

Working with minikube and Nagios

Interact with Minikube

kubectl is a command-line tool used in Kubernetes to interact with and manage Kubernetes clusters.

Once Minikube is running:

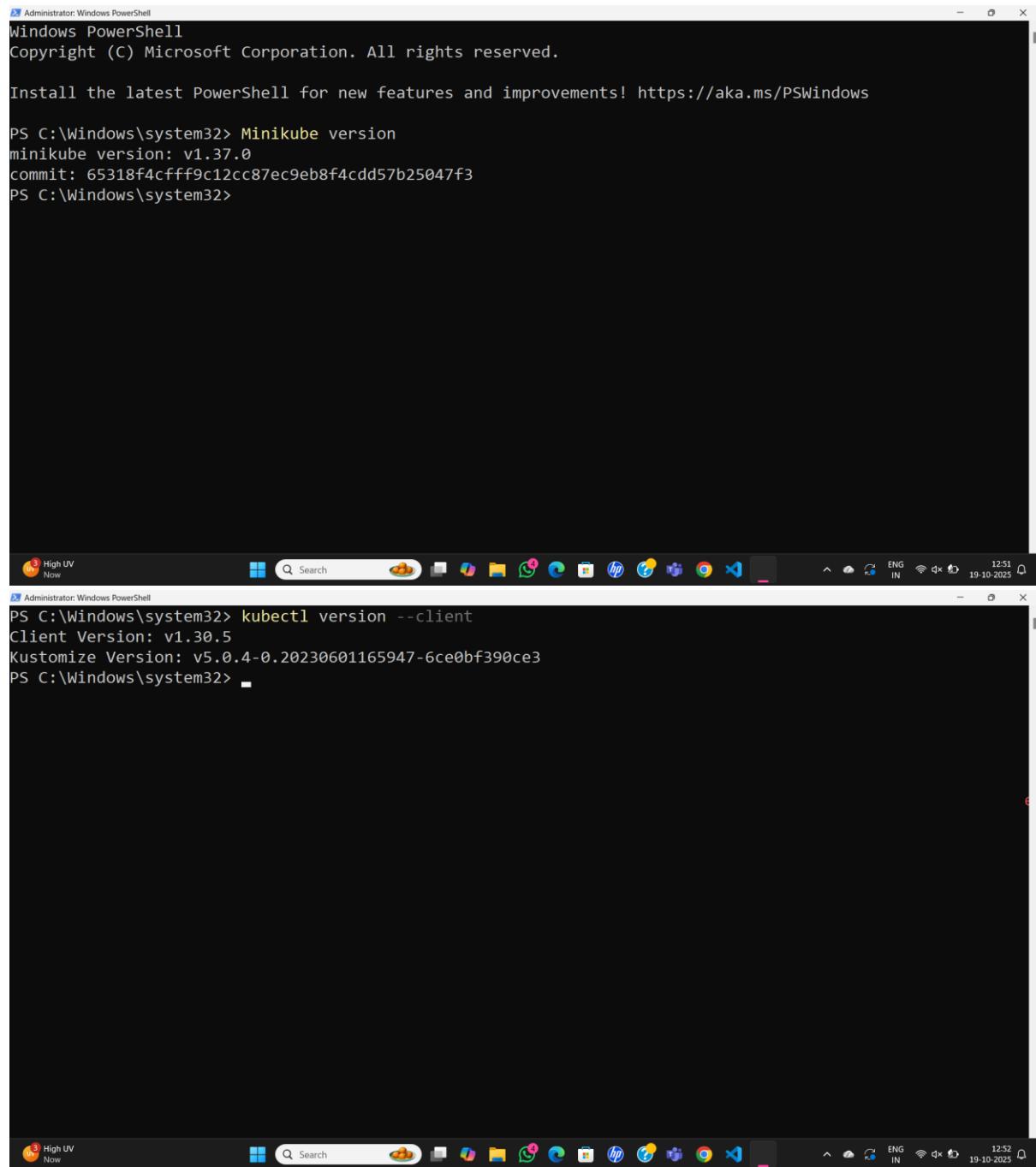
Minikube version

```
kubectl version --client
```

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\kmit> Minikube version
minikube version: v1.34.0
commit: 210b148df93a80eb872ecbeb7e35281b3c582c61
PS C:\Users\kmit> kubectl version --client
Client Version: v1.30.5
Kustomize Version: v5.0.4-0.20230601165947-6ce0bf390ce3
```



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Windows\system32> minikube version
minikube version: v1.37.0
commit: 65318f4cff9c12cc87ec9eb8f4cdd57b25047f3
PS C:\Windows\system32>

Administrator: Windows PowerShell
PS C:\Windows\system32> kubectl version --client
Client Version: v1.30.5
Kustomize Version: v5.0.4-0.20230601165947-6ce0bf390ce3
PS C:\Windows\system32>
```

Minikube Automation Steps

Step 1: Start Minikube Cluster

- Open your terminal and run the command:

```
minikube start
```

```

Administrator: Windows PowerShell
PS C:\Windows\system32> minikube start
* minikube v1.34.0 on Microsoft Windows 10 Pro 10.0.19045.6332 Build 19045.6332
* minikube 1.37.0 is available! Download it: https://github.com/kubernetes/minikube/releases/tag/v1.37.0
* To disable this notice, run: 'minikube config set WantUpdateNotification false'

* Automatically selected the hyperv driver. Other choices: virtualbox, ssh
* Downloading VM boot image...
> minikube-v1.34.0-amd64.iso...: 65 B / 65 B [=====] 100.00% ? p/s 0s
> minikube-v1.34.0-amd64.iso: 333.55 MiB / 333.55 MiB 100.00% 5.89 MiB/s
* Starting "minikube" primary control-plane node in "minikube" cluster
* Creating hyperv VM (CPU=2, Memory=2200MB, Disk=20000MB) ...
! Failing to connect to https://registry.k8s.io/ from both inside the minikube VM and host machine
* To pull new external images, you may need to configure a proxy: https://minikube.sigs.k8s.io/docs/reference/networking/proxy/
* Preparing Kubernetes v1.31.0 on Docker 27.2.0 ...
- Generating certificates and keys ...
- Booting up control plane ...
- Configuring RBAC rules ...
* Configuring bridge CNI (Container Networking Interface) ...
* Verifying Kubernetes components...
- Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: storage-provisioner, default-storageclass
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
PS C:\Windows\system32>

Administrator: Windows PowerShell
>>>
minikube
type: Control Plane
host: Running
kublet: Running
apiserver: Running
kubeconfig: Configured

NAME      STATUS   ROLES      AGE   VERSION
minikube  Ready    control-plane  72s   v1.34.0
PS C:\Windows\system32> minikube start
* minikube v1.37.0 on Microsoft Windows 11 Home Single Language 10.0.22631.4460 Build 22631.4460
* Using the docker driver based on existing profile
* Starting "minikube" primary control-plane node in "minikube" cluster
* Pulling base image v0.0.48 ...
* Updating the running docker "minikube" container ...
! Failing to connect to https://registry.k8s.io/ from inside the minikube container
* To pull new external images, you may need to configure a proxy: https://minikube.sigs.k8s.io/docs/reference/networking/proxy/
* Preparing Kubernetes v1.34.0 on Docker 28.4.0 ...
* Verifying Kubernetes components...
- Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: storage-provisioner, default-storageclass

! C:\Program Files\Docke\Docke\resources\bin\kubectl.exe is version 1.30.5, which may have incompatibilities with Kubernetes 1.34.0.
- Want kubectl v1.34.0? Try 'minikube kubectl -- get pods -A'
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
PS C:\Windows\system32>

```

Step 2: Create and Manage Deployment

1. create_application

- o Command:

```
kubectl create deployment mynginx --image=nginx
```

- o Verify the deployment using: Kubernetes responds by showing you a list that includes the names of your deployment groups

```
kubectl get deployments
```

```

PS C:\Windows\system32>
PS C:\Windows\system32> kubectl create deployment mynginx --image=nginx
deployment.apps/mynginx created
PS C:\Windows\system32> kubectl get deployments
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
mynginx   1/1     1           1           59s
PS C:\Windows\system32> kubectl expose deployment mynginx --type=NodePort --port=80 --target-port=80
service/mynginx exposed

```

- kubectl get pods
- kubectl describe pods

```

PS C:\Users\kmit> kubectl get pods
NAME                  READY   STATUS    RESTARTS   AGE
mynginx-79bb8756c7-628nl 1/1     Running   0          60s
PS C:\Users\kmit> kubectl describe pods
Name:           mynginx-79bb8756c7-628nl
Namespace:      default
Priority:       0
Service Account: default
Node:           minikube/192.168.49.2
Start Time:     Tue, 14 Oct 2025 11:14:19 +0530
Labels:         app=mynginx
                pod-template-hash=79bb8756c7
Annotations:    <none>
Status:         Running
IP:             10.244.0.6
IPs:
  IP:           10.244.0.6
Controlled By:  ReplicaSet/mynginx-79bb8756c7
Containers:
  nginx:
    Container ID:  docker://005cbc65a23c07baffb6d0918f5d984ec64526aaafb7cecd1abb50b86c26766
    Image:         nginx
    Image ID:     docker-pullable://nginx@sha256:3b7732505933ca591ce4a6d860cb713ad96a3176b82f7979a8dfa9973486a0d6
    Port:          <none>
    Host Port:    <none>
    State:        Running
      Started:   Tue, 14 Oct 2025 11:14:56 +0530
    Ready:        True
    Restart Count: 0
    Environment:  <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-9rg79 (ro)
Conditions:
  Type      Status
  PodReadyToStartContainers  True
  Initialized  True
  Ready       True
  ContainersReady  True
  PodScheduled  True
Volumes:
  kube-api-access-9rg79:
    Type:           Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName:   kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI:    true
  QoS Class:      BestEffort
  Node-Selectors:  <none>
Events:

```

```

Volumes:
  kube-api-access-9rg79:
    Type:           Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName:   kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI:    true
  QoS Class:      BestEffort
  Node-Selectors:  <none>
  Tolerations:    node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
                  node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:
  Type  Reason  Age   From            Message
  ----  ----   --   ----
  Normal Scheduled  80s  default-scheduler  Successfully assigned default/mynginx-79bb8756c7-628nl to minikube
  Normal Pulling   78s  kubelet         Pulling image "nginx"
  Normal Pulled    44s  kubelet         Successfully pulled image "nginx" in 33.289s (33.291s including waiting). Image size: 159974475 bytes.
  Normal Created   43s  kubelet         Created container nginx
  Normal Started   43s  kubelet         Started container nginx

```

2. Expose Deployment as a Service:

- o Command:

```
kubectl expose deployment mynginx --type=NodePort --port=80 --target-port=80
```

Step 3: Scale the Deployment

Command:Scales the Nginx deployment to 4 replicas (pods).

```
kubectl scale deployment mynginx --replicas=4
```

```
kubectl get service mynginx
```

Step 4: Access the Nginx App

1. Using Port Forwarding:

- o Command:

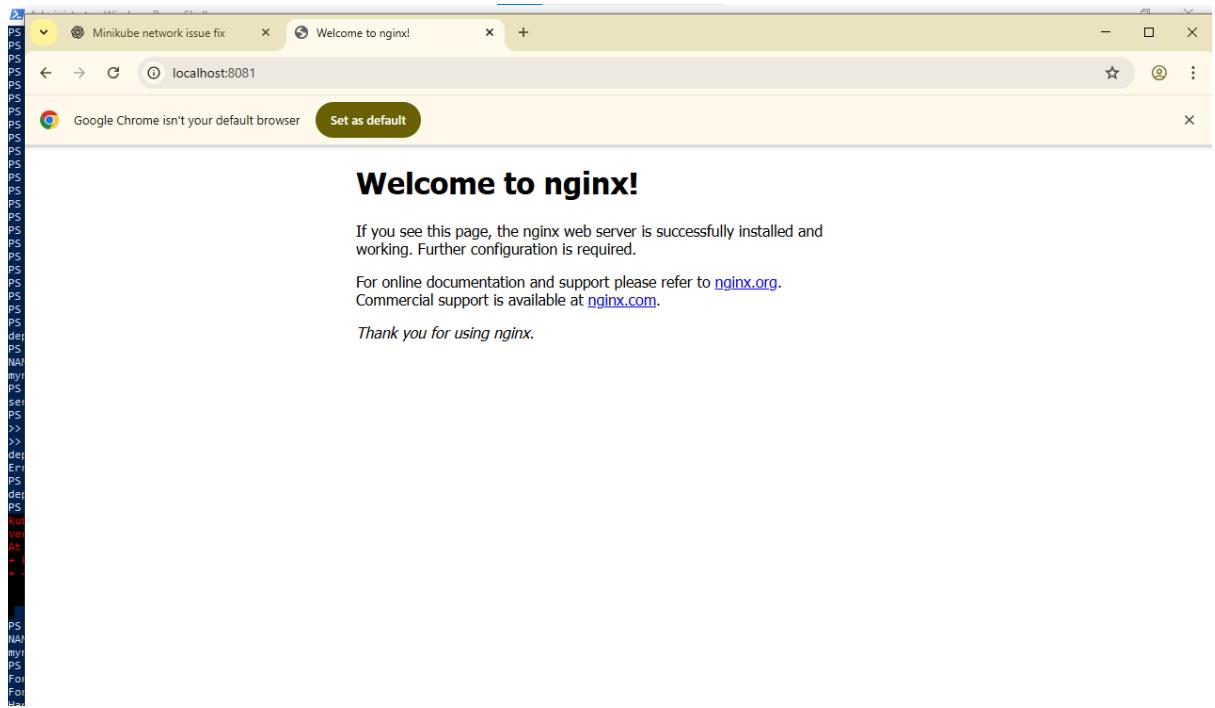
```
kubectl port-forward svc/mynginx 8081:80
```

- Access the app via <http://localhost:8081>.

```
PS C:\Windows\system32> kubectl scale deployment mynginx --replicas=4
deployment.apps/mynginx scaled
```

```
* FullyQualifiedErrorId::107,CommandNotFoundException
PS C:\Windows\system32> kubectl get service mynginx
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
mynginx   NodePort   10.100.169.198   <none>        80:31167/TCP   106s
PS C:\Windows\system32> kubectl port-forward svc/mynginx 8081:80
Forwarding from 127.0.0.1:8081 -> 80
Forwarding from [::1]:8081 -> 80
Handling connection for 8081
Handling connection for 8081

```



- Open the minikube dashboard

Minikube dashboard

```
Handling connection for 8081
PS C:\Windows\system32> Minikube dashboard
* Enabling dashboard ...
  - Using image docker.io/kubernetesui/dashboard:v2.7.0
  - Using image docker.io/kubernetesui/metrics-scraper:v1.0.8
* Some dashboard features require the metrics-server addon. To enable all features please run:
  minikube addons enable metrics-server

* Verifying dashboard health ...
* Launching proxy ...
* Verifying proxy health ...
* Opening http://127.0.0.1:50490/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default browser...
```

Kubernetes Dashboard - Workloads

127.0.0.1:50490/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/#/workloads?namespace=default

Google Chrome isn't your default browser Set as default

kubernetes default Search

Workloads

Workloads N

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods
- Replica Sets
- Replication Controllers
- Stateful Sets

Service

- Ingresses N
- Ingress Classes
- Services N

Config and Storage

- Config Maps N
- Persistent Volume Claims N
- Secrets N
- Storage Classes

Cluster

- Cluster Role Bindings

Workload Status

- Deployments: Running: 1
- Pods: Running: 4
- Replica Sets: Running: 1

Type here to search

28°C 11:53 14-10-2025

Kubernetes Dashboard - Deployments

127.0.0.1:53706/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/#/deployment?namespace=default

kubernetes default Search

Workloads > Deployments

Workloads N

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods
- Replica Sets
- Replication Controllers
- Stateful Sets

Deployments

Name	Images	Labels	Pods	Created
mynginx	nginx	app: mynginx	4 / 4	44 minutes ago

Ingresses N

Ingress Classes

Services N

Config and Storage

Name	Images	Labels	Pods	Created
mynginx	nginx	app: mynginx	4 / 4	44m

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)
mynginx-79bb8756c7-586gv	nginx	app: mynginx pod-template-hash: 79bb8756c7	minikube	Running	0	-	-
mynginx-79bb8756c7-74cpx	nginx	app: mynginx pod-template-hash: 79bb8756c7	minikube	Running	0	-	-
mynginx-79bb8756c7-xl9f4	nginx	app: mynginx pod-template-hash: 79bb8756c7	minikube	Running	0	-	-
mynginx-79bb8756c7-lbhnj	nginx	app: mynginx pod-template-hash: 79bb8756c7	minikube	Running	0	-	-

Name	Images	Labels	Pods	Created
mynginx-79bb8756c7	nginx	app: mynginx pod-template-hash: 79bb8756c7	4 / 4	45 minutes ago

Nagios Automation Steps

Step 1: Pull the Nagios Docker Image

- Open a terminal and run:

```
docker pull jasonrivers/nagios:latest
```

```

PS C:\Windows\system32> docker pull jasonrivers/nagios:latest
latest: Pulling from jasonrivers/nagios
Digest: sha256:2a7cb2d0118ba9f92b47b69a3901e68dd7664617801b94e560bc4d6564d6ae54
Status: Image is up to date for jasonrivers/nagios:latest
docker.io/jasonrivers/nagios:latest
PS C:\Windows\system32> docker run --name nagiosdemo -p 8888:80 jasonrivers/nagios:latest
docker: Error response from daemon: Ports are not available: exposing port TCP 0.0.0.0:8888 -> 0.0.0.0:0: listen tcp 0.0.0.0:8888: bind: Only one usage of each socket address (proto
ocel/network address/port) is normally permitted.
PS C:\Windows\system32> docker run --name nagiosdemo -p 8889:80 jasonrivers/nagios:latest
docker: Error response from daemon: Conflict. The container name "/nagiosdemo" is already in use by container "1502bd75ba729139176bc5088fc944fb886d8c4d797f5d059fd5f2cfc03ed43". Yo
u have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
PS C:\Windows\system32> docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
1502bd75ba72 jasonrivers/nagios:latest "/usr/local/bin/star..." 3 minutes ago Created
b3893fa7a382 new_se_web "python app.py" 4 weeks ago Exited (255) 3 weeks ago 0.0.0.0:5000->5000/tcp new_se-web-1
593434a22af8 postgres:13 "docker-entrypoint.s..." 4 weeks ago Exited (255) 3 weeks ago 5432/tcp new_se-db-1
07297a2b4066 nginx:latest "/docker-entrypoint.s..." 4 weeks ago Exited (255) 3 weeks ago 0.0.0.0:3033->80/tcp se_lab-web-1
6d93caf02acd nginx:latest "/docker-entrypoint.s..." 7 weeks ago Exited (255) 6 weeks ago 0.0.0.0:8089->80/tcp compose-web-1
848b6be09cf2 postgres:15 "docker-entrypoint.s..." 7 weeks ago Exited (255) 6 weeks ago 5432/tcp compose-db-1
f36f184f39c4 redis:alpine "docker-entrypoint.s..." 7 weeks ago Exited (255) 6 weeks ago 6379/tcp compose-redis-1
6591ec4949a5 b6de01ce0620 mysql:5.7 "docker-entrypoint.s..." 9 months ago Up 29 minutes 0.0.0.0:8000->80/tcp exter-wordpress-1
7630dc464132 mysql:5.7 "docker-entrypoint.s..." 9 months ago Up 29 minutes 3306/tcp, 33060/tcp exter-db-1
380e41461466 jasonrivers/nagios:latest "/usr/local/bin/star..." 9 months ago Created nagiosexam
7679619819ed jasonrivers/nagios:latest "/usr/local/bin/star..." 9 months ago Created nagios
173f462c7b80 jasonrivers/nagios:latest "/usr/local/bin/star..." 9 months ago Exited (4) 9 months ago nagios4
PS C:\Windows\system32> docker rm nagiosdemo
>>
nagiosdemo

```

Step 2: Run Nagios

- Command:

```
docker run --name nagiosdemo -p 8898:80 jasonrivers/nagios:latest
```

```

PS C:\Windows\system32> docker pull jasonrivers/nagios:latest
latest: Pulling from jasonrivers/nagios
Digest: sha256:2a7cb2d0118ba9f92b47b69a3901e68dd7664617801b94e560bc4d6564d6ae54
Status: Image is up to date for jasonrivers/nagios:latest
docker.io/jasonrivers/nagios:latest
PS C:\Windows\system32> docker run --name nagiosdemo -p 8888:80 jasonrivers/nagios:latest
docker: Error response from daemon: Ports are not available: exposing port TCP 0.0.0.0:8888 -> 0.0.0.0:0: listen tcp 0.0.0.0:8888: bind: Only one usage of each socket address (proto
ocel/network address/port) is normally permitted.
PS C:\Windows\system32> docker run --name nagiosdemo -p 8889:80 jasonrivers/nagios:latest
docker: Error response from daemon: Conflict. The container name "/nagiosdemo" is already in use by container "1502bd75ba729139176bc5088fc944fb886d8c4d797f5d059fd5f2cfc03ed43". Yo
u have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
PS C:\Windows\system32> docker run --name nagiosdemo -p 8899:80 jasonrivers/nagios:latest
docker: Error response from daemon: Conflict. The container name "/nagiosdemo" is already in use by container "1502bd75ba729139176bc5088fc944fb886d8c4d797f5d059fd5f2cfc03ed43". Yo
u have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
PS C:\Windows\system32> docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
1502bd75ba72 jasonrivers/nagios:latest "/usr/local/bin/star..." 3 minutes ago Created
b3893fa7a382 new_se_web "python app.py" 4 weeks ago Exited (255) 3 weeks ago 0.0.0.0:5000->5000/tcp new_se-web-1
593434a22af8 postgres:13 "docker-entrypoint.s..." 4 weeks ago Exited (255) 3 weeks ago 5432/tcp new_se-db-1
07297a2b4066 nginx:latest "/docker-entrypoint.s..." 4 weeks ago Exited (255) 3 weeks ago 0.0.0.0:3033->80/tcp se_lab-web-1
6d93caf02acd nginx:latest "/docker-entrypoint.s..." 7 weeks ago Exited (255) 6 weeks ago 0.0.0.0:8089->80/tcp compose-web-1
848b6be09cf2 postgres:15 "docker-entrypoint.s..." 7 weeks ago Exited (255) 6 weeks ago 5432/tcp compose-db-1
f36f184f39c4 redis:alpine "docker-entrypoint.s..." 7 weeks ago Exited (255) 6 weeks ago 6379/tcp compose-redis-1
6591ec4949a5 b6de01ce0620 mysql:5.7 "docker-entrypoint.s..." 9 months ago Up 29 minutes 0.0.0.0:8000->80/tcp exter-wordpress-1
7630dc464132 mysql:5.7 "docker-entrypoint.s..." 9 months ago Up 29 minutes 3306/tcp, 33060/tcp exter-db-1
380e41461466 jasonrivers/nagios:latest "/usr/local/bin/star..." 9 months ago Created nagiosexam
7679619819ed jasonrivers/nagios:latest "/usr/local/bin/star..." 9 months ago Created nagios
173f462c7b80 jasonrivers/nagios:latest "/usr/local/bin/star..." 9 months ago Exited (4) 9 months ago nagios4
PS C:\Windows\system32> docker rm nagiosdemo
>>
nagiosdemo

```

```

Error response from daemon: No such container: nagiosdemo
PS C:\Windows\system32> docker run --name nagiosdemo -p 8888:80 jasonrivers/nagios:latest
)
Adding password for user nagiosadmin
  chown: warning: '' should be ':': 'nagios.nagios'
Started runsvdir, PID is 13
checking permissions for nagios & nagiosgraph
rsyslogd: [origin software="rsyslogd" swVersion="8.2312.0" x-pid="22" x-info="https://www.rsyslog.com"] start
nagios: Nagios 4.5.7 starting... (PID=20)

Nagios Core 4.5.7
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors
Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 2024-10-24
License: GPL

Website: https://www.nagios.org
Nagios 4.5.7 starting... (PID=20)
Local time is Tue Oct 14 06:48:16 UTC 2025
Nagios version is Tue Oct 14 06:48:16 UTC 2025
nagios LOG VERSION: 2.0
wproc: Successfully registered manager as @wproc with query handler
nagios: qh: Socket '/opt/nagios/var/rw/nagios.qh' successfully initialized
nagios: qh: core query handler registered
nagios: qh: echo service query handler registered
nagios: qh: help for the query handler registered
nagios: wproc: Successfully registered manager as @wproc with query handler
wproc: Registry request: name=Core Worker 37;pid=37nagios: wproc: Registry request: name=Core Worker 37;pid=37
wproc: Registry request: name=Core Worker 38;pid=38
wproc: Registry request: name=Core Worker 39;pid=39
wproc: Registry request: name=Core Worker 41;pid=41
nagios: wproc: Registry request: name=Core Worker 38;pid=38
nagios: wproc: Registry request: name=Core Worker 39;pid=39
nagios: wproc: Registry request: name=Core Worker 41;pid=41
wproc: Registry request: name=Core Worker 40;pid=40nagios: wproc: Registry request: name=Core Worker 40;pid=40
wproc: Registry request: name=Core Worker 42;pid=42
nagios: wproc: Registry request: name=Core Worker 42;pid=42
Successfully launched command file worker with pid 50
nagios: Successfully launched command file worker with pid 50
postfix/master[26]: daemon started -- version 3.8.6., configuration /etc/postfix
nagios: SERVICE ALERT: localhost;Current Load;WARNING;SOFT;1;WARNING - load average: 3.16, 3.16, 3.08

```

Step 3: Access Nagios Dashboard

- Open your browser and navigate to:

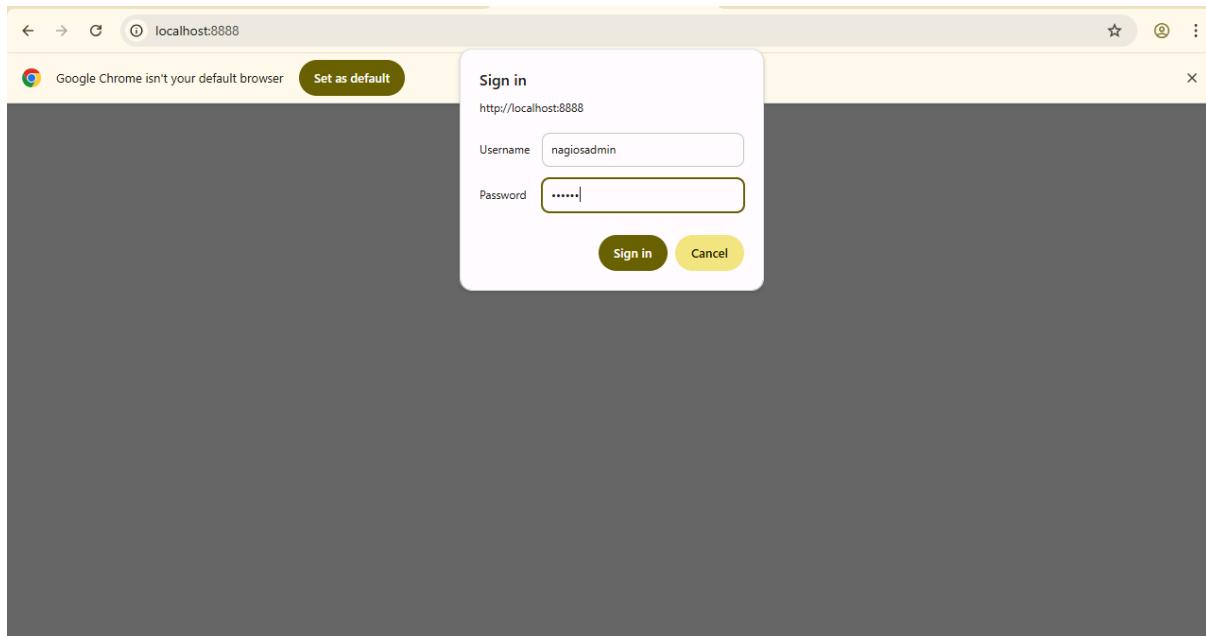
<http://localhost:8888>

- **Login Credentials:**

- **Username:** nagiosadmin
- **Password:** nagios

- Once logged in, explore:

- **Hosts:** View systems being monitored.
- **Services:** Check tasks being monitored (e.g., CPU usage).
- **Alerts:** Access recent notifications.



A screenshot of the Nagios Core 4.5.7 dashboard. The page title is 'Nagios'. The header includes the version 'Version 4.5.7 October 24, 2024' and a 'Check for updates' button. On the left, there's a navigation sidebar with sections: General (Home, Documentation), Current Status (Tactical Overview, Map, Hosts, Services, Host Groups, Service Groups, Problems, Services (Unhandled), Hosts (Unhandled), Network Outages), Reports (Availability, Trends, Alerts, History, Summary, Histogram), Notifications, Event Log, and System (Comments, Downtime, Process Info, Performance Info, Scheduling Queue). The main content area features a 'System Status' dashboard with a heatmap of host status by month, server statistics (CPU, Memory, Load), a status grid, and a bar chart. A blue banner at the top right says 'A new version of Nagios Core is available! Visit nagios.org to download Nagios 4.5.9.' At the bottom, there's a URL 'https://www.nagios.org/launch?utm_campaign=csp&utm_source=nagioscore&utm_medium=splash_thumbnail&utm_content=4.5.7' and a 'Page Tour' link.

localhost:8080

Current Network Status

Last Updated: Tue Oct 14 06:52:47 UTC 2025
Updated every 90 seconds
Nagios® Core™ 4.57 - www.nagios.org
Logged in as nagiosadmin

Host Status Totals

Up	0
Down	0
Unreachable	0
Pending	0

All Problems All Types
0 1

Service Status Totals

Ok	6
Warning	1
Unknown	0
Critical	0
Pending	1

All Problems All Types
1 7

Host Status Details For All Host Groups

Limit Results: 100

Host	Status	Last Check	Duration	Status Information
localhost	UP	10-14-2025 06:50:24	0d 0h 4m 30s	PING OK - Packet loss = 0%, RTA = 0.08 ms

Results 1 - 1 of 1 Matching Hosts

localhost:8888

Alert History

Last Updated: Tue Oct 14 06:53:49 UTC 2025
Nagios® Core™ 4.57 - www.nagios.org
Logged in as nagiosadmin

All Hosts and Services

Latest Archive ←

Log File Navigation

Tue Oct 14 00:00:00 UTC 2025 to Present.
File: /opt/nagios/var/nagios.log

State type options:
All state types ▾
History detail level for all hosts:
All alerts ▾
 Hide Flapping Alerts
 Hide Downtime Alerts
 Hide Process Messages
 Older Entries First
Update

October 14, 2025 06:00

```
[10-14-2025 06:53:24] SERVICE ALERT: localhost;HTTP;WARNING;HARD;4;HTTP WARNING: HTTP/11401 Unauthorized - 695 bytes in 0.000 second response time
[10-14-2025 06:52:24] SERVICE ALERT: localhost;HTTP;WARNING;SOFT;3;HTTP WARNING: HTTP/11401 Unauthorized - 695 bytes in 0.002 second response time
[10-14-2025 06:51:24] SERVICE ALERT: localhost;HTTP;WARNING;SOFT;2;HTTP WARNING: HTTP/11401 Unauthorized - 695 bytes in 0.001 second response time
[10-14-2025 06:50:58] SERVICE ALERT: localhost;Current Load;OK;SOFT;3;OK - load average: 2.40, 2.88, 2.99
[10-14-2025 06:50:24] SERVICE ALERT: localhost;HTTP;WARNING;SOFT;1;HTTP WARNING: HTTP/11401 Unauthorized - 695 bytes in 0.001 second response time
[10-14-2025 06:49:58] SERVICE ALERT: localhost;Current Load;WARNING;SOFT;2;WARNING - load average: 2.83, 3.04, 3.04
[10-14-2025 06:48:58] SERVICE ALERT: localhost;Current Load;WARNING;SOFT;1;WARNING - load average: 3.16, 3.16, 3.08
[10-14-2025 06:48:16] Nagios 4.57 starting... (PID=20)
```

Step 4: Monitoring Host Details

1. **Navigate to the Host Information Page:**
 - Select a host from the **Hosts** menu.
2. **Key Details:**
 - Host Status: Indicates if the system is UP or DOWN.
 - Metrics: View CPU usage, memory status, and network activity.
 - Actions: Reschedule checks, disable notifications, or schedule downtime.

The screenshot shows the Nagios Core 4.5.7 host information page for the host **localhost**. The top navigation bar includes links for Home, Documentation, Current Status, Tactical Overview, Reports, Availability, Trends, Alerts, and System. The main content area is divided into several sections:

- Host Information:** Last updated: Tue Oct 14 06:55:28 UTC 2025. Updated every 90 seconds. Nagios® Core™ 4.5.7 - www.nagios.org. Logged in as nagiosadmin.
- Host State Information:** Host Status: **UP** (for 0d 0h 7m 1s). Status Information: PING OK - Packet loss = 0%, RTA = 0.08 ms. Performance Data: rta=0.077000ms;3000.000000;5000.000000;0.000000 pl=0%;80;100;0. Current Attempt: 1/10 (HARD state). Last Check Time: 10-14-2025 06:50:24. Check Type: ACTIVE. Check Latency / Duration: 0.000 / 4.095 seconds. Next Scheduled Active Check: 10-14-2025 06:55:24. Last State Change: 10-14-2025 06:48:17. Last Notification: N/A (notification 0). Is This Host Flapping?: NO (0.00% state change). In Scheduled Downtime?: NO. Last Update: 10-14-2025 06:55:25 (0d 0h 0m 3s ago).
- Host Commands:** A list of actions available for the host, including Locate host on map, Disable active checks of this host, Re-schedule the next check of this host, Submit passive check result for this host, Stop accepting passive checks for this host, Stop obsessing over this host, Disable notifications for this host, Send custom host notification, Schedule downtime for this host, Schedule downtime for all services on this host, Disable notifications for all services on this host, Enable notifications for all services on this host, Schedule a check of all services on this host, Disable checks of all services on this host, Enable checks of all services on this host, Enable event handler for this host, Disable flap detection for this host, and Clear flapping state for this host.
- Host Comments:** A section for adding comments, with a link to Add a new comment and Delete all comments. It also includes columns for Entry Time, Author, Comment, Comment ID, Persistent, Type, Expires, and Actions. A note states: "This host has no comments associated with it."

The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray showing the date and time (14-10-2025, 12:25), battery level (28°C), and network status.

Step 5: Stop and Remove Nagios

1. Stop the Container:

- o Command:

```
docker stop nagiosdemo
```

2. Delete the Container:

- o Command:

```
docker rm nagiosdemo
```

3. Remove the Image (Optional):

- o List images:

```
docker images
```

- o Delete the Nagios image:

```
docker rmijasonrivers/nagios:latest
```

4. Observe the docker containers in DockerHub, we can see the latest Nagios Installed running on port:8888

The screenshot shows a Windows command prompt window with the following text:

```
PS C:\Windows\system32> docker stop nagiosdemo
PS C:\Windows\system32> docker rm nagiosdemo
PS C:\Windows\system32> docker images
REPOSITORY          TAG      IMAGE ID      CREATED     SIZE
new_se-web          latest   b9949397c4ef  4 weeks ago  202MB
mongo               latest   cf340b1e5283  5 weeks ago  1.22GB
budanrajumadurika/redis1    latest   6ca2791ceccc  8 weeks ago  280MB
redisnew            latest   9275ee693979  8 weeks ago  280MB
redis               alpine   987c376c7276  8 weeks ago  100MB
postgres            15      bc51cf4f1fe0  2 months ago  629MB
postgres            13      aedabd10a05c  2 months ago  620MB
nginx               latest   33e0bbcc7ca9e  2 months ago  279MB
wordpress           latest   c5f075fc71c9  3 months ago  1.04GB
ubuntu              latest   7c06e01f61fa  3 months ago  117MB
<none>              <none>  b50e01c0e020  10 months ago  994MB
jasonrivers/nagios  latest   257c2b20d118  11 months ago  1.36GB
docker/desktop-kubernetes  kubernetes-v1.30.5-cni-v1.4.0-cri-tools-v1.29.0-cri-dockerd-v0.3.11-1-debian  a77b9256c8d  12 months ago  625MB
registry.k8s.io/kube-apiserver  v1.30.5  7746aa55a074  13 months ago  153MB
registry.k8s.io/kube-scheduler  v1.30.5  62c91756a3c9  13 months ago  84.6MB
registry.k8s.io/kube-controller-manager  v1.30.5  bbd151267294  13 months ago  146MB
registry.k8s.io/kube-proxy  v1.30.5  fa20f01151b9  13 months ago  118MB
gcr.io/k8s-minikube/kicbase  v0.0.45  e7c9w3hc515  13 months ago  1.81GB
gcr.io/k8s-minikube/kicbase  <none>  81df28859520  13 months ago  1.81GB
registry.k8s.io/coredns/coredns  v1.11.3  9caabff62388  14 months ago  85.1MB
registry.k8s.io/etcd  3.5.12-0  44ae824dcbb8  20 months ago  211MB
mysql               5.7      4bc6b963e6d  22 months ago  689MB
docker/desktop-vpnkit-controller  dc331cb22850be0bdd97c84a9cfecaf44a1afb6e  7ecf567a0978  2 years ago  47MB
registry.k8s.io/pause  3.9      7831cb28338  3 years ago  1.97MB
docker/desktop-storage-provisioner  v2.0      115d77e7e6e2  4 years ago  59.2MB
registry.k8s.io/etcd  3.5.15-0  a6dc63e6e8cf  55 years ago  56.9MB
PS C:\Windows\system32> See docker --help
PS C:\Windows\system32>
```

1. Your Pod keeps restarting repeatedly. What will you do?

ANS: Check the pod logs using `kubectl logs <pod-name>`, review the events with `kubectl describe pod <pod-name>`, check resource limits (CPU/memory), and verify readiness and liveness probes.

2. A Kubernetes pod is stuck in a "Pending" state. What could be the possible reasons, and how would you troubleshoot it?

ANS: Possible causes: insufficient resources, unschedulable nodes, or affinity issues. Troubleshoot with `kubectl describe pod <pod-name>` to check events, node capacity, and scheduling issues.

3. How would you debug a failed deployment in Kubernetes?

ANS: Use `kubectl describe deployment <deployment-name>`, check pod logs (`kubectl logs <pod-name>`), and check events (`kubectl get events`). Look for issues in replicas, resources, or probes.

4. You have a Kubernetes Deployment with multiple replicas, and some pods are failing health checks. How would you identify the root cause and fix it?

ANS: Identify the cause by checking the pod's logs (`kubectl logs <pod-name>`), reviewing the health check configuration, and verifying pod resource consumption. Adjust resources or fix health check configurations.

5. How do you roll back a faulty deployment?

ANS: Use `kubectl rollout undo deployment/<deployment-name>` to rollback to the previous version.

6. How do you debug a running Pod?

ANS: Use `kubectl logs <pod-name>`, check the pod status with `kubectl describe pod <pod-name>`, and inspect events (`kubectl get events`).

7. You need to expose a local service externally. How to do?

ANS: Use `kubectl expose pod <pod-name> --type=LoadBalancer` or create a service of type NodePort or LoadBalancer to expose the service externally.

8. How to start and stop Nagios

ANS:

- **Start:** sudo systemctl start nagios
- **Stop:** sudo systemctl stop nagios

9. You installed Nagios but the web interface shows “*Unable to connect to Nagios process*”. How to resolve this?

ANS: Ensure Nagios is running (sudo systemctl status nagios), check Nagios configuration (/usr/local/nagios/etc/nagios.cfg), and restart Nagios (sudo systemctl restart nagios).

10. You added a new host in Nagios, but it's not appearing on the web interface. how to check?

ANS: Ensure the configuration file for the new host is correct, and reload Nagios with sudo systemctl reload nagios. Check Nagios logs for errors.

11. How can you check whether Nagios is running properly?

ANS: Use sudo systemctl status nagios to verify if the service is active and running.

12. How do you view Nagios logs in real-time

ANS: Use tail -f /usr/local/nagios/var/nagios.log to view logs in real-time.

13. What are the advantages of using Nagios?

ANS: Provides comprehensive monitoring for networks, servers, and applications; customizable alerts; robust community support; highly extensible with plugins.

