m      9%    1180Mi        25%
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl describe pod books-api-689c477fc5-bqnf9
Name:           books-api-689c477fc5-bqnf9
Namespace:      default
Priority:       0
Service Account: default
Node:           <none>
Labels:          app=books
                  pod-template-hash=689c477fc5
                  service=books-api
Annotations:    <none>
Status:         Pending
IP:
IPs:
Controlled By: ReplicaSet/books-api-689c477fc5
Containers:
  api:
    Image:      jrvm/books-books-api:1.0.0
    Port:       8000/TCP
    Host Port:  0/TCP
    Environment:
      DATA_FILE: /data/books.csv
    Mounts:
      /data from data (rw)
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-nst98 (ro)
Volumes:
  data:
    Type:     PersistentVolumeClaim (a reference to a PersistentVolumeClaim in the same namespace)
    ClaimName: books-data
    ReadOnly:  false
  kube-api-access-nst98:
    Type:             Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName:     kube-root-ca.crt
    ConfigMapOptional: <nil>
```

Terraform_AKS_FastAPI_Microservices master Cur

Project books-data-pvc.yml ssh.tf books-deployment.yml provider.tf out clients-deployment.yml

Terminal Local (2) Local (3)

```
Events: <none>
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get pvc
NAME      STATUS    VOLUME   CAPACITY   ACCESS MODES   STORAGECLASS   AGE
books-data  Pending          default       17m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl describe pvc books-data
Name:           books-data
Namespace:      default
StorageClass:   default
Status:         Pending
Volume:
Labels:         <none>
Annotations:   volume.beta.kubernetes.io/storage-provisioner: disk.csi.azure.com
                volume.kubernetes.io/selected-node: aks-agentpool-41747915-vmss000000
                volume.kubernetes.io/storage-provisioner: disk.csi.azure.com
Finalizers:    [kubernetes.io/pvc-protection]
Capacity:
Access Modes:
VolumeMode:    Filesystem
Used By:       books-api-689c477fc5-9fzs5
                books-api-689c477fc5-bqnf9
Events:
  Type    Reason     Age           From                  Message
  ----  -----     --  -----      -----
  Normal  WaitForPodScheduled  17m  persistentvolume-controller
  waiting for pods to be scheduled
  Normal  ExternalProvisioning  2m19s (x6 over 17m)  persistentvolume-controller
  Waiting for a volume to be provisioned by 'disk.csi.azure.com' or manually by the system administrator. If volume creation is delayed, please verify that the provisioner is running and correctly registered.
  Normal  Provisioning      2m7s (x12 over 17m)  disk.csi.azure.com_csi-azuredisk-controller-777dd5dc77-km2c4_c69eaaec-100d-45d1-87bf-a200025e3373  External provisioner is provisioning volume
  Warning ProvisioningFailed  2m7s (x12 over 17m)  disk.csi.azure.com_csi-azuredisk-controller-777dd5dc77-km2c4_c69eaaec-100d-45d1-87bf-a200025e3373  failed to provision volume
  InvalidArgument desc = mountVolume is not supported for access mode: MULTI_NODE_MULTI_WRITER
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get storageclass
NAME      PROVISIONER      RECLAIMPOLICY  VOLUMEBINDINGMODE   ALLOWVOLUMEEXPANSION   AGE
azurefile  file.csi.azure.com  Delete        Immediate        true            144m
azurefile-csi  file.csi.azure.com  Delete        Immediate        true            144m
azurefile-csi-premium  file.csi.azure.com  Delete        Immediate        true            144m
azurefile-premium  file.csi.azure.com  Delete        Immediate        true            144m
default (default)  disk.csi.azure.com  Delete        WaitForFirstConsumer  true            144m
managed      disk.csi.azure.com  Delete        WaitForFirstConsumer  true            144m
```

TM Terraform_AKS_FastAPI_Microservices master

Current File ▾ ▶ ⚙️ 🔍 ⚙️

Project ▾

Terraform_AKS_FastAPI_Microservices C:\Users\... Document 1/1 > spec: > template: > spec: > volumes: Item 1/1 > persistentVolumeClaim:

books-data-pvc.yml ssh.tf books-deployment.yml provider.tf out clients-deployment.yml

Terminal Local × Local (2) × Local (3) × +

```
managed-premium      disk.csi.azure.com  Delete      WaitForFirstConsumer  true          144m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl apply -f books-data-pvc.yml
Warning: resource persistentvolumeclaims/books-data is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by kubectl apply. kubectl apply should only be used on resources created declaratively by either kubectl create --save-config or kubectl apply. The missing annotation will be patched automatically.
The PersistentVolumeClaim "books-data" is invalid: spec: Forbidden: spec is immutable after creation except resources.requests for bound claims
  core.PersistentVolumeClaimSpec{
    ... // 2 identical fields
    Resources:      {Requests: {s:"storage": {i: {...}, s: "2Gi", Format: "BinarySI"}}, ...
  VolumeName:      "",
  StorageClassName: &"default",
+ StorageClassName: &"azurefile",
  VolumeMode:      &"Filesystem",
  DataSource:      nil,
  DataSourceRef:   nil,
}
}

(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME        READY   STATUS    RESTARTS   AGE
books-api-689c477fc5-9fzs5  0/1     Pending   0          14m
books-api-689c477fc5-bqnf9  0/1     Pending   0          15m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl delete pvc books-data
persistentvolumeclaim "books-data" deleted
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl apply -f books-data-pvc.yml
persistentvolumeclaim/books-data created
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get pvc books-data
NAME      STATUS   VOLUME   CAPACITY   ACCESS MODES   STORAGECLASS   AGE
books-data  Pending           azurefile       8s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME        READY   STATUS             RESTARTS   AGE
books-api-689c477fc5-9fzs5  0/1     ContainerCreating   0          16m
books-api-689c477fc5-bqnf9  0/1     ContainerCreating   0          16m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME        READY   STATUS    RESTARTS   AGE
books-api-689c477fc5-9fzs5  1/1     Running   0          19m
books-api-689c477fc5-bqnf9  1/1     Running   0          20m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s>
```

Project $\oplus \diamond \times \vdots -$ books-data-pvc.yml $\text{SSH} \text{ tf}$ books-deployment.yml provider.tf out $\vdash 1 \wedge \vee$

books-data-pvc.yml

```
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: books-data
spec:
  accessModes:
    - ReadWriteMany
  storageClassName: azurefile # StorageClass that allows ReadWriteMany
  resources:
    requests:
      storage: 2Gi
```

Terraform_AKS_FastAPLMicroservices C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS

- books
- clients
- gateway
- Terraform_Scripts_AKS
 - .terraform
 - k8s
 - gateway-conf
 - main.yml
 - books-data-pvc.yml
 - books-deployment.yml
 - clients-data-pvc.yml
 - clients-deployment.yml
 - gateway-deployment.yml
 - .terraform.lock.hcl
 - main.tf
 - main.tfplan
 - outputs.tf
 - provider.tf
 - ssh.tf
 - terraform.tfstate

Terminal Local \times Local (2) \times Local (3) \times

```
Normal ExternalProvisioning 2m19s (x63 over 17m) persistentvolume-controller
k.csi.azure.com' or manually by the system administrator. If volume creation is delayed, please verify that the provisioner is running an
Normal Provisioning 2m7s (x12 over 17m) disk.csi.azure.com_csi-azuredisk-controller-777dd5dc77-km2c4_c69eaaec-100d-45d1-87
Warning ProvisioningFailed 2m7s (x12 over 17m) disk.csi.azure.com_csi-azuredisk-controller-777dd5dc77-km2c4_c69eaaec-100d-45d1-87
InvalidArgument desc = mountVolume is not supported for access mode: MULTI_NODE_MULTI_WRITER
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get storageclass
NAME          PROVISIONER      RECLAIMPOLICY  VOLUMEBINDINGMODE   ALLOWVOLUMEEXPANSION  AGE
azurefile     file.csi.azure.com  Delete        Immediate        true            144m
azurefile-csi file.csi.azure.com  Delete        Immediate        true            144m
azurefile-csi-premium file.csi.azure.com  Delete        Immediate        true            144m
azurefile-premium file.csi.azure.com  Delete        Immediate        true            144m
default (default) disk.csi.azure.com  Delete        WaitForFirstConsumer  true            144m
managed       disk.csi.azure.com  Delete        WaitForFirstConsumer  true            144m
managed-csi   disk.csi.azure.com  Delete        WaitForFirstConsumer  true            144m
managed-csi-premium disk.csi.azure.com  Delete        WaitForFirstConsumer  true            144m
managed-premium disk.csi.azure.com  Delete        WaitForFirstConsumer  true            144m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl apply -f books-data-pvc.yml
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get pvc books-data
NAME      STATUS    VOLUME          CAPACITY   ACCESS MODES  STORAGECLASS   AGE
books-data  Pending           azuredisk   2Gi        RWX          azurefile     8s

(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME                READY   STATUS            RESTARTS   AGE
books-api-689c477fc5-9fzs5  0/1    ContainerCreating   0          16m
books-api-689c477fc5-bqnf9  0/1    ContainerCreating   0          16m

(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME                READY   STATUS            RESTARTS   AGE
books-api-689c477fc5-9fzs5  1/1    Running   0          19m
books-api-689c477fc5-bqnf9  1/1    Running   0          20m

(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get pvc
NAME      STATUS    VOLUME          CAPACITY   ACCESS MODES  STORAGECLASS   AGE
books-data  Bound    pvc-e8ff0412-6cee-44ad-bb08-70a5f3524a28  2Gi        RWX          azurefile     12m

(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> █
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME          READY   STATUS    RESTARTS   AGE
books-api-689c477fc5-9fzs5   1/1     Running   0          19m
books-api-689c477fc5-bqnf9   1/1     Running   0          20m
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get pvc
NAME      STATUS  VOLUME                                     CAPACITY  ACCESS MODES  STORAGECLASS  AGE
books-data  Bound   pvc-e8ff0412-6cee-44ad-bb08-70a5f3524a28  2Gi       RWX           azurefile     12m
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl exec -it books-api-689c477fc5-bqnf9 -- /bin/bash
root@books-api-689c477fc5-bqnf9:/app# df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
overlay	124G	24G	101G	20%	/
tmpfs	64M	0	64M	0%	/dev
//fad23d0744854d82904638.file.core.windows.net/pvc-e8ff0412-6cee-44ad-bb08-70a5f3524a28	2.0G	0	2.0G	0%	/data
/dev/root	124G	24G	101G	20%	/etc/hosts
shm	64M	0	64M	0%	/dev/shm
tmpfs	4.5G	12K	4.5G	1%	/run/secrets/kubernetes.io/serviceaccount
tmpfs	3.4G	0	3.4G	0%	/proc/acpi
tmpfs	3.4G	0	3.4G	0%	/proc/scsi
tmpfs	3.4G	0	3.4G	0%	/sys/firmware

```
root@books-api-689c477fc5-bqnf9:/app# ls /data/
```

```
root@books-api-689c477fc5-bqnf9:/app# exit
```

```
exit
```

Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSWindows>

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd .\books\  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books> cd .\app\data  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl cp C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data\books.csv books-api-689c477fc5-bqnf9:/data/  
error: one of src or dest must be a local file specification  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl cp books.csv books-api-689c477fc5-bqnf9:/data/  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl exec -it books-api-689c477fc5-bqnf9 -- /bin/bash  
root@books-api-689c477fc5-bqnf9:/app# df -h  
Filesystem                                Size  Used Avail Use% Mounted on  
overlay                                     124G  24G  101G  20% /  
tmpfs                                       64M    0   64M   0% /dev  
//fad232d0744854d82904638.file.core.windows.net/pvc-e8ff0412-6cee-44ad-bb08-70a5f3524a28  2.06  64K  2.06  1% /data  
/dev/root                                    124G  24G  101G  20% /etc/hosts  
shm                                         64M    0   64M   0% /dev/shm  
tmpfs                                       4.56  12K  4.56  1% /run/secrets/kubernetes.io/serviceaccount  
tmpfs                                       3.46    0   3.46  0% /proc/acpi  
tmpfs                                       3.46    0   3.46  0% /proc/scsi  
tmpfs                                       3.46    0   3.46  0% /sys/firmware  
root@books-api-689c477fc5-bqnf9:/app# ls /data  
books.csv  
root@books-api-689c477fc5-bqnf9:/app#
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books> cd .\app\data
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl cp C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data books-api-689c477fc5-bqnf9:/data/
error: one of src or dest must be a local file specification
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl cp books.csv books-api-689c477fc5-bqnf9:/data/
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl exec -it books-api-689c477fc5-bqnf9 -- /bin/bash
root@books-api-689c477fc5-bqnf9:/app# df -h
Filesystem                                Size  Used  Avail Use% Mounted on
overlay                                     124G  24G  101G  20% /
tmpfs                                       64M    0   64M   0% /dev
//fad232d0744854d82904638.file.core.windows.net/pvc-e8ff0412-6cee-44ad-bb08-70a5f3524a28  2.0G  64K  2.0G  1% /data
/dev/root                                    124G  24G  101G  20% /etc/hosts
shm                                         64M    0   64M   0% /dev/shm
tmpfs                                       4.5G  12K  4.5G  1% /run/secrets/kubernetes.io/serviceaccount
tmpfs                                       3.4G    0  3.4G   0% /proc/acpi
tmpfs                                       3.4G    0  3.4G   0% /proc/scsi
tmpfs                                       3.4G    0  3.4G   0% /sys/firmware
root@books-api-689c477fc5-bqnf9:/app# ls /data
books.csv
root@books-api-689c477fc5-bqnf9:/app# exit
exit
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl exec -it books-api-689c477fc5-bqnf9 -- /bin/bash
root@books-api-689c477fc5-bqnf9:/app# cat /data/books.csv
"id", "title", "author", "basic_discount", "premium_discount"
1, "Rayuela", "Julio Cortázar", 0.10, 0.15
2, "El Aleph", "Jorge Luis Borges", 0, 0.05
3, "Cien años de soledad", "Gabriel García Márquez", 0, 0
4, "Ulises", "James Joyce", 0.05, 0.10
5, "2666", "Roberto Bolaño", 0.10, 0.15
6, "Ensayo sobre la ceguera", "José Saramago", 0.20, 0.45
7, "El nombre del viento", "Patrick Rothfuss", 0.15, 0.20
8, "Fundación", "Isaac Asimov", 0.10, 0.15
9, "El poder del perro", "Don Winslow", 0.35, 0.40
```

```
jrvr@DESKTOP-AP1:~$ kubectl port-forward books-api-689c477fc5-bqnf9 8080:8000  
exit  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl port-forward books-api-689c477fc5-bqnf9 8080:8000  
Forwarding from 127.0.0.1:8080 -> 8000  
Forwarding from [::1]:8080 -> 8000
```

Books API 1.0.0 OAS 3.1

/openapi.json

books

GET /books Books

Get list of books.



Parameters

Try it out

No parameters

Responses

Code

Description

Links

200 Successful Response

No links

Media type

application/json

Controls Accept header.

Example Value | Schema

```
[  
  {  
    "id": 0,  
    "title": "string",  
    "author": "string",  
    "basic_discount": 0,  
    "premium_discount": 0  
  }  
]
```

GET /book/{book_id} Books



Schemas



Book > Expand all object

HTTPValidationError > Expand all object

Books API - Swagger UI

localhost:8080/docs#/books/books_books_get

Articulos APIs aws BBDD Empleo Forecasting GITHUB Learning My Web NOISE PROJECT MASTER OPENAI Python Snowflake Spark Projects TFM Utilities W...

books

GET /books Books

Get list of books.

Parameters

Cancel

No parameters

Execute

Clear

Responses

Curl

```
curl -X 'GET' \
'http://localhost:8080/books' \
-H 'accept: application/json'
```



Request URL

```
http://localhost:8080/books
```

Server response

Code

Details

200

Response body

```
[  
  {  
    "id": 1,  
    "title": "Rayuela",  
    "author": "Julio Cortázar",  
    "basic_discount": 0.1,  
    "premium_discount": 0.15  
  },  
  {  
    "id": 2,  
    "title": "El Aleph",  
    "author": "Jorge Luis Borges",  
    "basic_discount": 0,  
    "premium_discount": 0.05  
  },  
  {  
    "id": 3, "title": "Cien años de soledad",  
    "author": "Gabriel García Márquez",  
    "basic_discount": 0,  
    "premium_discount": 0  
  },  
  {  
    "id": 4,  
    "title": "Ulises",  
    "author": "James Joyce",  
    "basic_discount": 0.05,  
    "premium_discount": 0.1  
},  
]
```



Download

Response headers

```
content-length: 1045  
content-type: application/json  
date: Wed, 17 Apr 2024 14:51:21 GMT  
server: unicorn
```

BOOKS

GET /books Books

GET /book/{book_id} Books

Get book by id.

Parameters[Cancel](#)

Name Description

book_id * required
integer
(path)

2

[Execute](#)[Clear](#)Responses

Curl

```
curl -X 'GET' \
'http://localhost:8080/book/2' \
-H 'accept: application/json'
```



Request URL

```
http://localhost:8080/book/2
```

Server response

Code Details

200

Response body

```
{
  "id": 2,
  "title": "El Aleph",
  "author": "Jorge Luis Borges",
  "basic_discount": 0,
  "premium_discount": 0.05
}
```

[Download](#)

Response headers

```
content-length: 101
content-type: application/json
date: Wed,17 Apr 2024 14:52:27 GMT
server: uvicorn
```

Responses

Code Description

[Links](#)

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl port-forward books-api-689c477fc5-bqnf9 8080:8000
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl port-forward books-api-689c477fc5-bqnf9 8080:8000
Forwarding from 127.0.0.1:8080 -> 8000
Forwarding from [::1]:8080 -> 8000
Handling connection for 8080
Handling connection for 8080
Handling connection for 8080
Handling connection for 8080
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl get deploy
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
books-api  2/2     2           2           79m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl expose deploy books-api --port 8000
service/books-api exposed
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data> kubectl get svc
NAME      TYPE      CLUSTER-IP    EXTERNAL-IP   PORT(S)   AGE
books-api  ClusterIP  10.0.137.65 <none>        8000/TCP  14s
kubernetes  ClusterIP  10.0.0.1    <none>        443/TCP   3h28m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books\app\data>
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\books> cd ..
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd ./Terraform_Scripts_AKS\k8s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl create -f clients-data-pvc.yml
persistentvolumeclaim/clients-data created
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl create -f clients-deployment.yml
deployment.apps/clients-api created
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get deployment
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
books-api  2/2     2           2           99m
clients-api 2/2     2           2           71s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get po
NAME          READY   STATUS    RESTARTS   AGE
books-api-689c477fc5-9fzs5  1/1     Running   0          84m
books-api-689c477fc5-bqnf9  1/1     Running   0          84m
clients-api-98b79bd4f-jbv5z 1/1     Running   0          83s
clients-api-98b79bd4f-wbm4q  1/1     Running   0          83s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl exec -it clients-api-98b79bd4f-wbm4q -- /bin/bash
root@clients-api-98b79bd4f-wbm4q:/app# df -h
Filesystem                                Size  Used Avail Use% Mounted on
overlay                                     124G  24G  101G  20% /
tmpfs                                       64M   0    64M   0% /dev
//fad232d0744854d82904638.file.core.windows.net/pvc-c7338a1b-bac1-471e-b063-6bcb4b64342f  2.0G   0    2.0G   0% /data
/dev/root                                    124G  24G  101G  20% /etc/hosts
shm                                         64M   0    64M   0% /dev/shm
tmpfs                                       4.5G  12K   4.5G  1% /run/secrets/kubernetes.io/serviceaccount
tmpfs                                       3.4G   0    3.4G   0% /proc/acpi
tmpfs                                       3.4G   0    3.4G   0% /proc/scsi
tmpfs                                       3.4G   0    3.4G   0% /sys/firmware
root@clients-api-98b79bd4f-wbm4q:/app# ls /data
root@clients-api-98b79bd4f-wbm4q:/app# exit
exit
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> cd ..
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> cd ..
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd ./clients
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients> cd app\data
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients\app\data> kubectl cp clients.csv clients-api-98b79bd4f-wbm4q:/data/
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients\app\data> █
```

```
clients-api-98b79bd4f-jbv5z 1/1 Running 0 83s
clients-api-98b79bd4f-wbm4q 1/1 Running 0 83s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl exec -it clients-api-98b79bd4f-wbm4q -- /bin/bash
root@clients-api-98b79bd4f-wbm4q:/app# df -h
Filesystem Size Used Avail Use% Mounted on
overlay 124G 24G 101G 20% /
tmpfs 64M 0 64M 0% /dev
//fad232d0744854d82904638.file.core.windows.net/pvc-c7338a1b-bac1-471e-b063-6bcb4b64342f 2.0G 0 2.0G 0% /data
/dev/root 124G 24G 101G 20% /etc/hosts
shm 64M 0 64M 0% /dev/shm
tmpfs 4.5G 12K 4.5G 1% /run/secrets/kubernetes.io/serviceaccount
tmpfs 3.4G 0 3.4G 0% /proc/acpi
tmpfs 3.4G 0 3.4G 0% /proc/scsi
tmpfs 3.4G 0 3.4G 0% /sys/firmware
root@clients-api-98b79bd4f-wbm4q:/app# ls /data
root@clients-api-98b79bd4f-wbm4q:/app# exit
exit
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> cd ..
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS> cd ..
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd .\clients\
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients> cd app\data
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients\app\data> kubectl cp clients.csv clients-api-98b79bd4f-wbm4q:/data/
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\clients\app\data> kubectl exec -it clients-api-98b79bd4f-wbm4q -- /bin/bash
root@clients-api-98b79bd4f-wbm4q:/app# df -h
Filesystem Size Used Avail Use% Mounted on
overlay 124G 24G 101G 20% /
tmpfs 64M 0 64M 0% /dev
//fad232d0744854d82904638.file.core.windows.net/pvc-c7338a1b-bac1-471e-b063-6bcb4b64342f 2.0G 64K 2.0G 1% /data
/dev/root 124G 24G 101G 20% /etc/hosts
shm 64M 0 64M 0% /dev/shm
tmpfs 4.5G 12K 4.5G 1% /run/secrets/kubernetes.io/serviceaccount
tmpfs 3.4G 0 3.4G 0% /proc/acpi
tmpfs 3.4G 0 3.4G 0% /proc/scsi
tmpfs 3.4G 0 3.4G 0% /sys/firmware
root@clients-api-98b79bd4f-wbm4q:/app# ls \data
ls: cannot access 'data': No such file or directory
root@clients-api-98b79bd4f-wbm4q:/app# ls /data
clients.csv
root@clients-api-98b79bd4f-wbm4q:/app#
```



Clients API 1.0.0 OAS 3.1

[/openapi.json](#)

Clients

GET /clients Clients

Get list of clients.

Parameters[Cancel](#)

No parameters

[Execute](#)[Clear](#)**Responses****Curl**

```
curl -X 'GET' \
'http://localhost:8080/clients' \
-H 'accept: application/json'
```

**Request URL**<http://localhost:8080/clients>**Server response**[Code](#) [Details](#)

200

Response body

```
[  
  {  
    "id": 1,  
    "name": "Manuel",  
    "type": "Basic"  
  },  
  {  
    "id": 2,  
    "name": "Lucia",  
    "type": "Basic"  
  },  
  {  
    "id": 3,  
    "name": "Ana",  
    "type": "Premium"  
  },  
  {  
    "id": 4,  
    "name": "Lola",  
    "type": "Basic"  
  }]
```

[Download](#)**Response headers**

Clients API 1.0.0 OAS 3.1

[/openapi.json](#)

Clients

GET /clients Clients**GET** /client/{client_id} Get Client

Get client by id.

Parameters[Cancel](#)

Name Description

client_id * required

integer
(path)

2

[Execute](#)[Clear](#)**Responses****Curl**

```
curl -X 'GET' \
'http://localhost:8080/client/2' \
-H 'accept: application/json'
```

**Request URL**<http://localhost:8080/client/2>**Server response**

Code Details

200

Response body

```
{  
  "id": 2,  
  "name": "Lucia",  
  "type": "Basic"  
}
```

[Download](#)**Response headers**

```
content-length: 39  
content-type: application/json  
date: Wed,17 Apr 2024 15:24:58 GMT  
server: uvicorn
```

```
clients-api-98b79bd4f-wbm4q  1/1    Running   0          10m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd .\gateway\app\conf.d
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> New-Item -ItemType Directory -Path .\gateway-conf
```

Directorio: C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d

Mode	LastWriteTime	Length	Name
---	-----	-----	-----
d----	17/04/2024	17:49	gateway-conf

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> Copy-Item -Path .\gateway\app\conf.d\main.yml -Destination .\gateway-conf\
Copy-Item : No se encuentra la ruta de acceso 'C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d\gateway\app\conf.d\main.yml' porque no existe.
En linea: 1 Carácter: 1
+ Copy-Item -Path .\gateway\app\conf.d\main.yml -Destination .\gateway- ...
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (C:\Users\jrver\...conf.d\main.yml:String) [Copy-Item], ItemNotFoundException
+ FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.CopyItemCommand
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> Copy-Item -Path main.yml -Destination .\gateway-conf\
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> kubectl create cm books-gateway-conf --from-file gateway-conf
configmap/books-gateway-conf created
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d>
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> kubectl get cm  
NAME          DATA   AGE  
books-gateway-conf  1      61s  
kube-root-ca.crt    1      4h13m  
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> █
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> kubectl get cm
NAME          DATA   AGE
books-gateway-conf  1      61s
kube-root-ca.crt    1      4h13m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> kubectl get cm books-gateway-conf -o yaml
apiVersion: v1
data:
  main.yml: |-
    url:
      clients: "http://books-api:8000"
      books: "http://clients-api:8000"
kind: ConfigMap
metadata:
  creationTimestamp: "2024-04-17T15:51:50Z"
  name: books-gateway-conf
  namespace: default
  resourceVersion: "57044"
  uid: df8a47e9-330b-44b1-90d6-c0948e07974d
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d>
```

```
main.yml: |-
  url:
    clients: "http://books-api:8000"
    books: "http://clients-api:8000"
kind: ConfigMap
metadata:
  creationTimestamp: "2024-04-17T15:51:50Z"
  name: books-gateway-conf
  namespace: default
  resourceVersion: "57044"
  uid: df8a47e9-330b-44b1-90d6-c0948e07974d
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app\conf.d> cd ..
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway\app> cd ..
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\gateway> cd ..
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> cd .\Terraform_Scripts_AKS\k8s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl create -f gateway-deployment.yml
deployment.apps/gateway-api created
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get deploy
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
books-api  2/2     2           2           154m
clients-api 2/2     2           2           56m
gateway-api 1/1     1           1           19s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get pod | grep gatewa
grep : El término 'grep' no se reconoce como nombre de un cmdlet, función, archivo de script o programa ejecutable. Compruebe si escribió correctamente el nombre o, si incluyó correcta e inténtelo de nuevo.
En línea: 1 Carácter: 19
+ kubectl get pod | grep gatewa
+          ~~~~
+ CategoryInfo          : ObjectNotFound: (grep:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get pod | ? { $_ -match "gateway" }
gateway-api-795fbcc755c-hl74j  1/1     Running   0            3m4s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> █
```

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get pod | ? { $_ -match "gateway" }
gateway-api-795fbc755c-hl74j  1/1    Running   0          3m4s
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl expose deploy gateway-api --port 8000 --type Loadbalancer
The Service "gateway-api" is invalid: spec.type: Unsupported value: "Loadbalancer": supported values: "ClusterIP", "ExternalName", "LoadBalancer", "NodePort"
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl expose deploy gateway-api --port 8000 --type LoadBalancer
service/gateway-api exposed
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
books-api  ClusterIP  10.0.137.65  <none>        8000/TCP      71m
clients-api  ClusterIP  10.0.174.248 <none>        8000/TCP      55m
gateway-api  LoadBalancer  10.0.146.157 <pending>    8000:31048/TCP  8s
kubernetes  ClusterIP  10.0.0.1     <none>        443/TCP       4h40m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
books-api  ClusterIP  10.0.137.65  <none>        8000/TCP      73m
clients-api  ClusterIP  10.0.174.248 <none>        8000/TCP      57m
gateway-api  LoadBalancer  10.0.146.157  172.210.92.195  8000:31048/TCP  88s
kubernetes  ClusterIP  10.0.0.1     <none>        443/TCP       4h41m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> █
```

Terraform_AKS_FastAPI_Microservices master

Project books\...\\main.py clients\...\\main.py clients-data-pvc.yml app\\conf.d\\main... clients-deployment.yml

Terminal Local Local (2) Local (3) Local (4) Local (5) Local (6) +

```
INFO: Application startup complete.
INFO: Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
INFO: 127.0.0.1:36324 - "GET /docs HTTP/1.1" 200 OK
INFO: 127.0.0.1:36324 - "GET /openapi.json HTTP/1.1" 200 OK
INFO: 127.0.0.1:55272 - "GET /clients HTTP/1.1" 200 OK
INFO: 127.0.0.1:47410 - "GET /client/2 HTTP/1.1" 200 OK
INFO: 10.244.1.10:35154 - "GET /books HTTP/1.1" 404 Not Found
INFO: 10.244.1.10:58130 - "GET /book/1 HTTP/1.1" 404 Not Found
INFO: 10.244.1.10:33358 - "GET /books HTTP/1.1" 404 Not Found
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl rollout restart deployment gateway-api
deployment.apps/gateway-api restarted
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl rollout restart deployment gateway-api
deployment.apps/gateway-api restarted
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl rollout restart deployment clients-api
deployment.apps/clients-api restarted
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl rollout restart deployment books-api
deployment.apps/books-api restarted
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
books-api   ClusterIP  10.0.137.65  <none>          8000/TCP    133m
clients-api  ClusterIP  10.0.174.248 <none>          8000/TCP    117m
gateway-api  LoadBalancer  10.0.146.157  172.210.92.195  8000:31048/TCP  61m
kubernetes   ClusterIP  10.0.0.1      <none>          443/TCP     5h41m
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s> kubectl logs deployment/gateway-api
INFO: Started server process [1]
INFO: Waiting for application startup.
INFO: Application startup complete.
INFO: Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
INFO: 10.224.0.4:36003 - "GET /docs HTTP/1.1" 200 OK
INFO: 10.224.0.4:36003 - "GET /openapi.json HTTP/1.1" 200 OK
INFO: 10.224.0.4:36003 - "GET /clients HTTP/1.1" 200 OK
INFO: 10.244.1.1:49659 - "GET /books HTTP/1.1" 200 OK
id=1 title='Rayuela' author='Julio Cortázar' basic_discount=0.1 premium_discount=0.15
INFO: 10.224.0.4:25693 - "GET /book/1 HTTP/1.1" 200 OK
id=1 title='Rayuela' author='Julio Cortázar' basic_discount=0.1 premium_discount=0.15
INFO: 10.244.1.1:19485 - "GET /book/1?client_id=3 HTTP/1.1" 200 OK
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices\Terraform_Scripts_AKS\k8s>
```

Gateway API

1.0.1 OAS 3.1

/openapi.json

Clients

GET /clients Clients

Books

GET /books Books

Personalized

GET /book/{book_id} Book With Personalized Msg

Schemas

Book > Expand all object

Client > Expand all object

HTTPValidationError > Expand all object

ValidationError > Expand all object

Gateway API 1.0.1 OAS 3.1

[/openapi.json](#)

Clients

GET /clients Clients

Get list of clients.

Parameters

[Cancel](#)

No parameters

[Execute](#)[Clear](#)

Responses

Curl

```
curl -X 'GET' \
'http://172.210.92.195:8000/clients' \
-H 'accept: application/json'
```



Request URL

```
http://172.210.92.195:8000/clients
```

Server response

Code Details

200

Response body

```
[  
  {  
    "id": 1,  
    "name": "Manuel",  
    "type": "Basic"  
  },  
  {  
    "id": 2,  
    "name": "Lucía",  
    "type": "Basic"  
  },  
  {  
    "id": 3,  
    "name": "Ana",  
    "type": "Premium"  
  },  
  {  
    "id": 4,  
    "name": "Lola",  
    "type": "Basic"  
}
```

Personalized

GET

/book/{book_id} Book With Personalized Msg

Get book by id and personalized message for client.

Parameters

Cancel

Name Description

book_id * required

integer
(path)

1

client_id

(query)

client_id

Execute

Clear

Responses

Curl

```
curl -X 'GET' \
'http://172.210.92.195:8000/book/1' \
-H 'accept: application/json'
```



Request URL

```
http://172.210.92.195:8000/book/1
```

Server response

Code Details

200

Response body

```
{
  "message": "Become client to get fantastic discounts!. You could have had a 10% discount just being client.",
  "book": {
    "id": 1,
    "title": "Rayuela",
    "author": "Julio Cortázar",
    "basic_discount": 0.1,
    "premium_discount": 0.15
  }
}
```



Download

Response headers

```
content-length: 215
content-type: application/json
date: Wed,17 Apr 2024 17:25:19 GMT
server: uvicorn
```

Personalized

GET

/book/{book_id} Book With Personalized Msg

Get book by id and personalized message for client.

Parameters

Cancel

Name Description

book_id * required
integer
(path)

1

client_id
(query)

3

Execute

Clear

Responses

Curl

```
curl -X 'GET' \
'http://172.210.92.195:8000/book/1?client_id=3' \
-H 'accept: application/json'
```



Request URL

```
http://172.210.92.195:8000/book/1?client_id=3
```

Server response

Code

Details

200

Response body

```
{
  "message": "Ana thanks for keep buying with us For this book you get 15% discount, just for being premium client.",
  "book": {
    "id": 1,
    "title": "Rayuela",
    "author": "Julio Cortázar",
    "basic_discount": 0.1,
    "premium_discount": 0.15
  }
}
```



Download

Response headers

```
content-length: 222
content-type: application/json
date: Wed,17 Apr 2024 17:25:54 GMT
server: unicorn
```

Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSWindows>

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> kubectl get deploy
```

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
books-api	2/2	2	2	8h
clients-api	2/2	2	2	7h8m
gateway-api	1/1	1	1	6h12m

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> kubectl get pod
```

NAME	READY	STATUS	RESTARTS	AGE
books-api-6bcb4f5fb-b7glg	1/1	Running	0	5h4m
books-api-6bcb4f5fb-bf7nm	1/1	Running	0	5h4m
clients-api-6ddf89d585-b2rk7	1/1	Running	0	5h4m
clients-api-6ddf89d585-ztw82	1/1	Running	0	5h4m
gateway-api-58f9f8676-pf9wg	1/1	Running	0	5h5m

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> kubectl get svc
```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
books-api	ClusterIP	10.0.137.65	<none>	8000/TCP	7h17m
clients-api	ClusterIP	10.0.174.248	<none>	8000/TCP	7h1m
gateway-api	LoadBalancer	10.0.146.157	172.210.92.195	8000:31048/TCP	6h6m
kubernetes	ClusterIP	10.0.0.1	<none>	443/TCP	10h

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> kubectl get cm
```

NAME	DATA	AGE
books-gateway-conf	1	6h34m
kube-root-ca.crt	1	10h

```
(venv) PS C:\Users\jrver\PycharmProjects\Python\Terraform_AKS_FastAPI_Microservices> █
```