

6 - Artifact Repository Manager with Nexus

Solutions for Module "Artifact Repository Manager with Nexus"

You and other teams in 2 different projects in your company see that they have many different small projects, including the NodeJS application you built in the previous step, the java-gradle helper application and so on. You discuss and decide it would be a good idea to be able to keep all these app artifacts in 1 place, where each team can keep their app artifacts and can access them when they need.

So they ask you to setup Nexus in the company and create repositories for 2 different projects.

Java Gradle App: <https://gitlab.com/twn-devops-bootcamp/latest/06-nexus/java-app>

Java Maven App: <https://gitlab.com/twn-devops-bootcamp/latest/06-nexus/java-maven-app>

► Solution 1: Install Nexus on a server

EXERCISE 1: Install Nexus on a server

- If you already followed the demo in the Nexus module for installing Nexus, then you can use that one.
- If not, you can watch the module demo video to install Nexus.

ON IONOS CLOUD VM

```
cd /opt/
wget https://download.sonatype.com/nexus/3/nexus-3.61.0-01-unix.tar.gz
tar -xvzf nexus-3.61.0-01-unix.tar.gz
adduser nexus

chown -R nexus:nexus nexus-3.61.0-01
chown -R nexus:nexus sonatype-work
vim nexus-3.61.0-01/bin/nexus.rc

java -version
java was not installed

wget -O - https://packages.adoptium.net/artifactory/api/gpg/key/public |
apt-key add -
echo "deb https://packages.adoptium.net/artifactory/deb $(awk -F=
'^VERSION_CODENAME/{print$2}' /etc/os-release) main" | tee
/etc/apt/sources.list.d/adoptium.list

apt-get update
apt-get install temurin-8-jdk

update-alternatives --config java

vim /etc/systemd/system/nexus.service
```

```

[Unit]
Description=nexus service
After=network.target

[Service]
Type=forking
LimitNOFILE=65536
ExecStart=/opt/nexus-3.61.0-01/bin/nexus start
ExecStop=/opt/nexus-3.61.0-01/bin/nexus stop
User=nexus
Restart=on-abort

[Install]
WantedBy=multi-user.target
"

systemctl daemon-reload
systemctl enable --now nexus.service
systemctl restart nexus

netstat -tlnp

```

```

root@t360-ionosmonitoring:~# netstat -tlnp
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 0.0.0.0:80              0.0.0.0:*               LISTEN      33148/nginx: master
tcp        0      0 0.0.0.0:8081            0.0.0.0:*               LISTEN      82375/java
tcp        0      0 127.0.0.1:45749         0.0.0.0:*               LISTEN      82375/java
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      1609/sshd: /usr/sbi
tcp6       0      0 :::80                   :::*                    LISTEN      33148/nginx: master
tcp6       0      0 :::22                   :::*                    LISTEN      1609/sshd: /usr/sbi

```

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cloudpanel.ionos.de/panel/app/corevps?ionospanelid=ionos1096be30-e3ed-4d8d-9

BİLKEM: BAĞLAM...

Ungarische autob...

BGMAUT

Five Funny Little L...

Server Monitoring...

Netzwerk

Firewall-Richtlinien

Öffentliche IP

Management

Kosten

Hilfe

Sagen Sie uns, was Sie über die Cloud-Transformation denken und nehmen Sie an unserer Befragung teil. [Jetzt teilnehmen](#)

🔔

🔊

⚙️

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Firewall-Richtlinien

Filter

Name	Status	Port
My firewall policy	🟡	TCP: 22, 8443, 8447, 3000, 9999, 8081

My firewall policy

Konfiguration

Geben Sie eine Beschreibung ein

Konfiguration

Eingehend

Aktion	Erlaubte IP	Protokoll	Port(s)	Beschreibung	
Zulassen	Alle	TCP	22		🔍 ⌵
Zulassen	Alle	TCP	8443		🔍 ⌵
Zulassen	Alle	TCP	8447		🔍 ⌵
Zulassen	Alle	TCP	3000	GRAFANA	🔍 ⌵
Zulassen	Alle	TCP	9999	PROM	🔍 ⌵
Zulassen	176.199.168.192/32	TCP	8081	Nexus	🔍 ⌵

➕ Standardwerte einfügen

←

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cloudpanel.ionos.de/panel/app/corevps?ionospanelid=ionos1096be30-e3ed-4d8c

BİLKEM: BAĞLAM...

Ungarische autob...

BGMAUT

Five Funny Little L...

Server Monitoring...

IONOS MENÜ

Infrastruktur

Server

Images

Netzwerk

Firewall-Richtlinien

Öffentliche IP

Management

Kosten

Hilfe

Letzter Login: 29.09.2023 14:52:57 von 176.199.168.192 (Germany)

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⚙️

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Der SMTP-Port 25 (ausgehend) ist aus Sicherheitsgründen gesperrt. Wenn Sie den SMTP-Port freischalten möchten, wenden Sie sich bitte an den [Support](#).

[Zeigen Sie diese Nachricht nicht erneut an.](#)

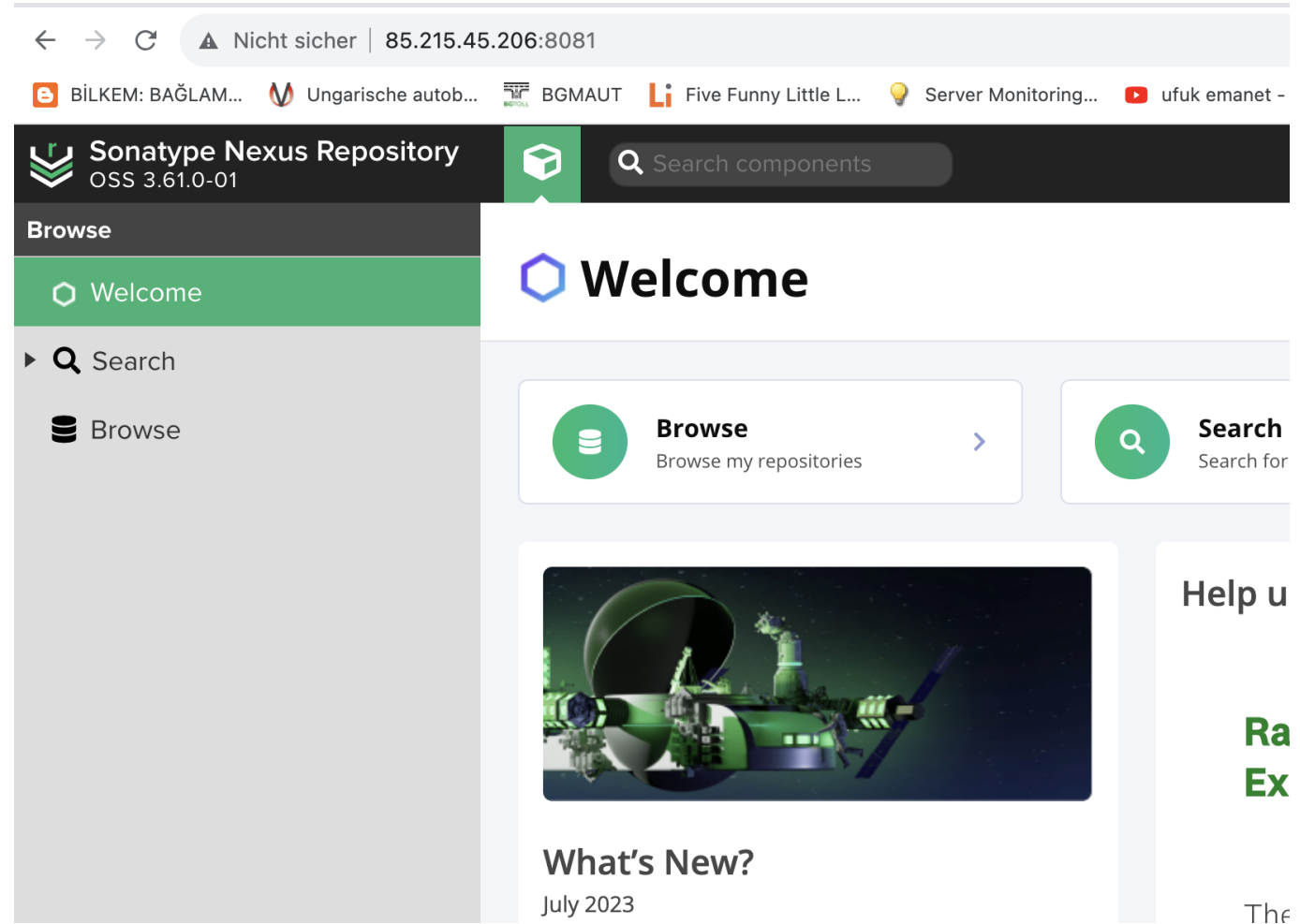
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Server

Aktionen Netzwerk

Filter

Typ	Name	Status	IP	Größe	OS	Rechenzentrum
🔌	My VPS	🟢	85.215.45.206	VPS M	Debian 11	🇩🇪



► Solution 2: Create npm hosted repository

EXERCISE 2: Create npm hosted repository

- For a Node application you: create a new npm hosted repository with a new blob store

Sonatype Nexus Repository
OSS 3.61.0-01

Administration

- Repository
 - Repositories
 - Blob Stores
 - Proprietary Repositories
 - Content Selectors
 - Cleanup Policies
 - Routing Rules
- Security
 - Privileges
 - Roles**
 - Users

Roles

Manage roles

Filter

ID	NAME	DESCRIPTION
nx-admin	nx-admin	Administrator Role
nx-anonymous	nx-anonymous	Anonymous Role
nx-java	nx-java	for java developers
nx-npm-team1	nx-npm-team1	Is the group role for accessing the nx-npm-repo

Create Role

Sonatype Nexus Repository
OSS 3.61.0-01

Administration

- Repository
 - Repositories
 - Blob Stores
 - Proprietary Repositories
 - Content Selectors
 - Cleanup Policies
 - Routing Rules
- Security
 - Privileges
 - Roles
 - Users**
 - Anonymous Access
 - LDAP
 - Realms
 - SSL Certificates

Users

nx-npm-teammember-1 nx-npm-teammember-1

Delete user Change password

Settings

ID: nx-npm-teammember-1

First name: nx-npm-teammember-1

Last name: nx-npm-teammember-1

Email: sg1905w1@gmail.com
Used for notifications

Status: Active

Roles:

Available

Filter

nx-admin
nx-anonymous
nx-java

Granted

nx-npm-team1

► Solution 3: Create user for team 1

EXERCISE 3: Create user for team 1

- You create Nexus user for the project 1 team to have access to this npm repository

The screenshot shows the Sonatype Nexus Repository OSS 3.61.0-01 Administration page, specifically the 'Users' section. The left sidebar lists various administration options: Repository, Repositories, Blob Stores, Proprietary Repositories, Content Selectors, Cleanup Policies, Routing Rules, Security, Privileges, Roles, Users (selected), and Anonymous Access. The main content area is titled 'Users Manage users' and includes a 'Create local user' button, a 'Source' dropdown set to 'Local', and a 'Filter by user ID' search bar. Below this is a table listing users:

User ID ↑	Realm	First name	Last name	Email	Status	
admin	default	Administrator	User	admin@example.org	active	>
anonymous	default	Anonymous	User	anonymous@example.org	active	>
nx-npm-teammember-1	default	nx-npm-teammember-1	nx-npm-teammember-1	sg1905w1@gmail.com	active	>
sgworker	default	Saban	Gül	sg1905w1@gmail.com	active	>

The screenshot shows a modal dialog box with the title 'Copy to clipboard: ⌘+C, Enter'. The text inside the dialog reads: 'Use your repository's direct URL (shown below) to connect other tools to your repository. For more information, see our [npm-specific help documentation](#).' Below the text is a text input field containing the URL 'http://85.215.45.206:8081/repository/my_npm_repo/'. A 'Close' button is located at the bottom left of the dialog. The background is a blurred view of the Nexus Repository interface.

► Solution 4: Build and publish npm tar

EXERCISE 4: Build and publish npm tar

- You want to test that the project 1 user has correct access configured.
- So you: build and publish a nodejs tar package to the npm repo

Use: Node application from Cloud & IaaS Basics exercises

Hint:

```
# for publishing project tar file
npm publish --registry={npm-repo-url-in-nexus} {package-name}
```

```
sgworker@MacBook-Pro-3.local /Users/sgworker/cloud-basics-exercises/app
[main]
% npm login --registry=http://85.215.45.206:8081/repository/my_npm_repo/

npm notice Log in on http://85.215.45.206:8081/repository/my_npm_repo/
Username: nx-npm-teammember-1
Password: Logged in on http://85.215.45.206:8081/repository/my_npm_repo/.
```

```
npm publish
npm notice Log in on http://85.215.45.206:8081/repository/my_npm_repo/
Username: nx-npm-teammember-1
Password: npm ERR! code E401
npm ERR! Unable to authenticate, need: BASIC realm="Sonatype Nexus
Repository Manager"
```

```
npm ERR! A complete log of this run can be found in:
/Users/sgworker/.npm/_logs/2023-10-03T21_56_39_459Z-debug-0.log
```

```
sgworker@MacBook-Pro-3.local /Users/sgworker/cloud-basics-exercises/app
[main]
% npm login --registry=http://85.215.45.206:8081/repository/my_npm_repo/
npm notice Log in on http://85.215.45.206:8081/repository/my_npm_repo/
Username: nx-npm-teammember-1
Password: Logged in on http://85.215.45.206:8081/repository/my_npm_repo/.
```

```
npm publish --registry=http://85.215.45.206:8081/repository/my_npm_repo/
npm notice
npm notice 📦 bootcamp-node-project@1.0.0
npm notice === Tarball Contents ===
npm notice 79.3kB bootcamp-node-project-1.0.0.tgz
npm notice 60.5kB images/profile-andrea.jpg
npm notice 17.5kB images/profile-ari.jpeg
npm notice 1.2kB index.html
npm notice 283B package.json
npm notice 724B server.js
npm notice 205B server.test.js
npm notice === Tarball Details ===
npm notice name: bootcamp-node-project
npm notice version: 1.0.0
npm notice filename: bootcamp-node-project-1.0.0.tgz
npm notice package size: 158.8 kB
npm notice unpacked size: 159.8 kB
npm notice shasum: e10f49cdade11d49d433035f79e03cf89a5551796
npm notice integrity: sha512-5gy2Fzuk89MH7[...]i0+shgm9Kra0A==
```



```
npm notice total files:    7
npm notice
npm notice Publishing to http://85.215.45.206:8081/repository/my_npm_repo/
with tag latest and default access
+ bootcamp-node-project@1.0.0
```

The screenshot is divided into two main sections. The top section shows the Sonatype Nexus Repository web interface. The browser address bar indicates the URL `85.215.45.206:8081/#browse/browse:my_npm_repo`. The page title is "Sonatype Nexus Repository OSS 3.61.0-01". The left sidebar has a "Browse" menu. The main content area shows the "Browse" view for the "my_npm_repo" repository, displaying a list of components: "bootcamp-node-project" and "bootcamp-node-project-1.0.0.tgz".

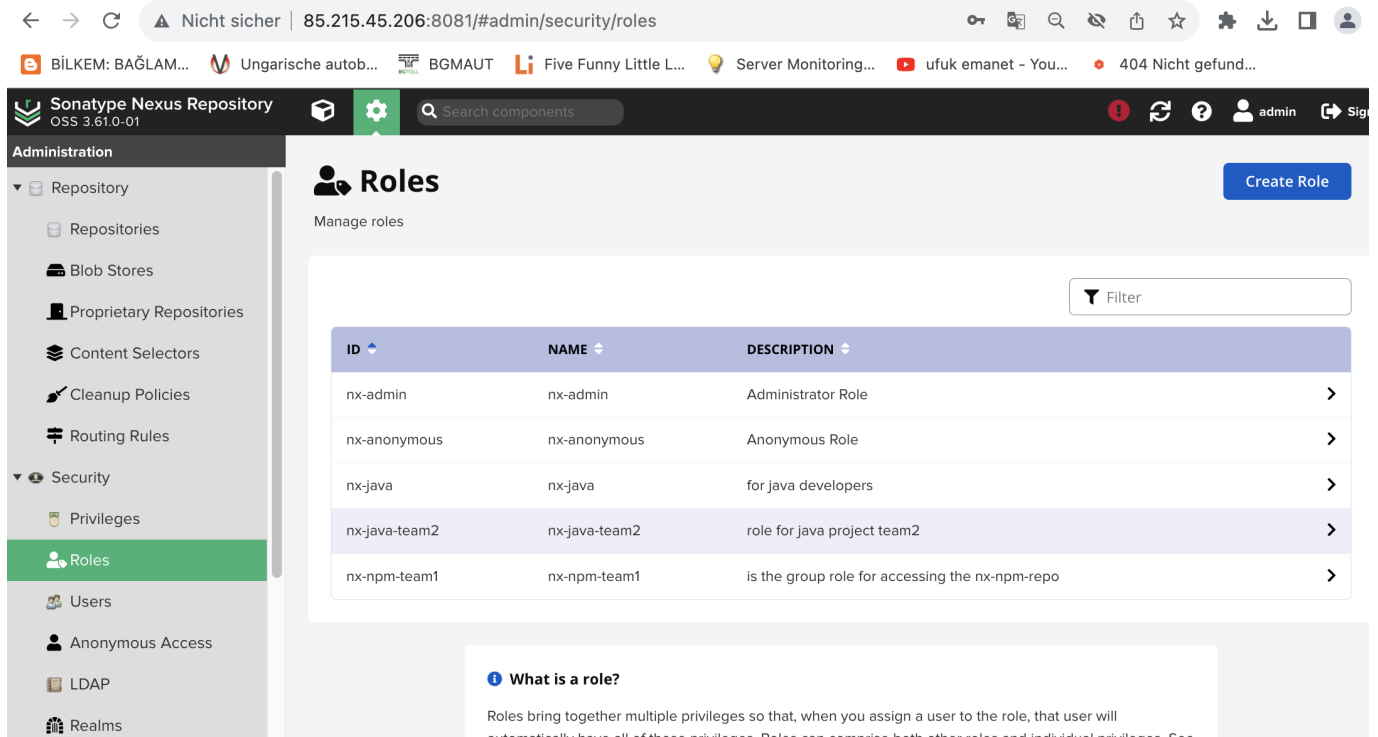
The bottom section shows a VS Code editor window. The "Project" sidebar on the left shows the file structure of "cloud-basics-exercises", including "app" and "images" folders. The "Structure" sidebar shows the file "bootcamp-node-project-1.0.0.tgz" selected. The "Terminal" panel at the bottom shows the output of the `npm publish` command, which successfully publishes the package to the repository. The output includes the package size, shasum, integrity, and the URL of the repository.

```
npm notice package size: 158.8 kB
npm notice unpacked size: 159.8 kB
npm notice shasum: e10f49cdae11d49d433035f79e03cf89a5551796
npm notice integrity: sha512-5gy2Fzuk89MH7[...]i0+shgm9Kra0A==
npm notice total files: 7
npm notice Publishing to http://85.215.45.206:8081/repository/my_npm_repo/ with tag latest and default
+ bootcamp-node-project@1.0.0
sgworker@MacBook-Pro-3.local /Users/sgworker/cloud-basics-exercises/app [main]
%
```

► Solution 5: Create maven hosted repository

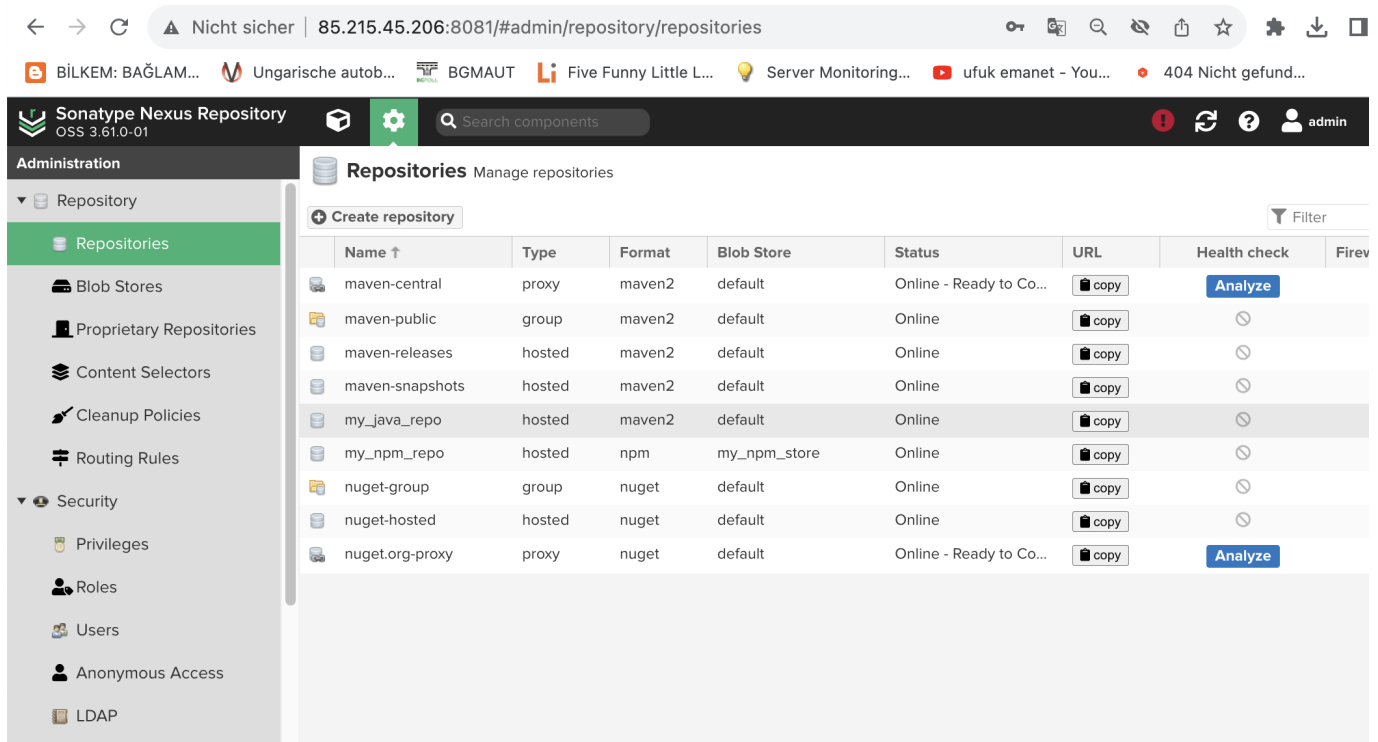
EXERCISE 5: Create maven hosted repository

- For a Java application you: create a new maven hosted repository



The screenshot shows the Sonatype Nexus Repository Administration interface. The left sidebar is under the 'Security' section, with 'Roles' selected. The main area is titled 'Roles' and 'Manage roles'. It features a table with columns: ID, NAME, and DESCRIPTION. The table lists several roles, including 'nx-admin', 'nx-anonymous', 'nx-java', 'nx-java-team2', and 'nx-npm-team1'. A 'Create Role' button is in the top right. Below the table, there is a section titled 'What is a role?' with explanatory text.

ID	NAME	DESCRIPTION
nx-admin	nx-admin	Administrator Role
nx-anonymous	nx-anonymous	Anonymous Role
nx-java	nx-java	for java developers
nx-java-team2	nx-java-team2	role for java project team2
nx-npm-team1	nx-npm-team1	is the group role for accessing the nx-npm-repo



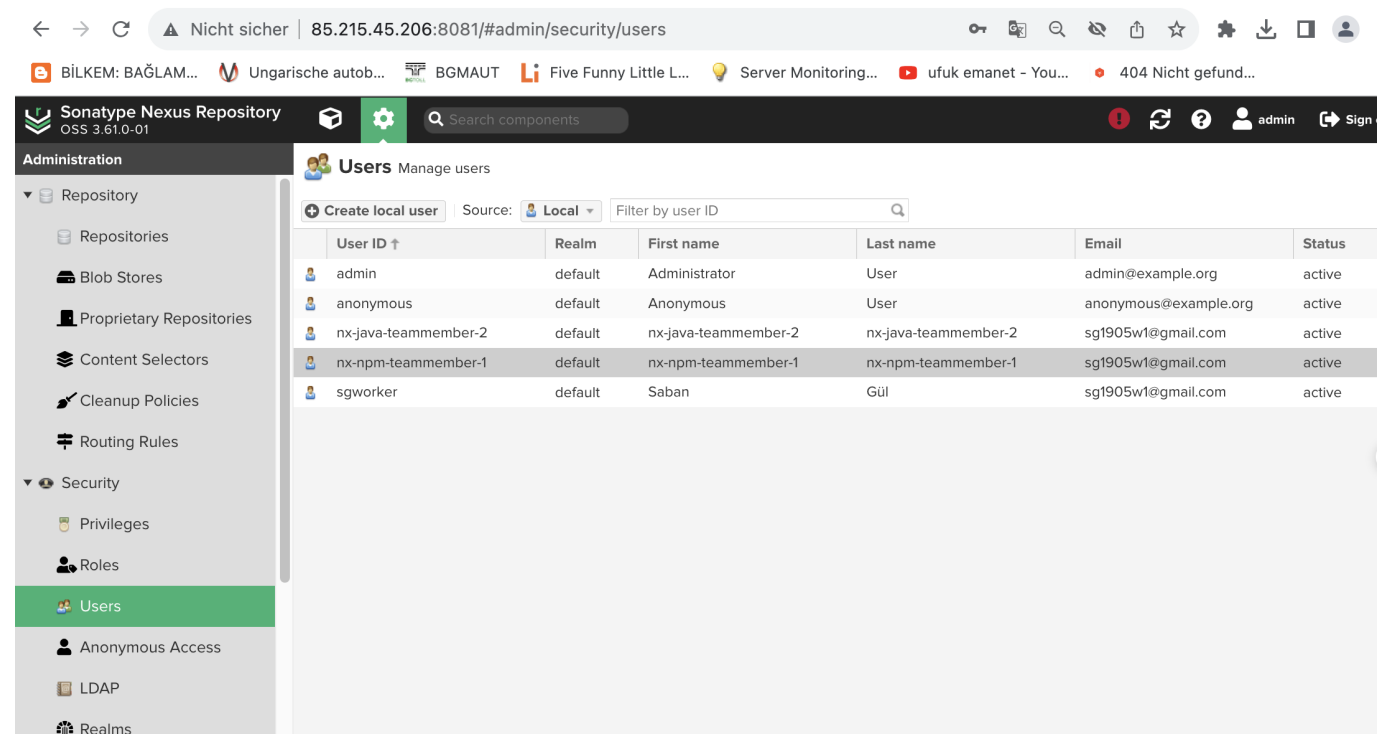
The screenshot shows the Sonatype Nexus Repository Administration interface. The left sidebar is under the 'Repository' section, with 'Repositories' selected. The main area is titled 'Repositories' and 'Manage repositories'. It features a table with columns: Name, Type, Format, Blob Store, Status, URL, Health check, and Firev. The table lists several repositories, including 'maven-central', 'maven-public', 'maven-releases', 'maven-snapshots', 'my_java_repo', 'my_npm_repo', 'nuget-group', 'nuget-hosted', and 'nuget.org-proxy'. A 'Create repository' button is in the top left. Below the table, there is a section titled 'What is a repository?' with explanatory text.

Name	Type	Format	Blob Store	Status	URL	Health check	Firev
maven-central	proxy	maven2	default	Online - Ready to Co...	copy	Analyze	
maven-public	group	maven2	default	Online	copy		
maven-releases	hosted	maven2	default	Online	copy		
maven-snapshots	hosted	maven2	default	Online	copy		
my_java_repo	hosted	maven2	default	Online	copy		
my_npm_repo	hosted	npm	my_npm_store	Online	copy		
nuget-group	group	nuget	default	Online	copy		
nuget-hosted	hosted	nuget	default	Online	copy		
nuget.org-proxy	proxy	nuget	default	Online - Ready to Co...	copy	Analyze	

► Solution 6: Create user for team 2

EXERCISE 6: Create user for team 2

- You create a Nexus user for project 2 team to have access to this maven repository

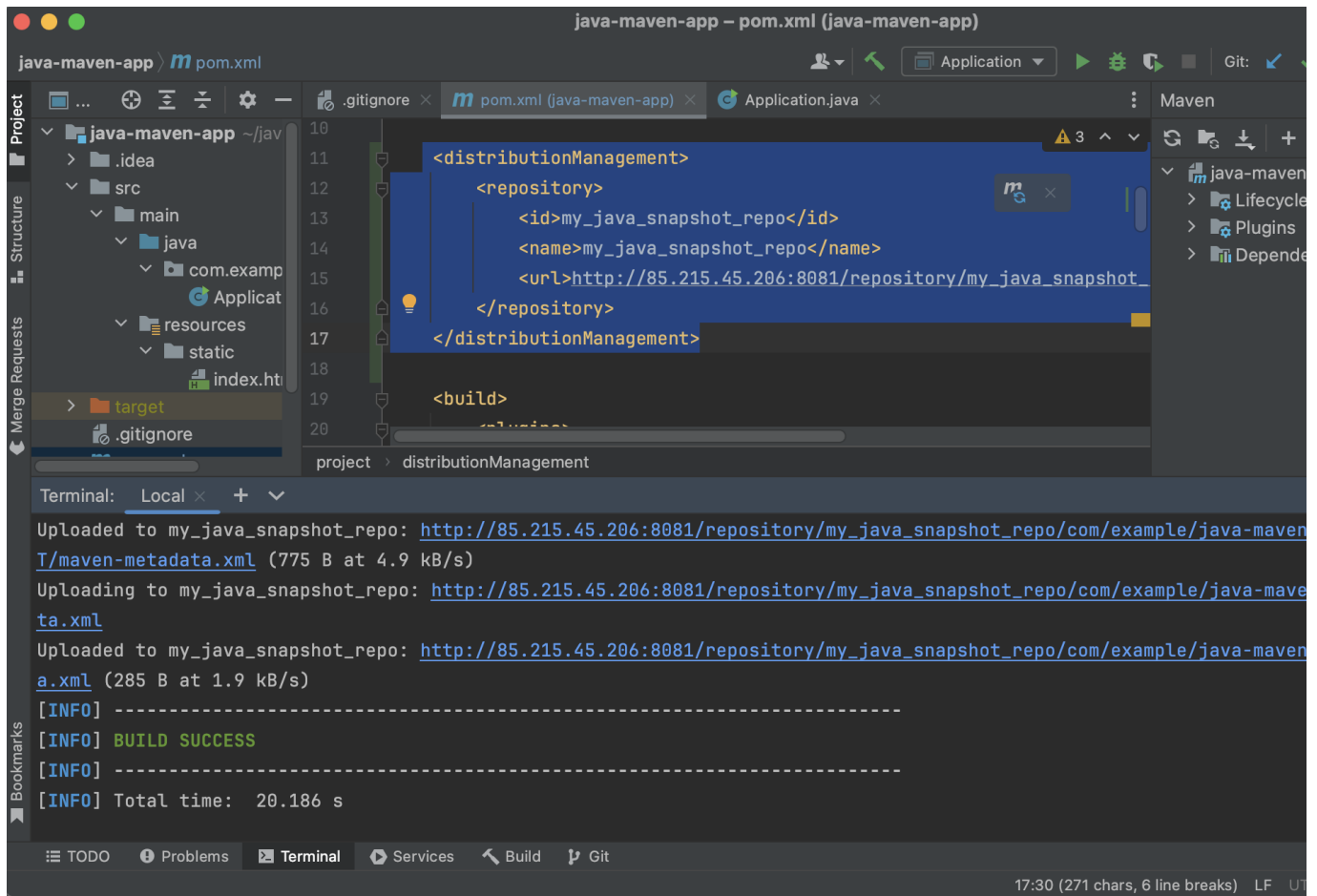


► Solution 7: Build and publish jar file

EXERCISE 7: Build and publish jar file

- You want to test that the project 2 user has the correct access configured and also upload the first version.
- So: build and publish the jar file to the new repository using the team 2 user.

Use the java-app application from the Build Tools module



added to pom.xml file

```

<distributionManagement>
  <repository>
    <id>my_java_snapshot_repo</id>
    <name>my_java_snapshot_repo</name>

    <url>http://85.215.45.206:8081/repository/my_java_snapshot_repo/</url>
  </repository>
</distributionManagement>

```

an created the file:

```
vim ~/.m2/settings.xml
```

```

<?xml version="1.0" encoding="UTF-8"?>
<settings xmlns="http://maven.apache.org/SETTINGS/1.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/SETTINGS/1.0.0
http://maven.apache.org/xsd/settings-1.0.0.xsd">
  <servers>
    <server>
      <id>my_java_snapshot_repo</id>
      <username>nx-java-teammember-2</username>
      <password>tenios2018</password>
    </server>
  </servers>

```

```
</settings>
```

```
sgworker@MacBook-Pro-3.local /Users/sgworker/java-maven-app [master]
```

```
% mvn deploy
```

```
[INFO] Scanning for projects...
```

```
[INFO]
```

```
[INFO] -----< com.example:java-maven-app >-----
```

```
-----
```

```
[INFO] Building java-maven-app 1.1.0-SNAPSHOT
```

```
[INFO]    from pom.xml
```

```
[INFO] -----[ jar ]-----
```

```
-----
```

```
[INFO]
```

```
[INFO] --- resources:3.3.1:resources (default-resources) @ java-maven-app
```

```
---
```

```
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered  
resources, i.e. build is platform dependent!
```

```
[INFO] Copying 1 resource from src/main/resources to target/classes
```

```
[INFO]
```

```
[INFO] --- compiler:3.11.0:compile (default-compile) @ java-maven-app ---
```

```
[INFO] Nothing to compile - all classes are up to date
```

```
[INFO]
```

```
[INFO] --- resources:3.3.1:testResources (default-testResources) @ java-
```

```
maven-app ---
```

```
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered  
resources, i.e. build is platform dependent!
```

```
[INFO] skip non existing resourceDirectory /Users/sgworker/java-maven-  
app/src/test/resources
```

```
[INFO]
```

```
[INFO] --- compiler:3.11.0:testCompile (default-testCompile) @ java-maven-
```

```
app ---
```

```
[INFO] No sources to compile
```

```
[INFO]
```

```
[INFO] --- surefire:3.1.2:test (default-test) @ java-maven-app ---
```

```
[INFO] No tests to run.
```

```
[INFO]
```

```
[INFO] --- jar:3.3.0:jar (default-jar) @ java-maven-app ---
```

```
[INFO] Building jar: /Users/sgworker/java-maven-app/target/java-maven-app-  
1.1.0-SNAPSHOT.jar
```

```
[INFO]
```

```
[INFO] --- spring-boot:3.0.5:repackage (default) @ java-maven-app ---
```

```
[INFO] Replacing main artifact with repackaged archive
```

```
[INFO]
```

```
[INFO] --- install:3.1.1:install (default-install) @ java-maven-app ---
```

```
[INFO] Installing /Users/sgworker/java-maven-app/pom.xml to  
/Users/sgworker/.m2/repository/com/example/java-maven-app/1.1.0-  
SNAPSHOT/java-maven-app-1.1.0-SNAPSHOT.pom
```

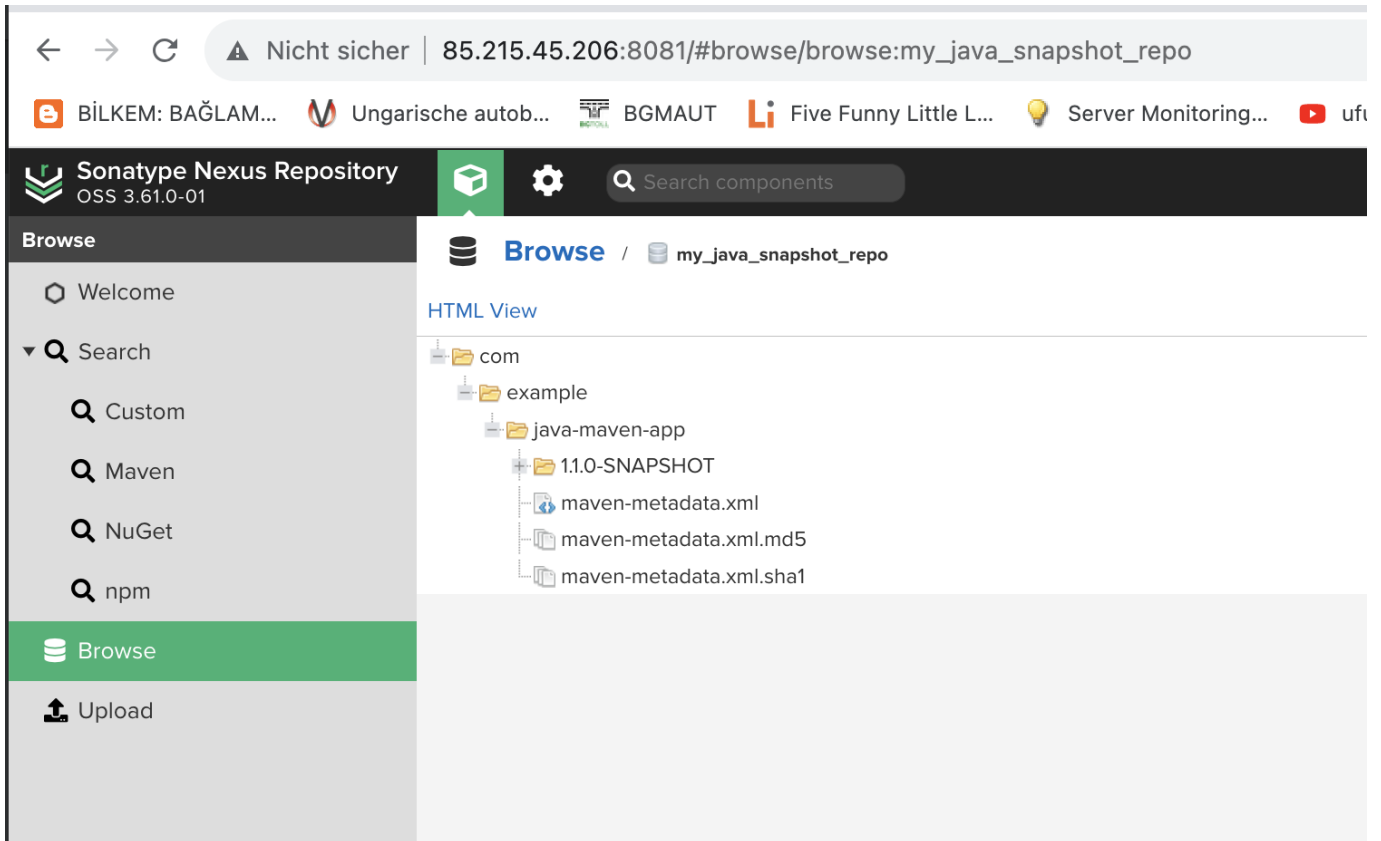
```
[INFO] Installing /Users/sgworker/java-maven-app/target/java-maven-app-  
1.1.0-SNAPSHOT.jar to /Users/sgworker/.m2/repository/com/example/java-  
maven-app/1.1.0-SNAPSHOT/java-maven-app-1.1.0-SNAPSHOT.jar
```

```
[INFO]
```

```
[INFO] --- deploy:3.1.1:deploy (default-deploy) @ java-maven-app ---
```

```
Downloading from my_java_snapshot_repo:
```

```
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/1.1.0-SNAPSHOT/maven-metadata.xml
Uploading to my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/1.1.0-SNAPSHOT/java-maven-app-1.1.0-20231003.230617-1.pom
Uploaded to my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/1.1.0-SNAPSHOT/java-maven-app-1.1.0-20231003.230617-1.pom (2.5
kB at 7.0 kB/s)
Uploading to my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/1.1.0-SNAPSHOT/java-maven-app-1.1.0-20231003.230617-1.jar
Uploaded to my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/1.1.0-SNAPSHOT/java-maven-app-1.1.0-20231003.230617-1.jar (19
MB at 1.1 MB/s)
Downloading from my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/maven-metadata.xml
Uploading to my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/1.1.0-SNAPSHOT/maven-metadata.xml
Uploaded to my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/1.1.0-SNAPSHOT/maven-metadata.xml (775 B at 4.9 kB/s)
Uploading to my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/maven-metadata.xml
Uploaded to my_java_snapshot_repo:
http://85.215.45.206:8081/repository/my_java_snapshot_repo/com/example/jav
a-maven-app/maven-metadata.xml (285 B at 1.9 kB/s)
[INFO] -----
-----
[INFO] BUILD SUCCESS
[INFO] -----
-----
[INFO] Total time: 20.186 s
[INFO] Finished at: 2023-10-04T01:06:38+02:00
[INFO] -----
-----
sgworker@MacBook-Pro-3.local /Users/sgworker/java-maven-app [master]
%
```



► Solution 8: Download from Nexus and start application

EXERCISE 8: Download from Nexus and start application

- Create new user for droplet server that has access to both repositories On a digital ocean droplet, using Nexus Rest API, fetch the download URL info for the latest NodeJS app artifact
- Execute a command to fetch the latest artifact itself with the download URL
- Untar it and run on the server!

Hint:

```
# fetch download URL with curl
curl -u {user}:{password} -X GET 'http://{nexus-
ip}:8081/service/rest/v1/components?repository={node-repo}&sort=version'
```


85.215.45.206:8081/#admin/security/users

KeyIconClipboardIconSearchIconCloseIcon

sche autob...BGMAUTFive Funny Little L...Server Monitoring...ufuk emanet - You...404

HomeIconSettingsIcon

Search components

!Icon

Users / Create User

This will be used as the username

dropplet_user_1

First name:

dropplet_user_1

Last name:

dropplet_user_1

Email:

Used for notifications

sg1905w1@gmail.com

Password:

.....

Confirm password:

.....

Status:

Active

Roles:

Available

Filter

nx-admin

nx-anonymous

Granted

nx-java-team2

nx-npm-team1

Navigation icons

85.215.45.206:8081/#admin/security/users

Navigation icons

BILKEM: BAĞLAM...Ungarische autob...BGMAUTFive Funny Little L...Server Monitoring...ufuk emanet - You...404 Nicht gefund...

Sonatype Nexus Repository

OSS 3.61.0-01

Administration

Cleanup Policies

Routing Rules

Security

Privileges

Roles

Users

Anonymous Access

Users

Manage users

Create local user

Source: Local

Filter by user ID

User ID ↑	Realm	First name	Last name	Email	Status
admin	default	Administrator	User	admin@example.org	active
anonymous	default	Anonymous	User	anonymous@example.org	active
dropplet_user_1	default	dropplet_user_1	dropplet_user_1	sg1905w1@gmail.com	active
nx-java-teammember-2	default	nx-java-teammember-2	nx-java-teammember-2	sg1905w1@gmail.com	active
nx-npm-teammember-1	default	nx-npm-teammember-1	nx-npm-teammember-1	sg1905w1@gmail.com	active
sgworker	default	Saban	Gül	sg1905w1@gmail.com	active

```
rt=version'
sgworker@MacBook-Pro-3.local /Users/sgworker/.m2
% curl -u droplet_user_1:tenios2018 -X GET 'http://85.215.45.206:8081/service/rest/v1/components?repository={my_npm_repo}&sort=version'
{
  "items" : [ {
    "id" : "bXlfbnBtX3JlcG86MWM3ODdhMDNkYjgyMDllYjhjY2IyMDYwMTJhMWU0MmI",
    "repository" : "my_npm_repo",
    "format" : "npm",
    "group" : null,
    "name" : "bootcamp-node-project",
    "version" : "1.0.0",
    "assets" : [ {
      "downloadUrl" : "http://85.215.45.206:8081/repository/my_npm_repo/bootcamp-node-project/-/bootcamp-node-project-1.0.0.tgz",
      "path" : "bootcamp-node-project/-/bootcamp-node-project-1.0.0.tgz",
      "id" : "bXlfbnBtX3JlcG86NzZkN2Q3ZTQxODZhMzkwZjVkJkZmFjMmU0YzFhMDM",
      "repository" : "my_npm_repo",
      "format" : "npm",
      "checksum" : {
        "sha1" : "e10f49cdae11d49d433035f79e03cf89a5551796"
      },
      "contentType" : "application/octet-stream",
      "lastModified" : "2023-10-03T22:01:45.191+00:00",
      "lastDownloaded" : null,
      "uploader" : "nx-npm-teammember-1",
      "uploaderIp" : "176.199.168.192",
      "fileSize" : 158776,
      "blobCreated" : null,
      "blobCreated" : "2023-10-03T22:01:45.191+00:00",
      "npm" : {

```

```
sgworker@MacBook-Pro-3.local /Users/sgworker/.m2
% curl -u droplet_user_1:tenios2018 -X GET 'http://85.215.45.206:8081/service/rest/v1/components?repository={my_npm_repo}&sort=version'
{
  "items" : [ {
    "id" : "bXlfbnBtX3JlcG86MWM3ODdhMDNkYjgyMDllYjhjY2IyMDYwMTJhMWU0MmI",
    "repository" : "my_npm_repo",
    "format" : "npm",
    "group" : null,
    "name" : "bootcamp-node-project",
    "version" : "1.0.0",
    "assets" : [ {
      "downloadUrl" : "http://85.215.45.206:8081/repository/my_npm_repo/bootcamp-node-project/-/bootcamp-node-project-1.0.0.tgz",
      "path" : "bootcamp-node-project/-/bootcamp-node-project-1.0.0.tgz",
      "id" : "bXlfbnBtX3JlcG86NzZkN2Q3ZTQxODZhMzkwZjVkJkZmFjMmU0YzFhMDM",
      "repository" : "my_npm_repo",
      "format" : "npm",
      "checksum" : {
        "sha1" : "e10f49cdae11d49d433035f79e03cf89a5551796"
      },
      "contentType" : "application/octet-stream",
      "lastModified" : "2023-10-03T22:01:45.191+00:00",
      "lastDownloaded" : null,
      "uploader" : "nx-npm-teammember-1",
      "uploaderIp" : "176.199.168.192",
      "fileSize" : 158776,
      "blobCreated" : null,
      "blobCreated" : "2023-10-03T22:01:45.191+00:00",
      "npm" : {
        "name" : "bootcamp-node-project",
        "version" : "1.0.0"
      }
    }
  ]
},
{
  "continuationToken" : null
}
}
```

```
sgworker@MacBook-Pro-3.local /Users/sgworker/Downloads
% curl -u droplet_user_1:tenios2018 -X GET
'http://85.215.45.206:8081/repository/my_npm_repo/bootcamp-node-
project/-/bootcamp-node-project-1.0.0.tgz' --output bootcamp-node-project-
1.0.0.tgz
% Total      % Received % Xferd  Average Speed   Time    Time     Time
Current                                  Dload  Upload  Total   Spent    Left
Speed
100 155k  100 155k    0    0 1278k      0 --:--:-- --:--:-- --:--:--
1360k
```

```
sgworker@MacBook-Pro-3.local /Users/sgworker/Downloads
% tar -xvzf bootcamp-node-project-1.0.0.tgz
x package/index.html
x package/images/profile-ari.jpeg
x package/images/profile-andrea.jpg
x package/server.js
x package/server.test.js
x package/package.json
x package/bootcamp-node-project-1.0.0.tgz
sgworker@MacBook-Pro-3.local /Users/sgworker/Downloads
% cd package

sgworker@MacBook-Pro-3.local /Users/sgworker/Downloads/package
% npm install

added 350 packages, and audited 351 packages in 25s

39 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
sgworker@MacBook-Pro-3.local /Users/sgworker/Downloads/package
% node server.js
app listening on port 3000!
```

← → ↻ ⓘ 127.0.0.1:3000

 BİL KEM: BAĞLAM...  Ungarische autob...  BGMAUT  Five Funny Little L...  Server Mc

List of projects team is working on



Name: **Andrea Hill**

Role: **DevOps engineer**

Projects: **AWS migration, Backup Automation**



Name: **Ari Baker**

Role: **Software developer**

Projects: **Online Shop, ERP Software**

► Solution 9: Automate

EXERCISE 9: Automate You decide to automate the fetching from Nexus and starting the application
So you:

- Write a script that fetches the latest version from npm repository.
- Untar it and run on the server!
- Execute the script on the droplet

Hints:

```
# save the artifact details in a json file
curl -u {user}:{password} -X GET 'http://{nexus-
ip}:8081/service/rest/v1/components?repository={node-repo}&sort=version' |
jq "." > artifact.json

# grab the download url from the saved artifact details using 'jq' json
processor tool
artifactDownloadUrl=$(jq '.items[].assets[].downloadUrl' artifact.json --
raw-output)

# fetch the artifact with the extracted download url using 'wget' tool
wget --http-user={user} --http-password={password} $artifactDownloadUrl
```

my bash script: fetch_npm_artifact_from_nexus_and_deploy.sh

```
#!/bin/bash

read -p "Enter your username: " USERNAME
read -p "Enter your password: " PASSWORD

NPM_REPO="my_npm_repo"
NEXUS_REST_API_URL="http://85.215.45.206:8081/service/rest/v1/components?
repository=$NPM_REPO&sort=version"
JSON_FILENAME="artifact.json"
ARTIFACT_FILE_NAME="my_node_app.tgz"

echo "nexus rest api URL: $NEXUS_REST_API_URL"
# save the artifact details in a json file
curl_response=$(curl -u $USERNAME:$PASSWORD -X GET "$NEXUS_REST_API_URL" |
jq "." > $JSON_FILENAME)

# Check if curl was successful (HTTP status code 200)
if [ $? -eq 0 ]; then
    echo "Curl request was successful. $curl_response:"
    echo "$curl_response"
    # grab the download url from the saved artifact details using 'jq'
    json processor tool
    ARTIFACT_DOWNLOAD_URL=$(jq '.items[].assets[].downloadUrl'
$JSON_FILENAME --raw-output)
    echo "grabbed artifact download URL: $ARTIFACT_DOWNLOAD_URL"

    # fetch the artifact with the extracted download url using 'wget' tool
    wget -O $ARTIFACT_FILE_NAME --http-user=$USERNAME --http-password=
{$PASSWORD} $ARTIFACT_DOWNLOAD_URL

    #
    tar -xvzf $ARTIFACT_FILE_NAME
    cd package
    npm install

    node server.js
else
    echo "Curl request failed."
    exit
fi
```

```
test.jssip  JS loop.js  $ fetch_npm_artifact_from_nexus_and_deploy.sh x  {} launch.json
bootcamp_nexus_script > $ fetch_npm_artifact_from_nexus_and_deploy.sh
27
28
29 # grab the download url from the saved artifact details using 'jq' json processor tool
30 ARTIFACT_DOWNLOAD_URL=$(jq '.items[].assets[].downloadUrl' $JSON_FILENAME --raw-output)
31 echo "grabbed artifact download URL: $ARTIFACT_DOWNLOAD_URL"
32
33 # fetch the artifact with the extracted download url using 'wget' tool
34 wget -O $ARTIFACT_FILE_NAME $--http-user={USERNAME} --http-password={PASSWORD} $ARTIFACT_DOWNLOAD_URL
35
36 #
37 tar -xvzf $ARTIFACT_FILE_NAME
38 cd package
39 npm install
40
41 node server.js
42
```

TERMINAL PROBLEME AUSGABE DEBUGGING-KONSOLE MULTIPANE EXPLORER zsh - bootcamp_nexus_script + - - -

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100	1175	100	1175	0	0	17236	0 --:--:-- --:--:-- --:--:-- 20258

Curl request was successful. :

grabbed artifact download URL: http://85.215.45.206:8081/repository/my_npm_repo/bootcamp-node-project/-/bootcamp-node-project-1.0.0.tgz
--2023-10-04 11:50:28-- http://hb-http-user=%7Bdroplet_user_1%7D/
Auflösen des Hostnamens hb-http-user={droplet_user_1} (hb-http-user={droplet_user_1})... fehlgeschlagen: nodename nor servname provided, or not known.
wget: Host-Adresse »hb-http-user={droplet_user_1}« kann nicht aufgelöst werden
--2023-10-04 11:50:28-- http://85.215.45.206:8081/repository/my_npm_repo/bootcamp-node-project/-/bootcamp-node-project-1.0.0.tgz
Verbindungsaufbau zu 85.215.45.206:8081 - verbunden.
HTTP-Anforderung gesendet, auf Antwort wird gewartet - 200 OK
Länge: 158776 (155K) [application/octet-stream]
Wird in »my_node_app.tgz« gespeichert.

my_node_app.tgz 100%[=====] 155,05K --.-KB/s in 0,08s

2023-10-04 11:50:28 (1,88 MB/s) - »my_node_app.tgz« gespeichert [158776/158776]

BEENDET --2023-10-04 11:50:28--
Verstrichene Zeit: 0,1s
Geholt: 1 Dateien, 155K in 0,08s (1,88 MB/s)
x package/index.html
x package/images/profile-ari.jpeg
x package/images/profile-andrea.jpg
x package/server.js
x package/server.test.js
x package/package.json
x package/bootcamp-node-project-1.0.0.tgz

added 349 packages, and audited 350 packages in 10s

39 packages are looking for funding
run `npm fund` for details

found 0 vulnerabilities
app listening on port 3000!

Zeile 41, Spalte 15 Leerzeichen: 4 UTF-8 LF Shell Script