

Week 2 - DevOps Masterclass

Deploy a static site via GitHub → VM → Nginx

Objective: Create a public web endpoint that serves a provided index.html using Nginx on a cloud VM, with the file sourced from a GitHub repository.

1. GitHub repo

The screenshot shows a GitHub repository page for 'odufuwabusola / school-portal'. The repository is public and forked from 'techbleat/school-portal'. The main branch is up-to-date with the original repository. The commit history for the 'main' branch shows a single commit by 'shegoj' titled 'first commit' made last week. The commit details show files like 'css', 'images', 'js', 'about.html', 'contact.html', 'events.html', 'index.html', and 'news.html' were added. The 'README' file is also present. The repository has 0 stars, 0 forks, and 0 releases.

- Create a new GitHub repository (public)—Please share

https://github.com/odufuwabusola/School_portal.git

- Add index.html at the repo root and push it.

The screenshot shows a GitHub repository page for 'School_portal'. The repository has 1 branch and 0 tags. There is one commit from 'odufuwabusola' titled 'Update and rename README.md to index.html' made 4 minutes ago. The commit details show 'index.html' was updated to 'Update and rename README.md to index.html' at 4 minutes ago. Below the commit, there is a section for 'README' with a 'Add a README' button.

2. Cloud VM (AWS)

- Provision a small Linux VM (e.g., Amazon-Linux/Ubuntu 22.04) with inbound HTTP (80) open.

The screenshot shows the AWS EC2 instance details for 'i-095e6496aa87f9fcf (web server)'. The instance is running and has a Public DNS name of 'ec2-34-240-67-224.eu-west-1.compute.amazonaws.com'. It is an 't3.micro' instance type and is associated with a VPC ID 'vpc-0c543a5108b905013'. The instance has an Auto-assigned IP address of '34.240.67.224 [Public IP]'.

The screenshot shows the 'Network settings' step of the AWS EC2 'Launch an instance' wizard. It includes sections for Network (vpc-0c543a5108b905013), Subnet (No preference), Auto-assign public IP (Enable), and Firewall (security groups). Under Firewall, there are two options: 'Create security group' (selected) and 'Select existing security group'. Below this, it says 'We'll create a new security group called 'launch-wizard-4' with the following rules:' and lists three rules: 'Allow SSH traffic from Anywhere (0.0.0.0/0)' (checked), 'Allow HTTPS traffic from the internet' (unchecked), and 'Allow HTTP traffic from the internet' (checked).

- Provide the VM's public IP or DNS. ec2-34-240-67-224.eu-west-1.compute.amazonaws.com
ec2-52-215-222-140.eu-west-1.compute.amazonaws.com

3. Retrieve site via Git

- SSH into the VM, install Git, and clone the repository to the VM.

```
[ec2-user@ip-172-31-30-197 ~]$ yum install git
Error: This command has to be run with superuser privileges (under the root user on most systems).
[ec2-user@ip-172-31-30-197 ~]$ sudo yum install git
Last metadata expiration check: 0:16:28 ago on Tue Oct 28 22:53:45 2025.
Dependencies resolved.

=====
| Package           | Architecture | Version      | Repository | Size   |
| ======           | ======       | ======       | ======     | ====== |
| Installing:      |              |              |            |        |
|   git             | x86_64       | 2.50.1-1.amzn2023.0.1 | amazonlinux | 5.3M   |
| Installing dependencies: |          |              |            |        |
|   git-core        | x86_64       | 2.50.1-1.amzn2023.0.1 | amazonlinux | 4.9M   |
|   git-core-doc    | noarch      | 2.50.1-1.amzn2023.0.1 | amazonlinux | 2.8M   |
|   perl-Error      | noarch      | 1:0.17029-5.amzn2023.0.2 | amazonlinux | 4.0M   |
|   perl-File-Find  | noarch      | 1.37-477.amzn2023.0.7 | amazonlinux | 2.5M   |
|   perl-Git         | noarch      | 2.50.1-1.amzn2023.0.1 | amazonlinux | 4.1M   |
|   perl-TermReadKey | x86_64       | 2.38-9.amzn2023.0.2  | amazonlinux | 3.6M   |
|   perl-lib         | x86_64       | 0.65-477.amzn2023.0.7 | amazonlinux | 1.5M   |

Transaction Summary
=====
| Install 8 Packages |          |          |          |          |
| ======           |          |          |          |          |
Total download size: 7.9 M
Installed size: 41 M
Is this ok [y/N]: y
Downloading Packages:
```

```
[ec2-user@ip-172-31-30-197 school-portal]$ cd /tmp
[ec2-user@ip-172-31-30-197 tmp]$ pwd
/tmp
[ec2-user@ip-172-31-30-197 tmp]$ mkdir workspace
[ec2-user@ip-172-31-30-197 tmp]$ cd workspace
[ec2-user@ip-172-31-30-197 workspace]$ git clone https://github.com/techbleat/school-portal.git
Cloning into 'school-portal'...
remote: Enumerating objects: 13, done.
remote: Counting objects: 100% (13/13), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 13 (delta 4), reused 13 (delta 4), pack-reused 0 (from 0)
Receiving objects: 100% (13/13), 3.93 MiB | 28.92 MiB/s, done.
Resolving deltas: 100% (4/4), done.
[ec2-user@ip-172-31-30-197 workspace]$ ls
school-portal
[ec2-user@ip-172-31-30-197 workspace]$ cd school-portal
[ec2-user@ip-172-31-30-197 school-portal]$ ls
about.html contact.html css events.html images index.html js news.html
[ec2-user@ip-172-31-30-197 school-portal]$ pwd
/tmp/workspace/school-portal
```

4. Install & configure Nginx

- Install Nginx.

```
[ec2-user@ip-172-31-30-197 ~]$ sudo yum install nginx
Amazon Linux 2023 Kernel Livepatch repository
Dependencies resolved.

=====
| Package           | Architecture | Version      | Repository | Size   |
| ======           | ======       | ======       | ======     | ====== |
| Installing:      |              |              |            |        |
|   nginx           | x86_64       | 1:1.28.0-1.amzn2023.0.2 | amazonlinux | 33M   |
| Installing dependencies: |          |              |            |        |
|   generic-logos-httdp | noarch      | 18.0.0-12.amzn2023.0.3 | amazonlinux | 19M   |
|   gperftools-libs  | x86_64       | 2.9.1-1.amzn2023.0.3 | amazonlinux | 308M  |
|   libunwind        | x86_64       | 1.4.0-5.amzn2023.0.3 | amazonlinux | 66M   |
|   nginx-core       | x86_64       | 1:1.28.0-1.amzn2023.0.2 | amazonlinux | 686M  |
|   nginx-filesystem | noarch      | 1:1.28.0-1.amzn2023.0.2 | amazonlinux | 9.6M   |
|   nginx-mimetypes  | noarch      | 2.1.49-3.amzn2023.0.3 | amazonlinux | 21M   |

Transaction Summary
=====
| Install 7 Packages |          |          |          |          |
| ======           |          |          |          |          |
Total download size: 1.1 M
Installed size: 3.7 M
Is this ok [y/N]: y
Downloading Packages:
(1/7): generic-logos-httdp-18.0.0-12.amzn2023.0.3.noarch.rpm          274 kB/s | 28 kB   00:00
(2/7): libunwind-1.4.0-5.amzn2023.0.3.x86_64.rpm                     382 kB/s | 19 kB   00:00
(3/7): gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64.rpm                 1.2 MB/s | 66 kB   00:00
(4/7): nginx-filesystem-1:1.28.0-1.amzn2023.0.2.noarch.rpm             4.4 MB/s | 308 kB  00:00
```

```

Verifying : libunwind-1.4.0-5.amzn2023.0.3.x86_64
Verifying : nginx-1:1.28.0-1.amzn2023.0.2.x86_64
Verifying : nginx-core-1:1.28.0-1.amzn2023.0.2.x86_64
Verifying : nginx-filesystem-1:1.28.0-1.amzn2023.0.2.noarch
Verifying : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch

WARNING:
A newer release of "Amazon Linux" is available.

Available Versions:
Version 2023.9.20251027:
Run the following command to upgrade to 2023.9.20251027:
dnf upgrade --releasever=2023.9.20251027

Release notes:
https://docs.aws.amazon.com/linux/al2023/release-notes/relnotes-2023.9.20251027.html

=====
installed:
generic-logos-nginx-18.0.0-12.amzn2023.0.3.noarch      gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64          libunwind-1.4.0-5.amzn2023.0.3.x86_64
nginx-1:1.28.0-1.amzn2023.0.2.x86_64                 nginx-core-1:1.28.0-1.amzn2023.0.2.x86_64          nginx-filesystem-1:1.28.0-1.amzn2023.0.2.noarch
nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch

Complete!

```

- Place index.html in Nginx's web root

```
[ec2-user@ip-172-31-30-197 school-portal]$ sudo cp -r * /usr/share/nginx/html/
[ec2-user@ip-172-31-30-197 school-portal]$ █
```

- Start/enable Nginx and verify it serves index.html.

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

5. Verification

- Access the VM's public IP/DNS over HTTP and confirm the page loads.

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- URL: <http://ec2-34-240-67-224.eu-west-1.compute.amazonaws.com>

- Commands used.

```

1  uptime
2  sudo yum install nginx
3  sudo service nginx start
4  pwd
5  yum install git
6  sudo yum install git
7  mkdir workspace
8  git clone https://github.com/techbleat/documentation-week2.git
9  ls
10 cd workspace
11 git clone https://github.com/techbleat/school-portal.git
12 ls
13 cd school-portal
14 ls
15 ls -ltr
16 ls /usr/share/n
17 ls /usr/share/nginx
18 ls /usr/share/nginx/html/
19 pwd
20 ls
21 cp -r * /usr/share/nginx/html/
22 cp -r * /usr/share/nginx/html
23 cp -r * /usr/share/nginx/html/
24 ls -ltr
25 pwd
26 cd /tmp
27 pwd

```

```

17  ls /usr/share/nginx
18  ls /usr/share/nginx/html/
19  pwd
20  ls
21  cp -r * /usr/share/nginx/html/
22  cp -r * /usr/share/nginx/html
23  cp -r * /usr/share/nginx/html/
24  ls -ltr
25  pwd
26  cd /tmp
27  pwd
28  mkdir workspace
29  cd workspace
30  git clone https://github.com/techbleat/school-portal.git
31  ls
32  cd school-portal
33  ls
34  pwd
35  ls -ltr
36  ls
37  ls /usr/share/nginx/html
38  ls -ltr
39  cp -r * /usr/share/nginx/html/
40  sudo cp -r * /usr/share/nginx/html/
41  sudo service nginx start
42  history
[ec2-user@ip-172-31-30-197 school-portal]$ █

```