

Nexus Lab Nexus Installation and Usage

Date: Nov 6 2025

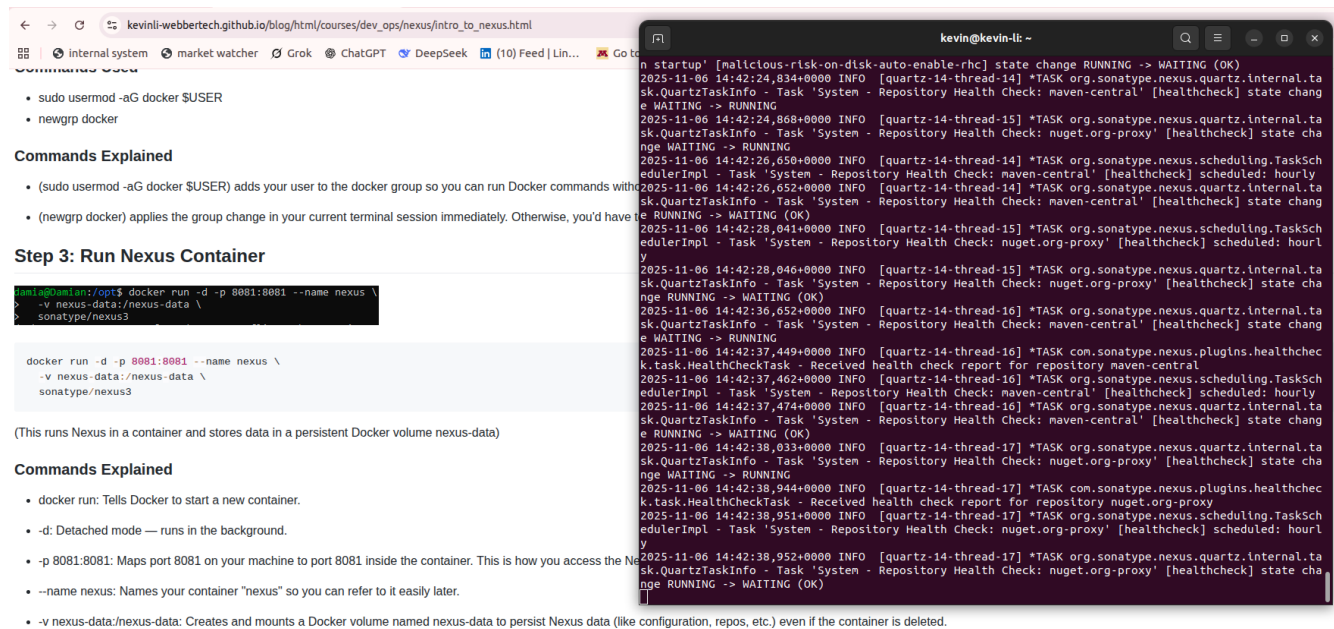
Written by: Kevin Li

Step 1 Run Nexus Docker Instance

1/ Create a folder called nexus-data in your current working directory,

Commands:

```
docker run -d -p 8081:8081 --name nexus \
-v nexus-data:/nexus-data \
sonatype/nexus3
```



The screenshot displays a web browser on the left and a terminal window on the right. The browser shows a GitHub page with Docker commands for running Nexus. The terminal window shows the execution of the `docker run` command and the resulting logs for the Nexus container.

Commands Explained

- (`sudo usermod -aG docker $USER`) adds your user to the docker group so you can run Docker commands without `sudo`.
- (`newgrp docker`) applies the group change in your current terminal session immediately. Otherwise, you'd have to open a new terminal window.

Step 3: Run Nexus Container

```
jamie@jamie-laptop:~$ docker run -d -p 8081:8081 --name nexus \
-v nexus-data:/nexus-data \
sonatype/nexus3
```

`docker run -d -p 8081:8081 --name nexus \`
`-v nexus-data:/nexus-data \`
`sonatype/nexus3`

(This runs Nexus in a container and stores data in a persistent Docker volume nexus-data)

Commands Explained

- `docker run`: Tells Docker to start a new container.
- `-d`: Detached mode — runs in the background.
- `-p 8081:8081`: Maps port 8081 on your machine to port 8081 inside the container. This is how you access the Nexus web interface.
- `--name nexus`: Names your container "nexus" so you can refer to it easily later.
- `-v nexus-data:/nexus-data`: Creates and mounts a Docker volume named nexus-data to persist Nexus data (like configuration, repos, etc.) even if the container is deleted.

Commands:

```
docker logs -f 3cedcd8a1a28e153695bfd553cc37c4464f73b2912ea5af9218b8a59b91eba9c &
```

Explanation:

* The hash id 3cedcd8a1a28e153695bfd553cc37c4464f73b2912ea5af9218b8a59b91eba9c is your container, please replace it and do not use this.

* & in the end is to release the terminal back to you. As it was run as a background job.

* -f is to output the log in realtime mode.

You can see in the bottom, if you hit enter, you can get your terminal back. This terminal process would not be hung there since the 'docker logs -f ...' process is running in the background.

```
2025-11-06 14:42:36,652+0000 INFO [quartz-14-thread-16] *TASK org.sonatype.nexus.quartz.internal.task.QuartzTaskInfo - Task 'System - Repository Health Check: maven-central' [healthcheck] state change WAITING -> RUNNING
2025-11-06 14:42:37,449+0000 INFO [quartz-14-thread-16] *TASK com.sonatype.nexus.plugins.healthcheck.task.HealthCheckTask - Received health check report for repository maven-central
2025-11-06 14:42:37,462+0000 INFO [quartz-14-thread-16] *TASK org.sonatype.nexus.scheduling.TaskSchedulerImpl - Task 'System - Repository Health Check: maven-central' [healthcheck] scheduled: hourly
2025-11-06 14:42:37,474+0000 INFO [quartz-14-thread-16] *TASK org.sonatype.nexus.quartz.internal.task.QuartzTaskInfo - Task 'System - Repository Health Check: maven-central' [healthcheck] state change RUNNING -> WAITING (OK)
2025-11-06 14:42:38,033+0000 INFO [quartz-14-thread-17] *TASK org.sonatype.nexus.quartz.internal.task.QuartzTaskInfo - Task 'System - Repository Health Check: nuget.org-proxy' [healthcheck] state change WAITING -> RUNNING
2025-11-06 14:42:38,944+0000 INFO [quartz-14-thread-17] *TASK com.sonatype.nexus.plugins.healthcheck.task.HealthCheckTask - Received health check report for repository nuget.org-proxy
2025-11-06 14:42:38,951+0000 INFO [quartz-14-thread-17] *TASK org.sonatype.nexus.scheduling.TaskSchedulerImpl - Task 'System - Repository Health Check: nuget.org-proxy' [healthcheck] scheduled: hourly
2025-11-06 14:42:38,952+0000 INFO [quartz-14-thread-17] *TASK org.sonatype.nexus.quartz.internal.task.QuartzTaskInfo - Task 'System - Repository Health Check: nuget.org-proxy' [healthcheck] state change RUNNING -> WAITING (OK)
kevin@kevin-li:~$
```

Now in the log window, please scroll up and you should see a line like the one below.

```
kevin@kevin-li: ~
Initialized
2025-11-06 14:41:50,744+0000 INFO [jetty-main-1] *SYSTEM org.eclipse.jetty.server.handler.ContextHandler - Started oeje8n.ContextHandler$CoreContextHandler@6aeac021{Sonatype Nexus,/,b=null,a=AVAILABLE,h=oeje8n.ContextHandler$CoreContextHandler$CoreToNestedHandler@2e872b2a{STARTED}}
2025-11-06 14:41:50,802+0000 INFO [jetty-main-1] *SYSTEM org.eclipse.jetty.jmx.MetaData - Getter/setter type mismatch for mbean attribute formEncodedMethods in class org.eclipse.jetty.server.HttpConfiguration, attribute will be read-only
2025-11-06 14:41:50,834+0000 INFO [jetty-main-1] *SYSTEM org.eclipse.jetty.server.AbstractConnector - Started ServerConnector@5d091efa[HTTP/1.1, (http/1.1)]{0.0.0.0:8081}
2025-11-06 14:41:50,839+0000 INFO [jetty-main-1] *SYSTEM org.eclipse.jetty.server.Server - Started oejs.Server@15e28549{STARTING}[12.0.17,sto=5000] @44728ms
2025-11-06 14:41:50,840+0000 INFO [jetty-main-1] *SYSTEM org.sonatype.nexus.bootstrap.entrypoint.jetty.JettyServer -
-----
Started Sonatype Nexus COMMUNITY 3.86.0-08 (f31dd905)
-----
2025-11-06 14:41:56,980+0000 INFO [main] *SYSTEM com.sonatype.nexus.bootstrap.entrypoint.pro.SonatypeNexusRepositoryApplication - Started SonatypeNexusRepositoryApplication in 49.628 seconds (process running for 50.869)
2025-11-06 14:42:00,085+0000 INFO [quartz-14-thread-12] *TASK org.sonatype.nexus.quartz.internal.task.QuartzTaskInfo - Task 'Upgrade - moving api keys to v2 table' [nexus.apikey.secrets] state change RUNNING -> OK
2025-11-06 14:42:19,125+0000 INFO [quartz-14-thread-13] *TASK org.sonatype.nexus.quartz.internal.task.QuartzTaskInfo - Task 'Malicious Risk On Disk - Auto enable Health Check for proxy repositories on startup' [malicious-risk-on-disk-auto-enable-rhc] state change WAITING -> RUNNING
2025-11-06 14:42:19,127+0000 INFO [quartz-14-thread-13] *TASK com.sonatype.nexus.risk.riskondisk.MaliciousRiskOnDiskAutoEnableRHCTask - Starting malicious-risk-on-disk-auto-enable-rhc task
2025-11-06 14:42:19,128+0000 INFO [quartz-14-thread-13] *TASK com.sonatype.nexus.risk.riskondisk.MaliciousRiskOnDiskAutoEnableRHCTask - Found 2 proxy repositories
2025-11-06 14:42:19,833+0000 INFO [quartz-14-thread-13] *TASK org.sonatype.nexus.quartz.internal.task.QuartzTaskInfo - Task 'System - Repository Health Check: maven-central' [healthcheck] : state=WAITING
2025-11-06 14:42:19,839+0000 INFO [quartz-14-thread-13] *TASK org.sonatype.nexus.scheduling.TaskSchedulerImpl - Task 'System - Repository Health Check: maven-central' [healthcheck] scheduled: hourly
2025-11-06 14:42:19,851+0000 INFO [quartz-14-thread-13] *TASK com.sonatype.nexus.plugins.healthcheck.service.impl.HealthCheckTaskManagerImpl - Enabled health check for repository maven-central
2025-11-06 14:42:19,862+0000 INFO [quartz-14-thread-13] *TASK org.sonatype.nexus.quartz.internal.task.QuartzTaskInfo - Task 'System - Repository Health Check: nuget.org-proxy' [healthcheck] : state=W
```

What it shows is the version and the nexus instance has been run successfully.

Step 2: Get password and Login

Next, let us get the password,

Commands:

docker exec -it nexus cat /nexus-data/admin.password

```
sk.QuartzTaskInfo - Task 'System - Repository Health Check: nuget.org-proxy' [healthcheck] state change RUNNING -> WAITING (OK)
kevin@kevin-li:~$
kevin@kevin-li:~$ docker exec -it nexus cat /nexus-data/admin.password
83952577-6b16-42ec-ac03-43f711834b48kevin@kevin-li:~$
```

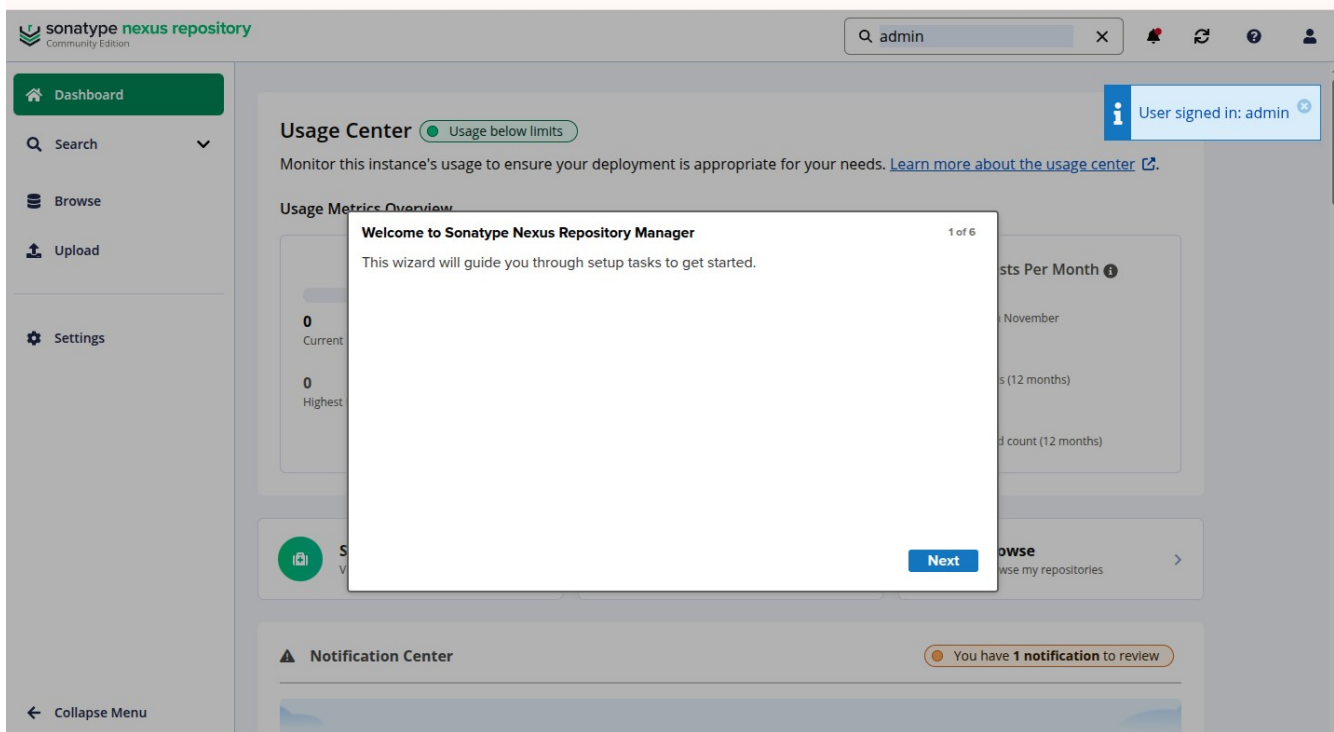
Go to your browser and open this url,

localhost:8081

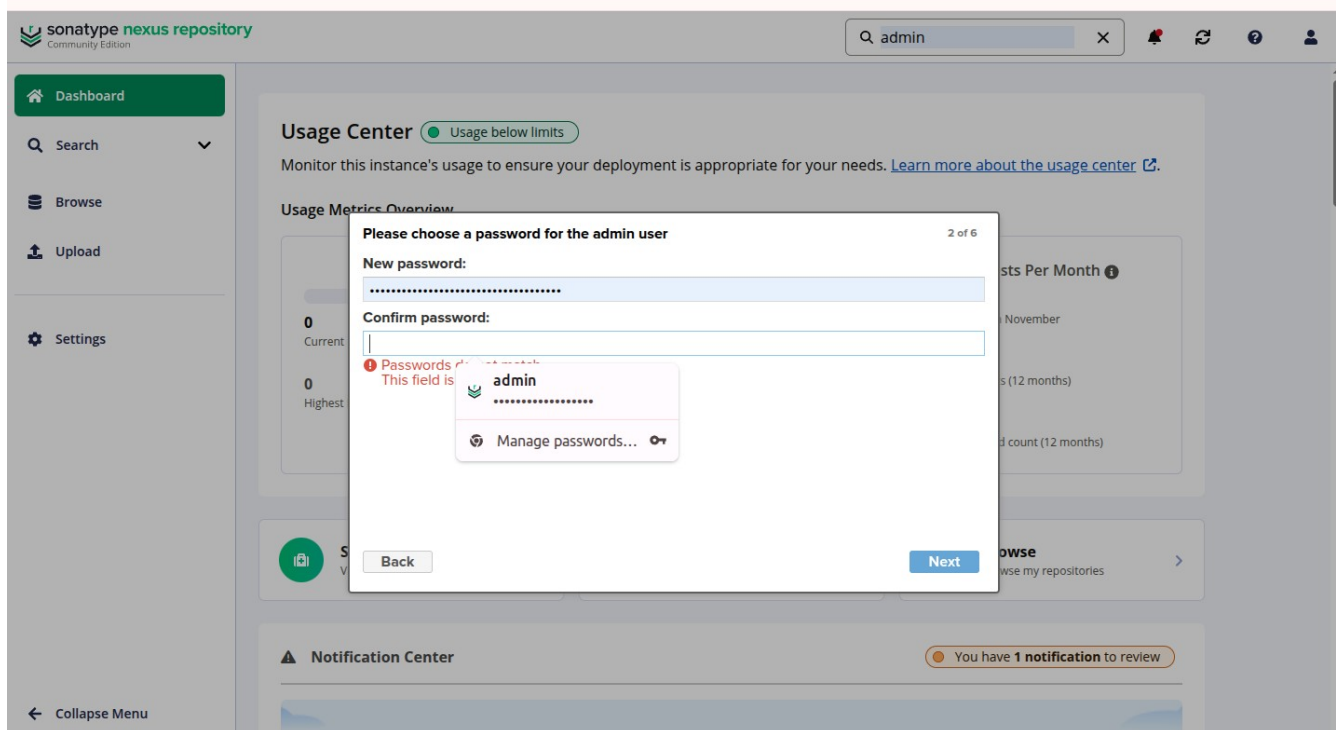
For me the password is:

83952577-6b16-42ec-ac03-43f711834b48

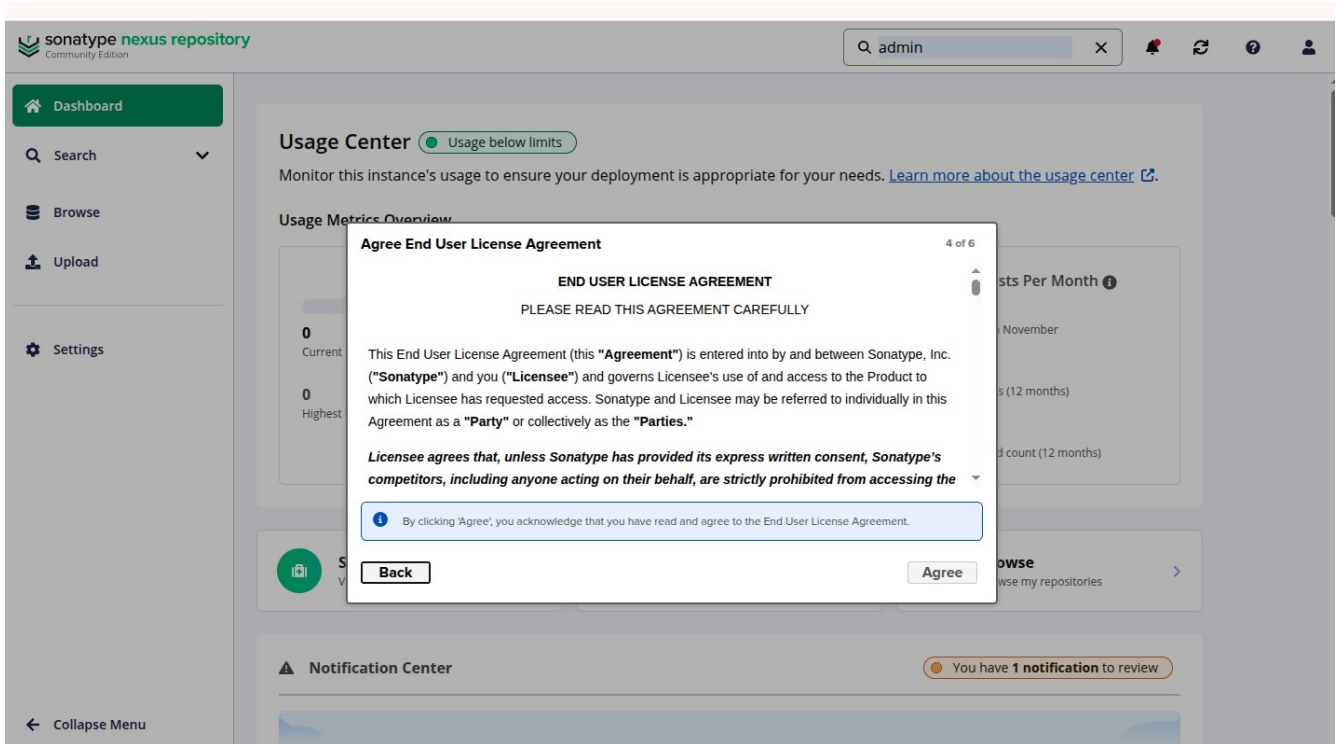
Note: For you, the password might be different.



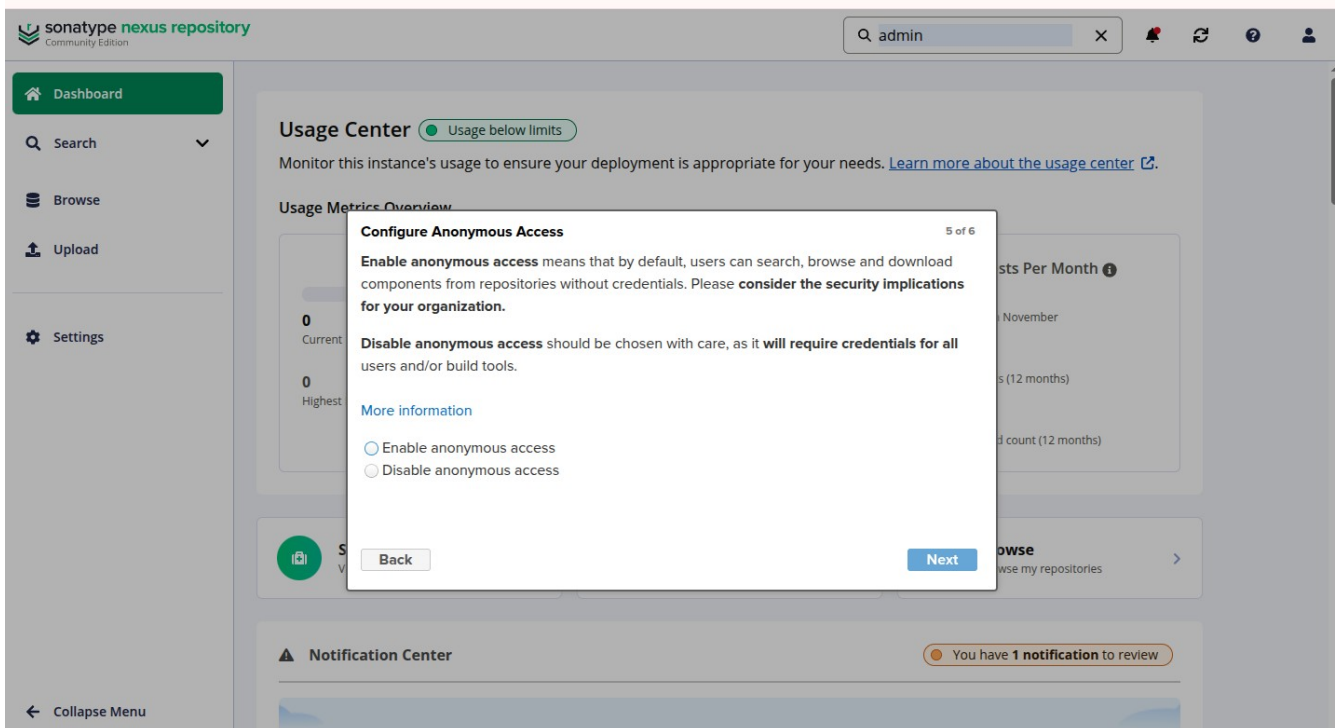
Change password for the first time.



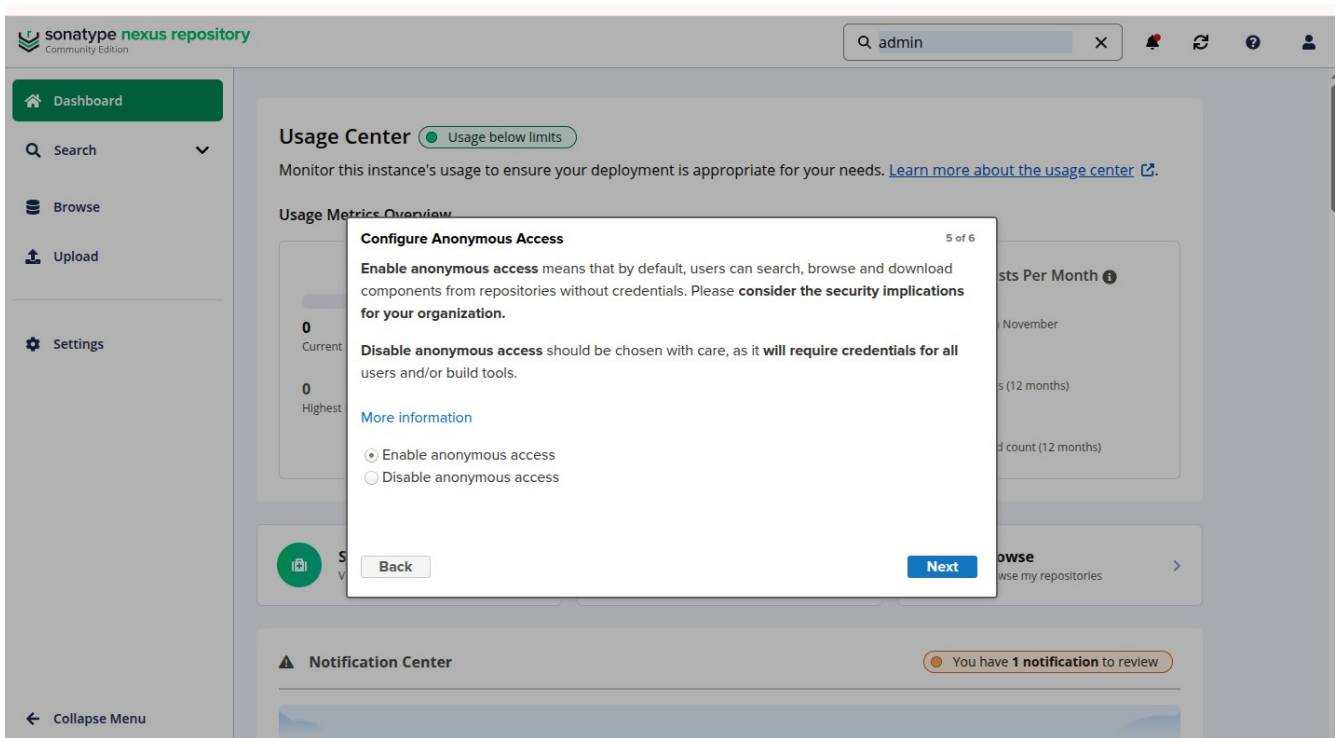
Next screen,



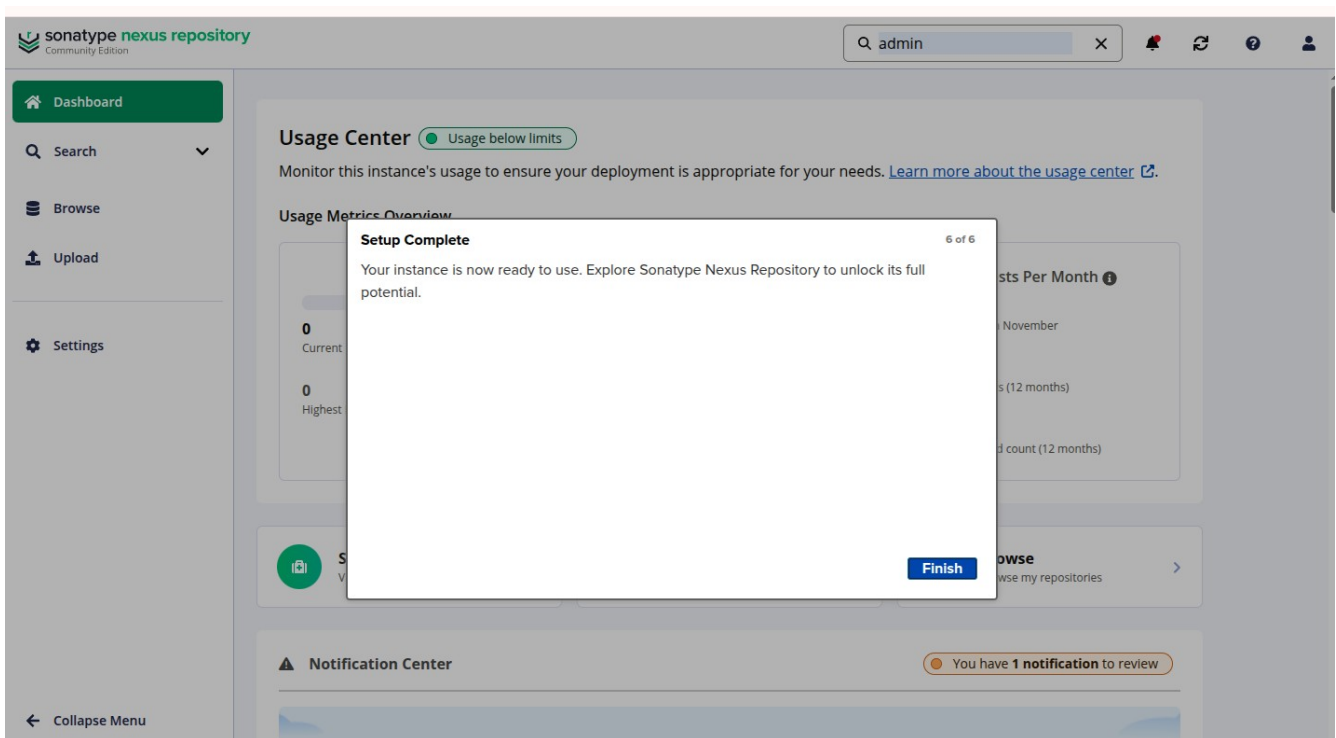
Select the first option,



As of now, we would choose "Enable anonymous access",



For our future lab we will just work with this option.



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Community Edition

admin

Dashboard

Search

Browse

Upload

Settings

Usage Center

Usage below limits

Monitor this instance's usage to ensure your deployment is appropriate for your needs. [Learn more about the usage center](#)

Usage Metrics Overview

Total Components	Requests Per Day	Requests Per Month
<div>0</div> <div>Current</div> <div>100,000</div> <div>Usage Limit</div>	<div>0</div> <div>Last 24 hours</div> <div>200,000</div> <div>Usage Limit</div>	<div>0</div> <div>Total requests in November</div>
<div>0</div> <div>Highest Recorded Count (30 days)</div>	<div>0</div> <div>Highest Recorded Count (30 days)</div>	<div>0</div> <div>Average requests (12 months)</div>
		<div>0</div> <div>Highest recorded count (12 months)</div>

System Health

View system status checks

Cleanup Policies

Review component removal policies

Browse

Browse my repositories

Notification Center

You have 1 notification to review

Step 3 Upload Artifact

First let us click on browse,

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admin

Dashboard

Search

Browse

Upload

Settings

Browse

Filter

Name ↑	Type	Format	Status	URL	Health check	Firewall Re...
maven-central	proxy	maven2	Online - Ready to Connect	copy	0 0	
maven-public	group	maven2	Online	copy		
maven-releases	hosted	maven2	Online	copy		
maven-snapshots	hosted	maven2	Online	copy		
nuget-group	group	nuget	Online	copy		
nuget-hosted	hosted	nuget	Online	copy		
nuget.org-proxy	proxy	nuget	Online - Ready to Connect	copy	0 0	

Then click on maven-central,

Dashboard

Search

Browse

Upload

Settings

← Collapse Menu

Browse

Name ↑	Type	Format	Status	URL	Health check	Firewall Re...
maven-central	proxy	maven2	Online - Ready to Connect	copy	0 0	
maven-public	group	maven2	Online	copy		
maven-releases	hosted	maven2	Online	copy		
maven-snapshots	hosted	maven2	Online	copy		
nuget-group	group	nuget	Online	copy		
nuget-hosted	hosted	nuget	Online	copy		
nuget.org-proxy	proxy	nuget	Online - Ready to Connect	copy	0 0	

Remember the <https://mvnrepository.com/>. That is similar to this.

Then let us go to upload an artifact,

Dashboard

Search

Browse

Upload

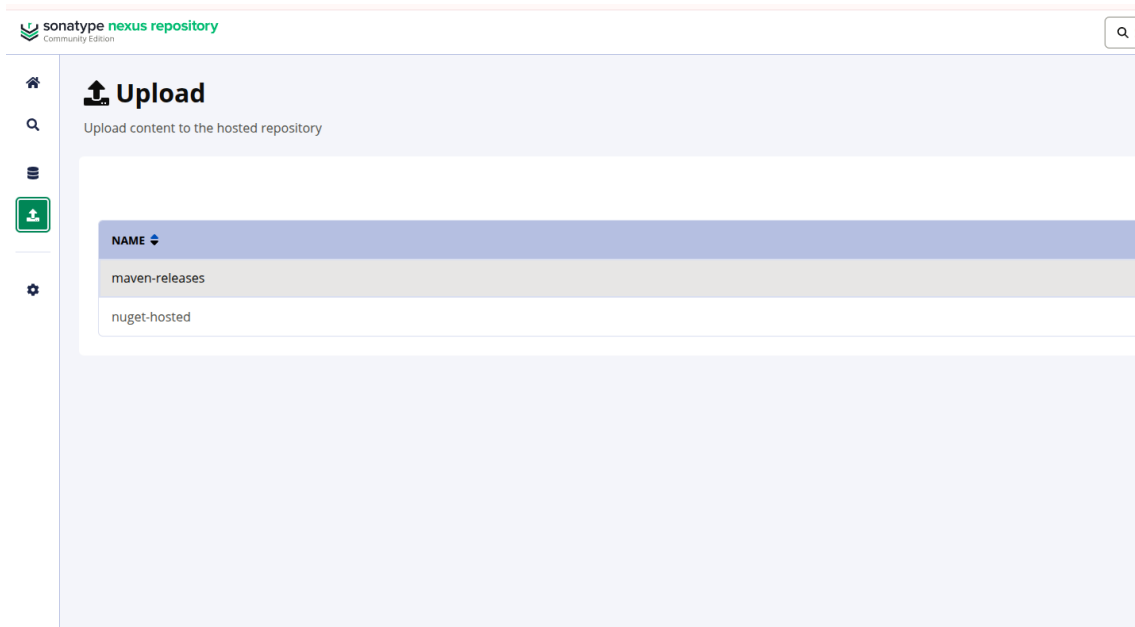
Settings

← Collapse Menu

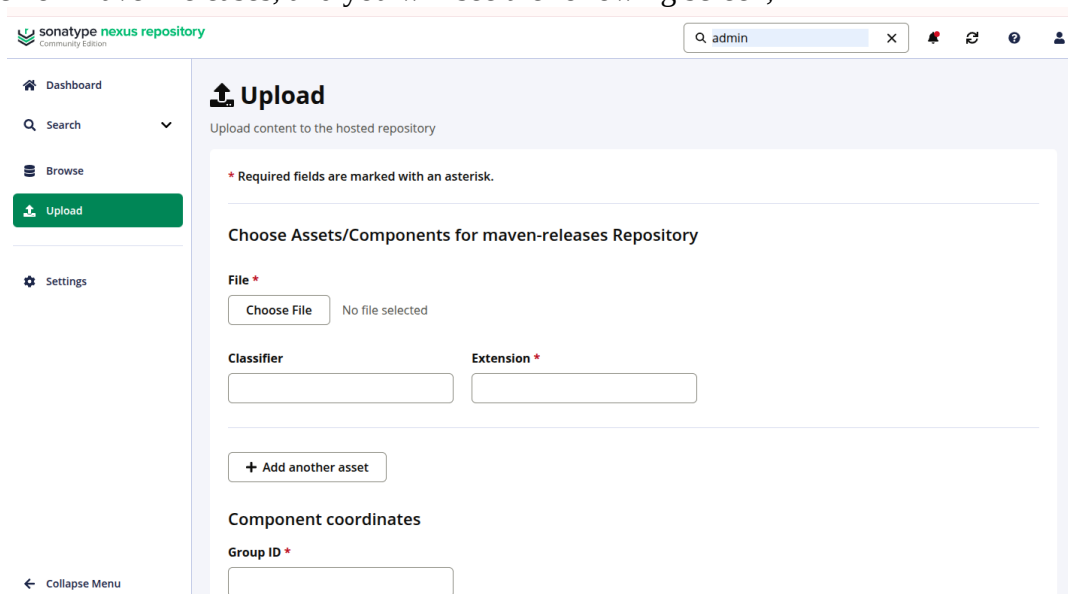
Upload

Upload content to the hosted repository

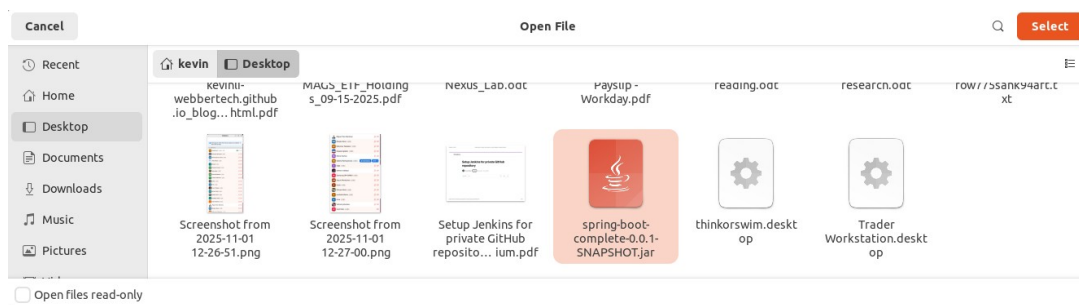
NAME ↓	FORMAT ↓	URL
maven-releases	maven2	>
nuget-hosted	nuget	>



Let us click on maven-releases, and you will see the following screen,



Pick a jar you built,



You will find out that the jar is uploaded and the Extension.

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Search components

Choose Assets/Components for maven-releases Repository

File *
Choose File spring-boot-complete-0.0.1-SNAPSHOT.jar 22.8 MB

Classifier ✓ Extension *
 jar ✓

+ Add another asset

Component coordinates

Group ID *

Artifact ID *

Version *

For the fields,

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Search components

+ Add another asset

Component coordinates

Group ID *
 abc ✓

Artifact ID *
 abc.def ✓

Version *
 1.0 ✓

☐ Generate a POM file with these coordinates

Packaging

Click on the jar,

localhost:8081/#browse/search/generic=keyword%3D"%2Fabc%2Fabc.def%2F1.0%2Fabc.def-1.0.jar"

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Search components

Search

Keyword
*/abc/abc.def/1.0/abc.def-1.0.jar More criteria

The form was saved successfully

Name	Group	Last Updated	Version	Format	Repository
abc.def	abc	11/6/2025, 11:44:45 AM	1.0	maven2	maven-releases

localhost:8081/#browse/search/generic=keyword%3D"%2Fabc%2Fabc.def%2F1.0%2Fabc.def-1.0.jar":maven2-4f1bbcd

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Search components

Search / abc.def

Repository maven-releases Group abc Most popular version

Format maven2 Name abc.def Age

Version 1.0 Popularity

Delete component Analyze application

Name
/abc/abc.def/1.0/abc.def-1.0.jar
/abc/abc.def/1.0/abc.def-1.0.jar.md5
/abc/abc.def/1.0/abc.def-1.0.jar.sha1
/abc/abc.def/1.0/abc.def-1.0.jar.sha256
/abc/abc.def/1.0/abc.def-1.0.jar.sha512

Click on the above jar,

localhost:8081/#browse/search/generic=keyword%3D"%2Fabc%2Fabc.def%2F1.0%2Fabc.def-1.0.jar":maven2-4f1bbcd:4f1bbcd

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Search components

Search / abc.def / /abc/abc.def/1.0/abc.def-1.0.jar

Delete asset

Summary Usage Attributes

Summary

Path	abc/abc.def/1.0/abc.def-1.0.jar
Content type	application/java-archive
File size	21.8 MB
Blob created	Thu Nov 06 2025 11:44:45 GMT-0500 (Eastern Standard Time)
Blob updated	Thu Nov 06 2025 11:44:45 GMT-0500 (Eastern Standard Time)
Last downloaded	has not been downloaded
Locally cached	true
Blob reference	default@c91ad4fa-5097-4d6e-9cba-5fe91cf0be44@2025-11-06T16:44
Containing repo	maven-releases
Uploader	admin
Uploader's IP Address	172.17.0.1

This is how it looks,

