Backup and Recovery

To create the backup of the website "Techvish" , you have to take a copy of mainly

- DATABASE
- Html files (wp-config.php)

Rest of the server backup can be taken if needed , incase you have any other important files saved in the server. Here I only needed my site backup ,so I took only the html files and the database backup.

Backup :

Created a volume "Backup" of size 5GB in the same availability zone (1-a)

Attached it to the instance where my website is hosted .

Named it as /dev/xvdd for mounting

Formatted the volume – " #mkfs.ext4 /dev/xvdd"

Created a mountpoint – "#mkdir /mnt/mybackup"

Mounted the volume – " #mount /dev/xvdd /mnt/mybackup"

Created a backup of html directory using gzip –
" #tar -czf backupofhtml.gz /var/www/html "

Created a backup of the database of my website , here named "wordpress" , username – vishnu & password "free....." –

" #mysql -u root -p"
" mysqldump -u your_username -p your_database_name > /path/to/backup/directory/db_backup.sql"

Now send both the files to your volume using cp command

"cp /pathtobackupfiles /mnt/mybackup"

Now list is to make sure , you got the proper files and then unmount the volume

#umount /dev/xvdd

Recovery :

Step 1) Create an Instance and repeat the installation of LAMP stack and do other necessary updates and installations if needed

Install LAMP Stack (Linux, Apache, MySQL, PHP)

yum install httpd php php-mysqlnd -y

```
[root@ip-172-31-12-160 ~]# yum install httpd php php-mysqlnd -y
Last metadata expiration check: 0:03:03 ago on Wed Oct 18 09:14:33 2023.
Dependencies resolved.
================================================================================================================================
 Package                                Architecture            Version                                 Repository                Size
================================================================================================================================
Installing:
 httpd                                  x86_64                  2.4.56-1.amzn2023                       amazonlinux               48 k
 php8.2                                 x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux               13 k
 php8.2-mysqlnd                         x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux              150 k
Installing dependencies:
 apr                                    x86_64                  1.7.2-2.amzn2023.0.2                    amazonlinux              129 k
 apr-util                               x86_64                  1.6.3-1.amzn2023.0.1                    amazonlinux               98 k
 generic-logos-httpd                    noarch                  18.0.0-12.amzn2023.0.3                  amazonlinux               19 k
 httpd-core                             x86_64                  2.4.56-1.amzn2023                       amazonlinux              1.4 M
 httpd-filesystem                       noarch                  2.4.56-1.amzn2023                       amazonlinux               15 k
 httpd-tools                            x86_64                  2.4.56-1.amzn2023                       amazonlinux               82 k
 libbrotli                              x86_64                  1.0.9-4.amzn2023.0.2                    amazonlinux              315 k
 libsodium                              x86_64                  1.0.18-13.amzn2023.0.1                  amazonlinux              166 k
 libxslt                                x86_64                  1.1.34-5.amzn2023.0.2                   amazonlinux              241 k
 mailcap                                noarch                  2.1.49-3.amzn2023.0.3                   amazonlinux               33 k
 nginx-filesystem                       noarch                  1:1.24.0-1.amzn2023.0.2                 amazonlinux              9.1 k
 php8.2-cli                             x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux              3.6 M
 php8.2-common                          x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux              692 k
 php8.2-pdo                             x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux               90 k
 php8.2-process                         x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux               45 k
 php8.2-xml                             x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux              149 k
Installing weak dependencies:
 apr-util-openssl                       x86_64                  1.6.3-1.amzn2023.0.1                    amazonlinux               17 k
 mod_http2                              x86_64                  2.0.11-2.amzn2023                       amazonlinux              150 k
 mod_lua                                x86_64                  2.4.56-1.amzn2023                       amazonlinux               62 k
 php8.2-fpm                             x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux              1.9 M
 php8.2-mbstring                        x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux              526 k
 php8.2-opcache                         x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux              380 k
 php8.2-sodium                          x86_64                  8.2.9-1.amzn2023.0.3                    amazonlinux               43 k

Transaction Summary
================================================================================================================================
Install  26 Packages

Total download size: 10 M
Installed size: 44 M
Downloading Packages:
(1/26): apr-util-1.6.3-1.amzn2023.0.1.x86_64.rpm                                                   1.3 MB/s |  98 kB     00:00
```

Start and enable the services

#systemctl start httpd

#systemctl enable httpd

```
[root@ip-172-31-12-160 html]# systemctl start httpd
[root@ip-172-31-12-160 html]# systemctl enable httpd
```

To install MariaDB 10.5 server on your Amazon Linux instance using yum, you can follow these steps:

1. Connect to your EC2 instance: Use SSH to connect to your Amazon Linux instance.

2. Update your package manager: Before installing any new packages, it's a good idea to update your package manager to ensure you're getting the latest versions of the software. Run the following command:

```
#sudo yum update
```

3. Install MariaDB 10.5 server: Run the following command to install MariaDB 10.5 server:

```
#sudo yum install mariadb105-server
```

4. Start the MariaDB service: After the installation is complete, start the MariaDB service using the following command:

```
#sudo systemctl start mariadb
```

5. Enable MariaDB to start on boot: If you want MariaDB to start automatically whenever the system boots, run the following command:

```
#sudo systemctl enable mariadb
```

6. Secure your MariaDB installation: It's recommended to run the MySQL/MariaDB security script to secure your installation. Run the following command and follow the prompts:

```
#sudo mysql_secure_installation
```

7. Verify the installation: You can verify that MariaDB is running by checking its status:

```
#sudo systemctl status mariadb
```

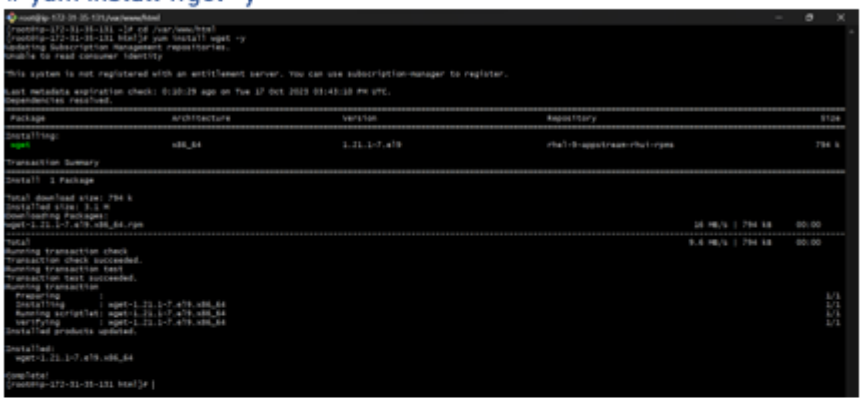
That's it! You've now installed MariaDB 10.5 server on your Amazon Linux instance. You can start using it as your database server.

Installation of wordpress

Wordpress Installation

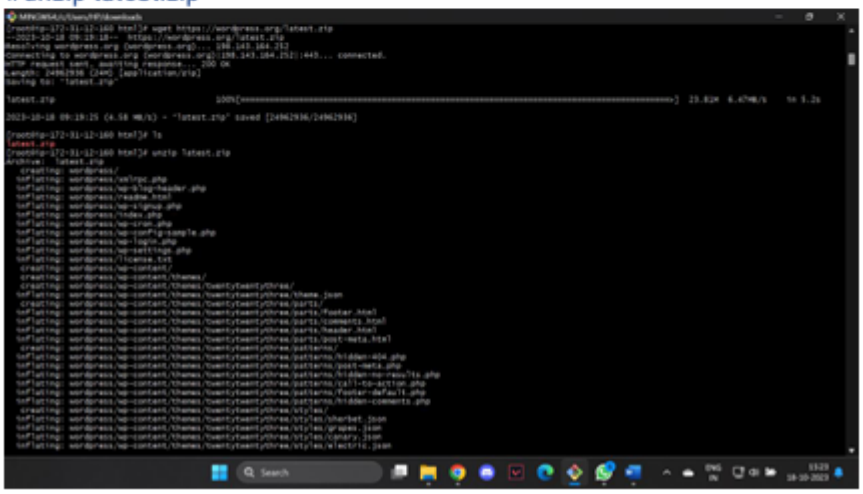
#cd /var/www/html

yum install wget -y



wget https://wordpress.org/latest.zip

#unzip latest.zip



Now copy all the contents of wordpress directory to default document root (/var/www/html)

cp -r wordpress/* /var/www/html/

#ls

```
[root@ip-172-31-35-131 html]# cp -r wordpress/* /var/www/html/
[root@ip-172-31-35-131 html]# ls
index.php      readme.html      wp-admin            wp-config.php        wp-cron.php        wp-load.php    wp-settings.php    xmlrpc.php
latest.tar.gz  wordpress        wp-blog-header.php  wp-config-sample.php wp-includes        wp-login.php   wp-signup.php
license.txt    wp-activate.php  wp-comments-post.php wp-content          wp-links-opml.php  wp-mail.php    wp-trackback.php
[root@ip-172-31-35-131 html]#
```

Also remove other files

#rm -rf latest.zip

```
[root@ip-172-31-12-160 html]# rm -rf latest.zip
[root@ip-172-31-12-160 html]# ls
wordpress
```

#rm -rf wordpress

#ls

```
[root@ip-172-31-12-160 html]# rm -rf wordpress/
[root@ip-172-31-12-160 html]# ls
index.php         wp-blog-header.php    wp-includes        wp-settings.php
license.txt       wp-comments-post.php  wp-links-opml.php  wp-signup.php
readme.html       wp-config-sample.php  wp-load.php        wp-trackback.php
wp-activate.php   wp-content            wp-login.php       xmlrpc.php
wp-admin          wp-cron.php           wp-mail.php
```

Set ownership as follows

#chmod -R 755 wp-content

#chown -R apache:apache wp-content

```
[root@ip-172-31-12-160 html]# chmod -R 755 wp-content
[root@ip-172-31-12-160 html]# chown -R apache:apache wp-content
```

Restart http service

#systemctl restart httpd

```
[root@ip-172-31-35-131 html]#
[root@ip-172-31-35-131 html]#
[root@ip-172-31-35-131 html]# systemctl restart httpd
[root@ip-172-31-35-131 html]#
[root@ip-172-31-35-131 html]#
[root@ip-172-31-35-131 html]# |
```

Now the pre-requisites are done ,

Attach the volume Backup where you have stored the files to the instance ,

#mount /dev/xvdd /mnt/mybackup

Replace the html files with the html files in the backup ,

#tar -xzf backupofhtml.gz

Replace the Html files with these new files

(you can either use tar for backup or just cp if the files aren't too big ,so if you used cp command , you can directly copy paste instead of extracting)

WordPress Files: These are the files that make up your WordPress website. They include core WordPress files, themes, plugins, and uploads. The main directory you'll want to back up is usually located in the web server's document root directory. In a typical LAMP (Linux, Apache, MySQL, PHP) setup, this directory is often **/var/www/html** or **/var/www**.

You can create a backup of the WordPress files by copying the entire WordPress directory to a safe location. For example:

```bash
cp -r /var/www/html /path/to/backup/directory
```

Now for the Database Recovery ,

1. **Transfer the Backup File**: If your backup file (**db_backup.sql**) is stored on a different server or location, transfer it to the server where your WordPress website is hosted. You can use tools like SCP, SFTP, or FTP for this purpose.
2. **Access the MySQL Command Line**: Log in to your server via SSH and access the MySQL command line interface. You can do this by running the following command and entering your MySQL root password when prompted:

#mysql -u root -p

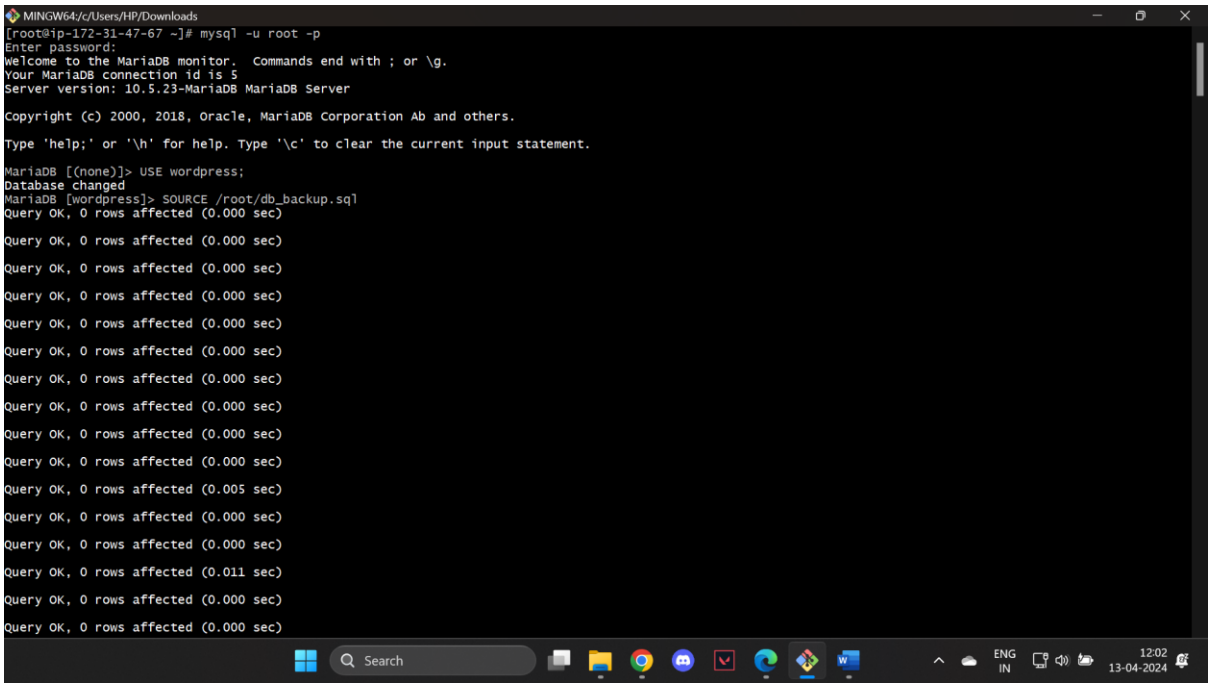
Create a New Database (Optional): If you want to restore the backup to a new database, you can create one using the following MySQL command:

#CREATE DATABASE new_database_name;

Restore the Database: Once you're in the MySQL command line interface and have selected the appropriate database (if necessary), you can restore the database from the backup file using the following command:

#USE your_database_name;

#SOURCE /path/to/backup/directory/db_backup.sql;



Check Database Credentials:

- Open your **wp-config.php** file located in your WordPress root directory.
- Verify that the database name, database username, and database password are correct. These details should match the credentials for the database you restored.

```php
define('DB_NAME', 'your_database_name');
define('DB_USER', 'your_database_username');
define('DB_PASSWORD', 'your_database_password');
```

Verify Database Host:

- Ensure that the database host is correctly set. For most cases, it's **localhost**, but if your database is hosted on a different server, you'll need to specify its address

```php
define('DB_HOST', 'localhost');
```

Database Permissions:

- Make sure that the database user has the necessary permissions to access and modify the database. You might need to grant permissions to the database user if they were not restored along with the database.

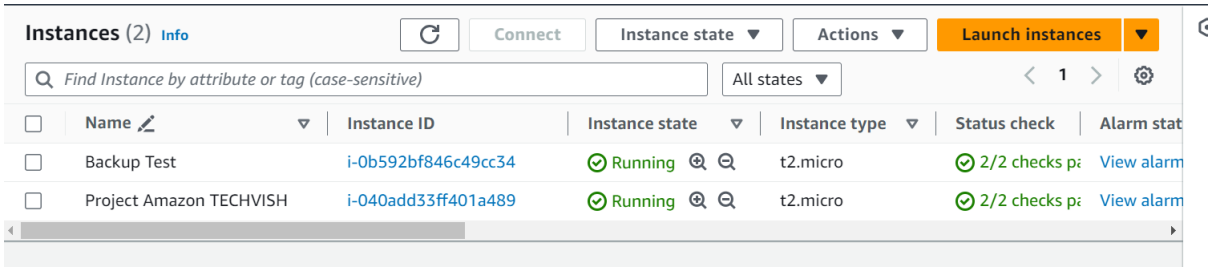
#GRANT ALL PRIVILEGES ON your_database_name.* TO 'your_database_username'@'localhost' IDENTIFIED BY 'your_database_password';

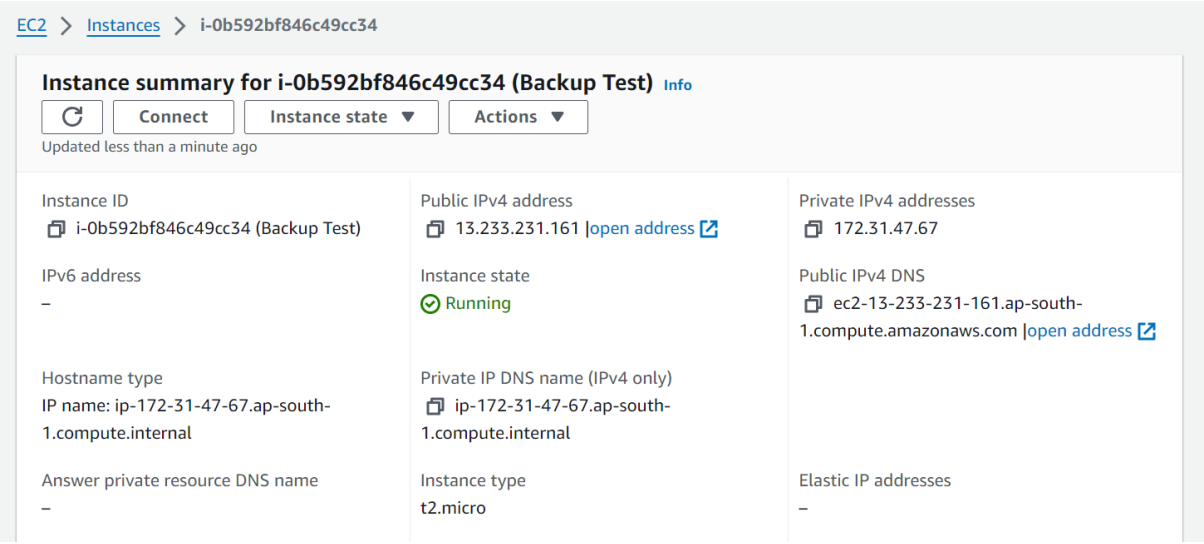
#FLUSH PRIVILEGES;

Now restart httpd

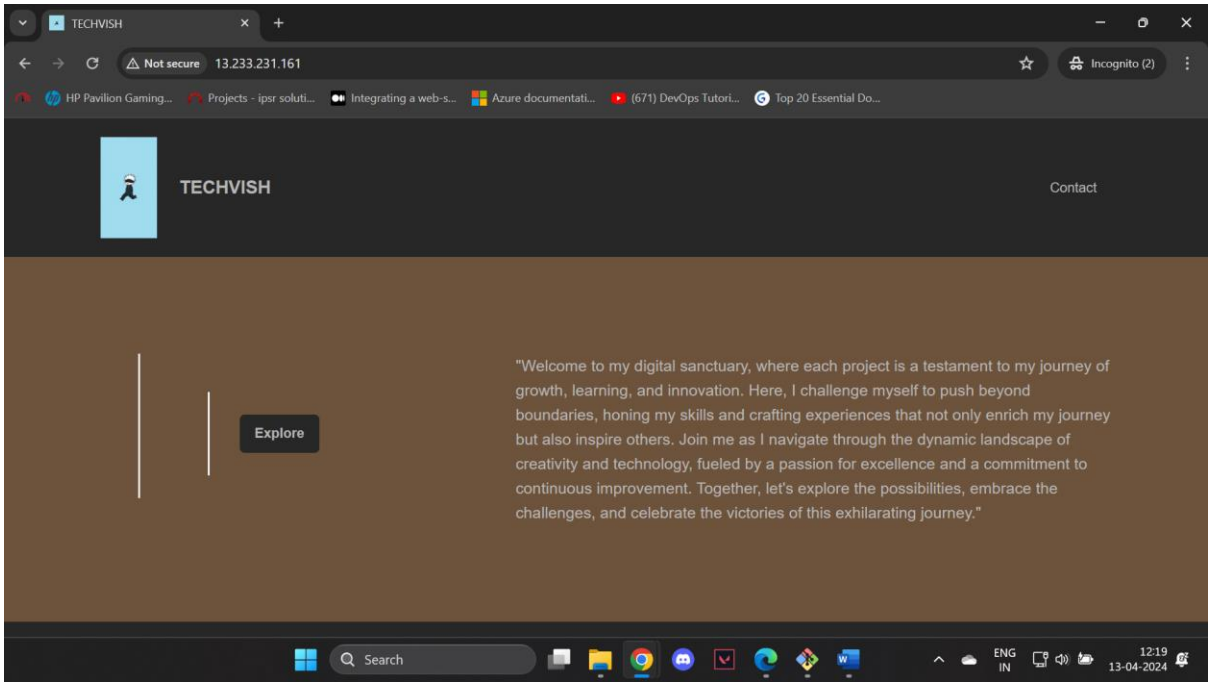
#systemctl restart httpd

That's it! Your WordPress database should now be restored from the backup file. You can now proceed to configure your WordPress site to use this database if necessary.





Access the ip address



This is the backup of my website !

Now I can use the backup files in the volume to recover my website incase the instance gets corrupted or destroyed.
another safe practice is to write a backup script which runs daily or weekly and stores the data in cloud or s3 bucket ,s o that you can have access to the latest data instead of having to do all these steps manually.