

Name: Devanarayanan TM

PROVISIONING RESOURCES

Created resource group

The screenshot shows the Azure portal interface for a resource group named 'dev-rg'. The left sidebar contains navigation links for Overview, Activity log, Access control (IAM), Tags, Resource visualizer, Events, Settings, Cost Management, Monitoring, Automation, and Help. The main content area shows the 'Resources' tab with a filter bar and a message: 'No resources match your filters. Try changing or clearing your filters.' Below the message are buttons for 'Create resources' and 'Clear filters'. The top of the page includes a search bar and various action buttons like 'Create', 'Manage view', 'Delete resource group', 'Refresh', 'Export to CSV', 'Open query', 'Assign tags', 'Move', and 'Delete'.

Created container registry (ACR)

The screenshot shows the Azure portal interface for the 'Microsoft.ContainerRegistry | Overview' page. The left sidebar contains navigation links for Overview, Inputs, Outputs, and Template. The main content area shows a deployment status message: 'Your deployment is complete'. Below this message, there are sections for 'Deployment details' and 'Next steps'. The 'Deployment details' section shows the deployment name, subscription, and resource group. The 'Next steps' section includes a 'Go to resource' button. The right sidebar contains a 'Cost management' section with a 'Set up cost alerts' button, a 'Microsoft Defender for Cloud' section with a 'Go to Microsoft Defender for Cloud' button, and a 'Free Microsoft tutorials' section with a 'Start learning today' button.

Created an AKS cluster

Home > microsoft.aks-1751351908911 | Overview

Deployment

Search x < Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name: microsoft.aks-1751351908911
Subscription: [Azure subscription 1](#)
Resource group: [dev-rg](#)

Start time: 7/1/2025, 12:23:26 PM
Correlation ID: 0261c4c3-4946-4caf-a8a6-19c5ca7e8fa0

Deployment details

Next steps

[Go to resource](#)

Cost Management

Get notified to stay within your budget and prevent unexpected charges on your bill.
[Set up cost alerts >](#)

Microsoft Defender for Cloud

Secure your apps and infrastructure
[Go to Microsoft Defender for Cloud >](#)

Free Microsoft tutorials

[Start learning today >](#)

Work with an expert

Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.

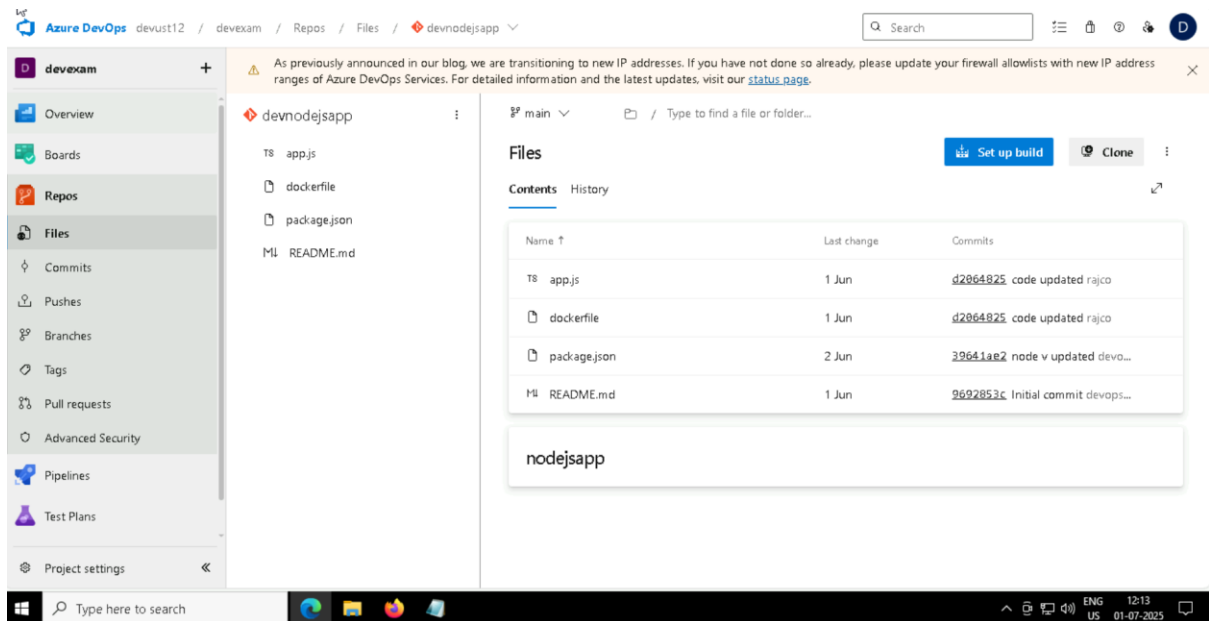
Integrated acr with aks

```
ust12 [ ~ ]$ az aks update --resource-group dev-rg --name devaks --attach devanacr
AAD role propagation done(#####) 100.0000%keyvaultid: None, enable_kv: False
{
  "aadProfile": null,
  "addonProfiles": {
    "azureKeyvaultSecretsProvider": {
      "config": null,
      "enabled": false,
      "identity": null
    },
    "azurepolicy": {
      "config": null,
      "enabled": false,
      "identity": null
    }
  },
  "agentPoolProfiles": [
    {
      "availabilityZones": [
        "1",
        "3"
      ],
      "capacityReservationGroupId": null,
      "count": 1,
      "creationData": null,
      "currentOrchestratorVersion": "1.31.9",
      "eTag": null,
      "enableAutoScaling": true,
      "enableEncryptionAtHost": null,
      "enableFips": false,
      "enableNodePublicIp": false,
      "enableUltraSsd": null,

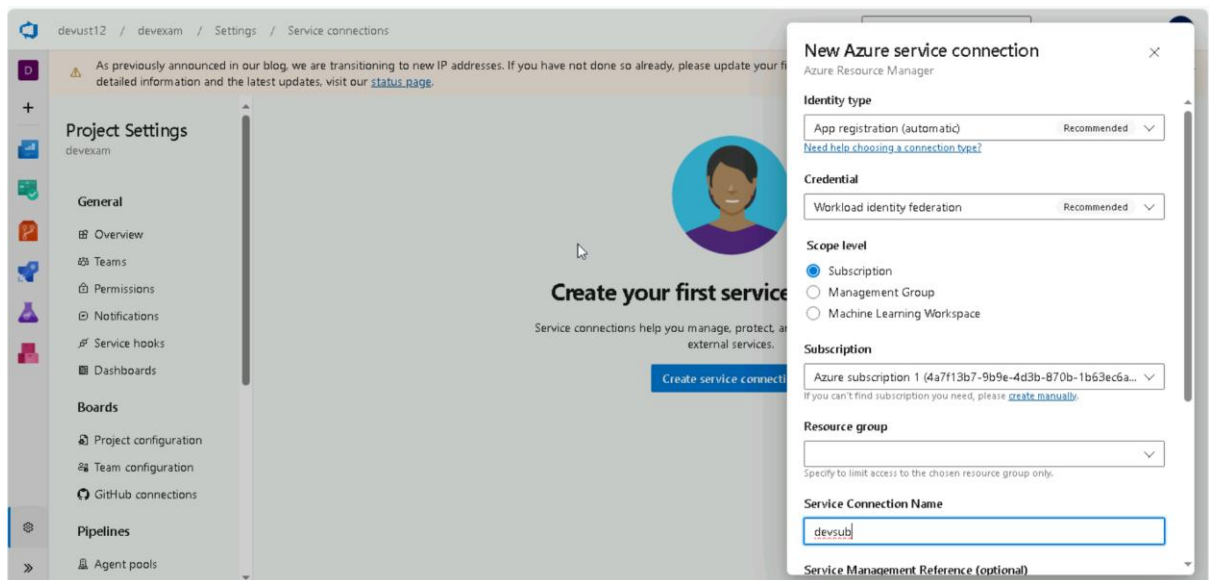
```

SET UP AZUREDEVOPS

Clone the repo



Created Service Connection for subscription



Service connection for the Kubernetes cluster

As previously announced in our blog, we are transitioning to new IP addresses. If you have not done so already, please update your firewall allowlists with new IP address ranges of Azure DevOps Services. For detailed information and the latest updates, visit our [status page](#).

Project Settings

devexam

- General
 - Overview
 - Teams
 - Permissions
 - Notifications
 - Service hooks
 - Dashboards
- Boards
 - Project configuration
 - Team configuration
 - GitHub connections
- Pipelines
 - Agent pools

devaks-default

ID: f3e2a45e-1e01-4f2e-9712-493d03a5524f

Overview Usage history Approvals and checks

An error occurred while querying the service account secret credentials. Internal error.

Details

Service connection type

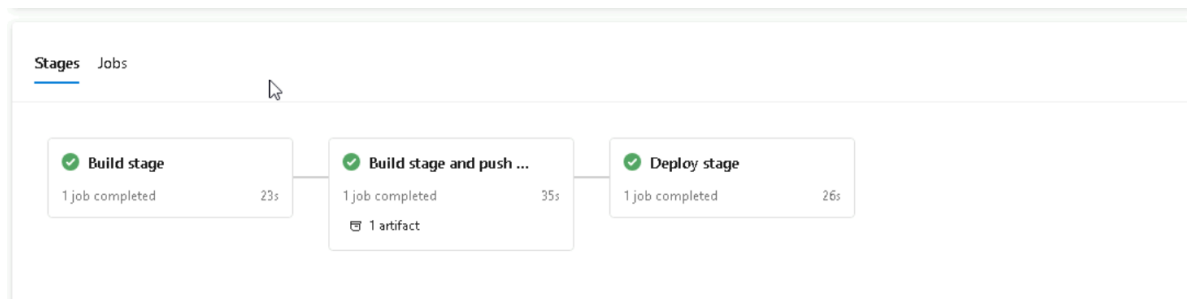
Kubernetes using kubernetes

Creator

devust12
devust12@Newdev01outlook.onmicrosoft.com

Pipeline execution:

3 stages in the pipeline



1) BUILD STAGE

```

- stage: Build
  displayName: Build stage
  jobs:
    - job: Build
      displayName: Build
      steps:
        - task: AzureCLI@2
          inputs:
            azureSubscription: 'devsub'
            scriptType: 'bash'
            scriptLocation: 'inlineScript'
            inlineScript: |
              npm install
              npm run test
  
```

As previously announced in our blog, we are transitioning to new IP addresses. If you have not done so already, please update your firewall allowlists with new IP address ranges of Azure DevOps Services. For detailed information and the latest updates, visit our [status page](#).

Jobs in run #20250701.2
devmodelapp

Build stage	Progress
Build	19%
Initialize job	1s
Checkout devmodelapp	1s
AzureCLI	16s
Postjob: Checkout d...	<1s
Finalize Job	<1s

Build stage and push image

- Build 33s

Deploy stage

- Deploy 23s

Finalize build

- Report build status <1s

AzureCLI

```

40 "cloudName": "AzureCloud",
41 "homeTenantId": "d33ac541-47fc-4a29-ba6d-9389f515d3e4",
42 "id": "4a7f1b7f-980a-4d3b-87b6-1b6bcecfafdf",
43 "isDefault": true,
44 "managedByTenantId": "",
45 "name": "Azure subscription 1",
46 "state": "Enabled",
47 "tenantId": "d33ac541-47fc-4a29-ba6d-9389f515d3e4",
48 "user": {
49   "name": "",
50   "type": "ServicePrincipal"
51 }
52 }
53 ]
54 /usr/bin/az account set --subscription 4a7f1b7f-980a-4d3b-87b6-1b6bcecfafdf
55 /usr/bin/bash /home/vsts/work/_temp/azurecli-taskscript1751359860279.sh
56
57 added 69 packages, and audited 70 packages in 6s
58
59 14 packages are looking for funding
60 run 'npm fund' for details
61
62 found 0 vulnerabilities
63
64 > npm run test
65 > echo "Dummy test passed!" && exit 0
66
67 Dummy test passed!
68
69 /usr/bin/az account clear
70 finishing: AzureCLI
  
```

2) PUSH TO ACR

```

- stage: Push_image_to_acr
  displayName: Build stage and push image
  dependsOn: Build
  jobs:
  - job: Build
    displayName: Build
    steps:
    - task: Docker@2
      displayName: Build and push an image to container registry
      inputs:
        command: buildAndPush
        repository: $(imageRepository)
        dockerfile: $(dockerfilePath)
        containerRegistry: $(dockerRegistryServiceConnection)
        tags: |
          $(tag)

    - upload: manifests
      artifact: manifests
  
```

Build and push an image to container registry

```

1 Starting: Build and push an image to container registry
2 =====
3 Task
4 Description : Build or push Docker images, login or logout, start or stop containers, or run a Docker command
5 Version : 2.256.1
6 Author : Microsoft Corporation
7 Help : https://aka.ms/azpipelines-docker-task
8 =====
9 /usr/bin/docker pull node:current-alpine
10
11 fe07684b16b0: Pulling fs layer
12 6a1e58d27f9f: Pulling fs layer
13 4387918b708a: Pulling fs layer
14 b0252ce8e5cb: Pulling fs layer
15 b0252ce8e5cb: Waiting
16 fe07684b16b0: Verifying Checksum
17 fe07684b16b0: Download complete
18 4387918b708a: Verifying Checksum
19 4387918b708a: Download complete
20 fe07684b16b0: Pull complete
21 6a1e58d27f9f: Verifying Checksum
22 6a1e58d27f9f: Download complete
23 b0252ce8e5cb: Verifying Checksum
24 b0252ce8e5cb: Download complete
25 6a1e58d27f9f: Pull complete
26 4387918b708a: Pull complete =>
27 b0252ce8e5cb: Pull complete
28 Digest: sha256:d9e45bf0e2728e35c3a466737d8bcfa12c29731c7c2f3e223f9a7c9a4fff39a4
29 Status: Downloaded newer image for node:current-alpine
30 docker.io/library/node:current-alpine
31 /usr/bin/docker inspect node:current-alpine
32 [
  
```

```

30     "node@sha256:4be1b1f0e2728a35c3a4667378b0cf12c29731c7c274e222f9a7c9a4fff3ba8"
31   },
32   "parent": "",
33   "comment": "buildkit.dockerfile.v0",
34   "created": "2020-06-25T02:25:22Z",
35   "dockername": "",
36   "author": "",
37   "config": {
38     "hostname": "",
39     "domainname": "",
40     "user": "",
41     "attachstdin": false,
42     "attachstdout": false,
43     "attachstderr": false,
44     "tty": false,
45     "openstdin": false,
46     "addnpipe": false,
47     "sha": [
48       "PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin",
49       "NODE_VERSION=24.3.0",
50       "SSH_VERSION=1.22.2"
51     ],
52     "cmd": [
53       "node"
54     ]
55   },
56   "image": "",
57   "licenses": null,
58   "workdir": "/",
59   "entrypoint": [
60     "docker-entrypoint.sh"
61   ],
62 }

```

Build and push an image to container registry



View raw log

```

76   "graphdriver": {
77     "data": {
78       "Lowerdir": "/var/lib/docker/overlay2/216285cb39abdad232e2a56943dbccbac7c5742deecd877697aa41bfff/diff/var/lib/docker/overlay2/63e28139e0ecd89a22e1c1ec5e8b6",
79       "MergedDir": "/var/lib/docker/overlay2/f734f8824d63c36a66a42867ef79f454c8a1d866e55b30bbebcb52548aff/merged",
80       "Upperdir": "/var/lib/docker/overlay2/f734f8824d63c36a66a42867ef79f454c8a1d866e55b30bbebcb52548aff/diff",
81       "Workdir": "/var/lib/docker/overlay2/f734f8824d63c36a66a42867ef79f454c8a1d866e55b30bbebcb52548aff/work"
82     },
83     "name": "overlay2"
84   },
85   "rootfs": {
86     "type": "layers",
87     "layers": [
88       "sha256:f42758d7a9e2b78d275ee7d1c218489f3439804449d895fa17e0de6c61ab2c4",
89       "sha256:39e7851a382f265eea86f9633220f4314f8b265ffe62f5865942aa34e2f29",
90       "sha256:a53804eecd1928374b0e5dc74b531dc162bc886d473bf8e45497727d68e",
91       "sha256:45e5afb289e8b1e3453743a2877aea3395cf13eb5219e1a3d4d6fc36e4422"
92     ]
93   },
94   "metadata": {
95     "LastTagTime": "2001-01-01T00:00:00Z"
96   }
97 }
98 ]
99 /usr/bin/docker build -f /home/vsts/work/1/s/dockerfile --label com.azure.dev.image.system.teamfoundationcollectionuri=https://dev.azure.com/devust12/ --label com.azure.dev.image
100 #0 building with "default" instance using docker driver
101
102 #1 [internal] load build definition from dockerfile
103 #1 transferring dockerfile: 588B done
104 #1 DONE 0.0s
105
106 #2 [internal] load metadata for docker.io/library/node:current-alpine
107 #2 DONE 0.0s

```

```
152:  @
153:  ##[warning]No data was written into the file /home/ats/ark/Temp/task_output/build_375139488423.txt
154: /usr/bin/docker images
155: /usr/bin/docker push ***/devnodejsapp:2
156: REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
157: ***/devnodejsapp    2              56bec733bd8a   1 second ago   174MB
158: node                current-alpine  4fb09f685c89   6 days ago     165MB
159:
160: The push refers to repository [***/devnodejsapp]
161: 58df9b7dab3b: Preparing
162: 9768e9ce353: Preparing
163: 6dde0d9d66a8: Preparing
164: b758f9e557fa: Preparing
165: 45e5afb209e: Preparing
166: a53004eec6ed: Preparing
167: 30e7861e382f: Preparing
168: fd2758d7a58e: Preparing
169: a53004eec6ed: Waiting
170: 30e7861e382f: Waiting
171: fd2758d7a58e: Waiting
172: 45e5afb209e: Layer already exists
173: a53004eec6ed: Layer already exists
174: 30e7861e382f: Layer already exists
175: b758f9e557fa: Pushed
176: 6dde0d9d66a8: Pushed
177: fd2758d7a58e: Layer already exists
178: 58df9b7dab3b: Pushed
```

```
180: 2: digest: sha256:7ca91f6b6b0c0e0ee0430beded18a335d11ae762264798f662057120f74e2 size: 1091
181:
182: /usr/bin/docker history --format createdat:{{.CreatedAt}}; layersize:{{.Size}}; createdby:{{.CreatedBy}}; layerid:{{.ID}} --no-trunc ***/devnodejsapp:2
183: createdat:2025-07-01T07:47:38Z; layersize:8B; createdby:CMD ["node" "app.js"]; layerid:sha256:56bec733bd8a61e749db59374012f94b0e36f39e8f0e6945413bc9631def91
184: createdat:2025-07-01T07:47:38Z; layersize:8B; createdby:EXPOSE map[3000/tcp:{}]; layerid:<missing>
185: createdat:2025-07-01T07:47:38Z; layersize:37.4kB; createdby:COPY . . # buildkit; layerid:<missing>
186: createdat:2025-07-01T07:47:38Z; layersize:8.8MB; createdby:RUN /bin/sh -c npm install --omit=dev && npm install express # buildkit; layerid:<missing>
187: createdat:2025-07-01T07:47:33Z; layersize:332B; createdby:COPY package*.json ./ # buildkit; layerid:<missing>
188: createdat:2025-07-01T07:47:33Z; layersize:8B; createdby:WORKDIR /app; layerid:<missing>
189: createdat:2025-06-25T02:25:22Z; layersize:8B; createdby:CMD ["node"]; layerid:<missing>
190: createdat:2025-06-25T02:25:22Z; layersize:8B; createdby:ENTRYPOINT ["docker-entrypoint.sh"]; layerid:<missing>
191: createdat:2025-06-25T02:25:22Z; layersize:388B; createdby:COPY docker-entrypoint.sh /usr/local/bin/ # buildkit; layerid:<missing>
192: createdat:2025-06-25T02:25:22Z; layersize:5.37MB; createdby:RUN /bin/sh -c apk add --no-cache --virtual .build-deps-yarn curl gnupg tar && export GNUPGHOME="${mktemp -d}" &&
193: createdat:2025-06-25T02:25:22Z; layersize:8B; createdby:ENV YARN_VERSION=1.22.22; layerid:<missing>
194: createdat:2025-06-25T02:25:22Z; layersize:152MB; createdby:RUN /bin/sh -c addgroup -g 1000 node && adduser -u 1000 -G node -s /bin/sh -D node && apk add --no-cache
195: createdat:2025-06-25T02:25:22Z; layersize:8B; createdby:ENV NODE_VERSION=24.3.0; layerid:<missing>
196: createdat:2025-05-30T16:20:41Z; layersize:8B; createdby:CMD ["/bin/sh"]; layerid:<missing>
197: createdat:2025-05-30T16:20:41Z; layersize:8.3MB; createdby:ADD alpine-minirootfs-3.22.0-x86_64.tar.gz / # buildkit; layerid:<missing>
198:
199: /usr/bin/docker inspect 56bec733bd8a61e749db59374012f94b0e36f39e8f0e6945413bc9631def91 -f {{.RootFS.Layers}}
200: [sha256:fd2758d7a58e2b78d275ee7d1c218489f2439084449d895fa17eede6c61ab204 sha256:30e7861e382f265eea864f963192dbf4324f6b265ff62f5868948aa34e23f29 sha256:a53004eec6ed10283f4b0ee5c
201:
202: Finishing: Build and push an image to container registry
```

3) DEPLOY TO AKS

```
65: - stage: Deploy
66:   displayName: Deploy stage
67:   dependsOn: Push_image_to_acr
68:
69: - jobs:
70:   - deployment: Deploy
71:     displayName: Deploy
72:     environment: 'devnodejsapp-1939.default'
73:     strategy:
74:       runOnce:
75:         deploy:
76:           steps:
77:             - task: KubernetesManifest@0
78:               displayName: Create imagePullSecret
79:               inputs:
80:                 action: createSecret
81:                 secretName: $(imagePullSecret)
82:                 dockerRegistryEndpoint: $(dockerRegistryServiceconnection)
83:
84:             - task: KubernetesManifest@0
85:               displayName: Deploy to Kubernetes cluster
86:               inputs:
87:                 action: deploy
88:                 manifests: |
89:                   $(Pipeline.Workspace)/manifests/deployment.yml
90:                   $(Pipeline.Workspace)/manifests/service.yml
91:                 imagePullSecrets: |
92:                   $(imagePullSecret)
93:                 containers: |
94:                   $(containerRegistry)/$(imageRepository):$(tag)
```

```
✓ Deploy to Kubernetes cluster 🔍 View raw log

1 Starting: Deploy to Kubernetes cluster
2 =====
3 Task      : Deploy to Kubernetes
4 Description: Use Kubernetes manifest files to deploy to clusters or even bake the manifest files to be used for deployments using Helm charts
5 Version   : 0.246.2
6 Author    : Microsoft Corporation
7 Help      : https://aka.ms/azpipes-lbs-manifest-tsg
8 =====
9 =====
10 Kubect1 Client Version: v1.35.2
11 Kubect1 Server Version: v1.31.9
12 =====
13 /usr/bin/kubect1 apply -f /home/vsts/work/_temp/Deployment_devnodejsapp_1751356382317,/home/vsts/work/_temp/Service_devnodejsapp_1751356382317 --namespace default
14 deployment.apps/devnodejsapp configured
15 service/devnodejsapp unchanged
16 /usr/bin/kubect1 rollout status Deployment/devnodejsapp --timeout 6s --namespace default
17 Waiting for deployment "devnodejsapp" rollout to finish: 1 old replicas are pending termination...
18 Waiting for deployment "devnodejsapp" rollout to finish: 1 old replicas are pending termination...
19 deployment "devnodejsapp" successfully rolled out
20 /usr/bin/kubect1 get service/devnodejsapp -o json --namespace default
21 {
22   "apiVersion": "v1",
23   "kind": "Service",
24   "metadata": {
25     "annotations": {
26       "azure-pipelines/jobName": "\Deploy",
27       "azure-pipelines/org": "https://dev.azure.com/deust12/",
28       "azure-pipelines/pipeline": "\devnodejsapp",
29       "azure-pipelines/pipelineId": "\1",
30       "azure-pipelines/project": "devexam",
31       "azure-pipelines/run": "28298781.1",
32       "azure-pipelines/runurl": "https://dev.azure.com/deust12/devexam/_build/results?buildId=1",

```

```
51   "internalTrafficPolicy": "Cluster",
52   "ipFamilies": [
53     "IPV4"
54   ],
55   "ipFamilyPolicy": "SingleStack",
56   "ports": [
57     {
58       "nodePort": 31252,
59       "port": 3000,
60       "protocol": "TCP",
61       "targetPort": 3000
62     }
63   ],
64   "selector": {
65     "app": "devnodejsapp"
66   },
67   "sessionAffinity": "None",
68   "type": "LoadBalancer"
69 },
70 "status": {
71   "loadBalancer": {
72     "ingress": [
73       {
74         "ip": "40.121.185.24",
75         "ipMode": "VIP"
76       }
77     ]
78   }
79 }
80 }
81 service devnodejsapp external IP is 40.121.185.24
82 /usr/bin/kubect1 annotate -f /home/vsts/work/_temp/Deployment_devnodejsapp_1751356382317,/home/vsts/work/_temp/Service_devnodejsapp_1751356382317 azure-pipelines/run=28298781.1 -
```

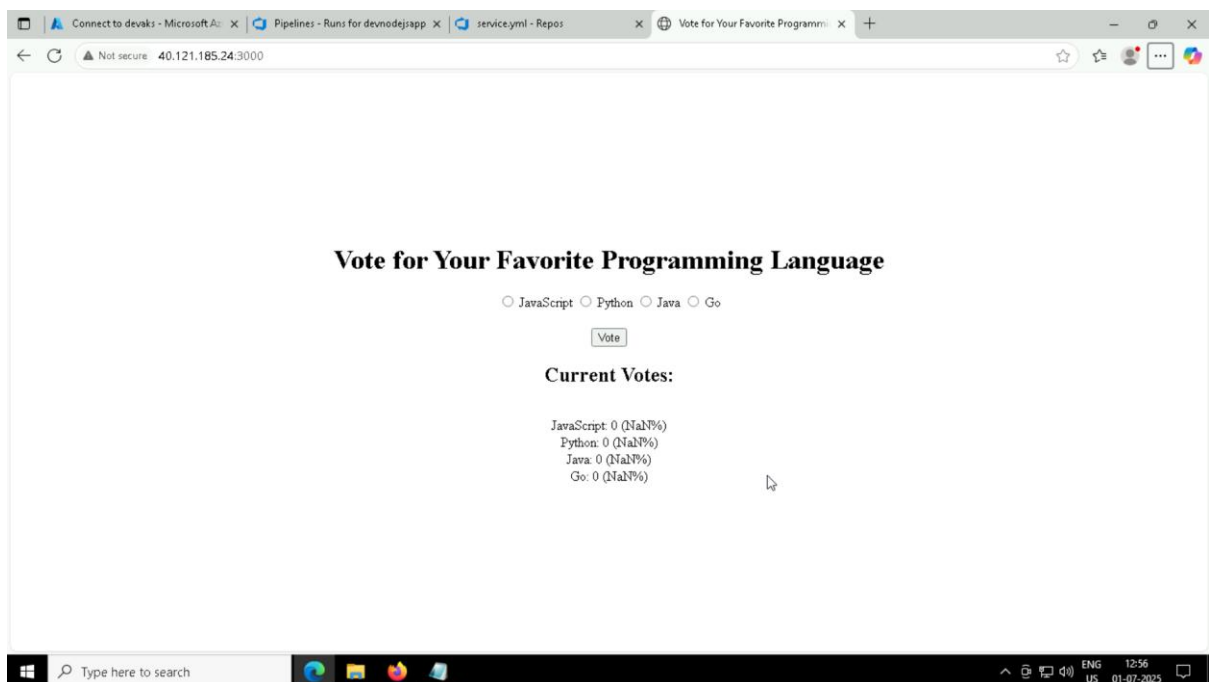
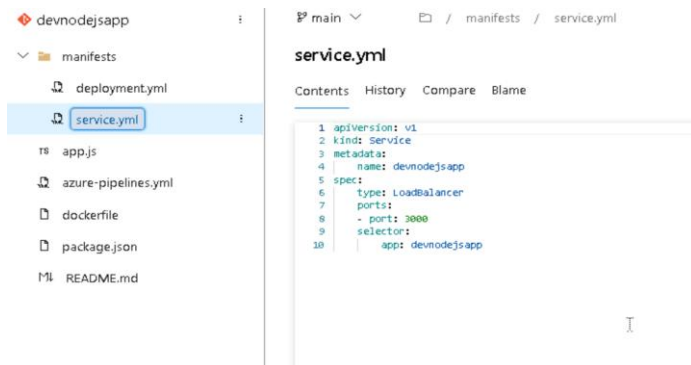
Deployment yaml file

deployment.yml

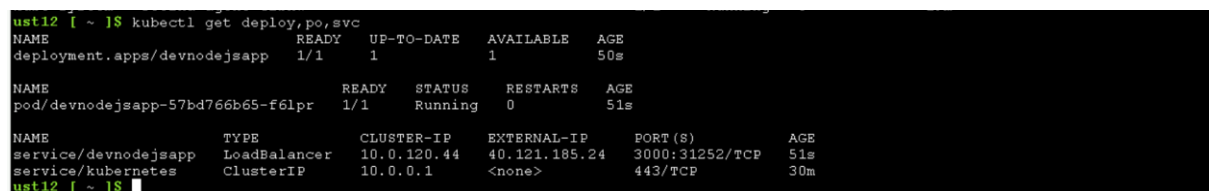
Contents History Compare Blame

```
1 apiVersion: apps/v1
2 kind: Deployment
3 metadata:
4   name: devnodejsapp
5 spec:
6   replicas: 1
7   selector:
8     matchLabels:
9       app: devnodejsapp
10  template:
11    metadata:
12      labels:
13        app: devnodejsapp
14    spec:
15      containers:
16        - name: devnodejsapp
17          image: devanacr.azurecr.io/devnodejsapp
18          ports:
19            - containerPort: 3000
```


Created an loadbalancer service (hit the loadbalancerip(External ip))



Kubernetes deployment is running



RESOURCE-GROUP

dev-rg resource group here it contain acr, aks

Home > devaks >

dev-rg Resource group

Search

+ Create Manage view Delete resource group Refresh Export to CSV Open query Assign tags Move Delete

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

Events

Settings

Cost Management

Monitoring

Automation

Help

Essentials

Resources Recommendations

Filter for any field... Type equals all Location equals all Add filter

Showing 1 to 14 of 14 records. Show hidden types

No grouping List view

Name	Type	Location
CPU Usage Percentage - devaks	Metric alert rule	Global
defaultazuremonitorworkspace-eus	Azure Monitor workspace	East US
devaks	Kubernetes service	East US
devanacr	Container registry	East US
KubernetesRecordingRulesRuleGroup-devaks	Prometheus rule group	East US
Memory Working Set Percentage - devaks	Metric alert rule	Global
MSDrm-eastus-devaks	Data collection endpoint	East US

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Give feedback

https://portal.azure.com/#@Newdev01outlook.onmicrosoft.com/resource/subscriptions/4a7f13b7-9b9e-4d3b-870b-1b63ec6afaf/resourceGroups/dev-rg/overview

AKS will create another resource group

MC_dev-rg_devaks_eastus Resource group

Search

+ Create Manage view Delete resource group Refresh Export to CSV Open query Assign tags Move Delete

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

Events

Settings

Cost Management

Monitoring

Automation

Help

Essentials

Resources Recommendations

Filter for any field... Type equals all Location equals all Add filter

Showing 1 to 7 of 7 records. Show hidden types

No grouping List view

Name	Type	Location
1f126b08-d5b4-4ac8-b3e6-4cd1b9c9c9f	Public IP address	East US
aks-agentpool-27318421-vmss	Virtual machine scale set	East US
aks-agentpool-34863459-nsg	Network security group	East US
aks-vnet-34863459	Virtual network	East US
devaks-agentpool	Managed Identity	East US
kubernetes	Load balancer	East US
kubernetes-563d7ba6da2d777ba9d8h72f6d2da88	Public IP address	East US

< Previous Page 1 of 1 Next >

Give feedback

Add or remove favorites by pressing Ctrl+Shift+F

NB: I just created terraform code for aks

```

1 data "azurerm_resource_group" "example" {
2   name = "dev-rg"
3 }
4
5 resource "azurerm_virtual_network" "example" {
6   name            = "devanaks"
7   location        = "EastUS"
8   resource_group_name = "dev-rg"
9   address_space   = ["10.70.0.0/16"]
10 }
11
12 resource "azurerm_subnet" "example" {
13   name            = "devsubnet"
14   virtual_network_name = azurerm_virtual_network.example.name
15   resource_group_name = "dev-rg"
16   address_prefixes = ["10.70.0.0/24"]
17 }
18
19 resource "azurerm_kubernetes_cluster" "example" {
20   name            = "devanaks"
21   location        = "EastUS"
22   resource_group_name = "dev-rg"
23   dns_prefix      = "devanaks"
24
25   default_node_pool {
26     name            = "devdefaulttnp"
27     vm_size         = "Standard_B2s"
28     node_count      = 1
29     vnet_subnet_id = azurerm_subnet.example.id
30   }
31
32   network_profile {
33     network_policy = "azure"
34     network_plugin = "azure"
35     load_balancer_sku = "standard"
36   }
37 }

```