

# Infotrixx - AWS Cloud Intern

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# Task 1

Deploy application in monolithic and microservices architecture

Description:

- Monolithic – 1 EC2 instance , deploy wordpress and MySql on same instances.
- Microserices - 2 EC2 instance , 1 for wordpress and other for MySql
- EC2 instance type t3.micro
- AMI - Ubuntu

# Instance Specifications

- Name – mywordpress
- OS – Ubuntu
- Instance Type – t3.micro
- Storage – 8 gb

# Creating Instance



[EC2](#) > [Instances](#) > Launch an instance

## Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

### Name and tags [Info](#)

Name

*e.g. My Web Server*

[Add additional tags](#)

### ▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Recents

[Quick Start](#)

### ▼ Summary

Number of instances [Info](#)

1

#### Software Image (AMI)

Amazon Linux 2023 AMI 2023.2.2...[read more](#)  
ami-03a2c69daedb78c95

#### Virtual server type (instance type)

t3.micro

#### Firewall (security group)

New security group

#### Storage (volumes)

1 volume(s) - 8 GiB

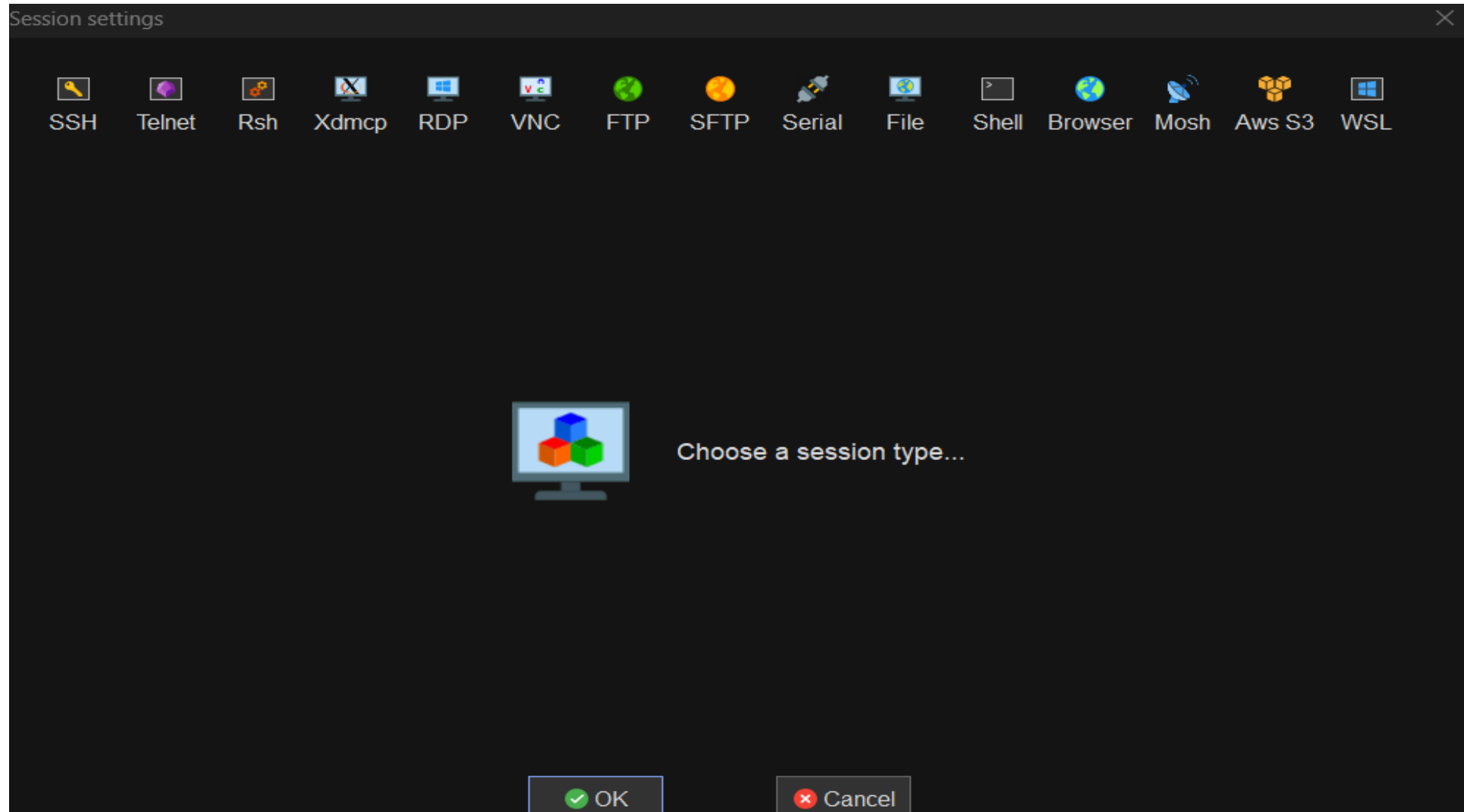
[Info](#) **Free tier:** In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per

Cancel

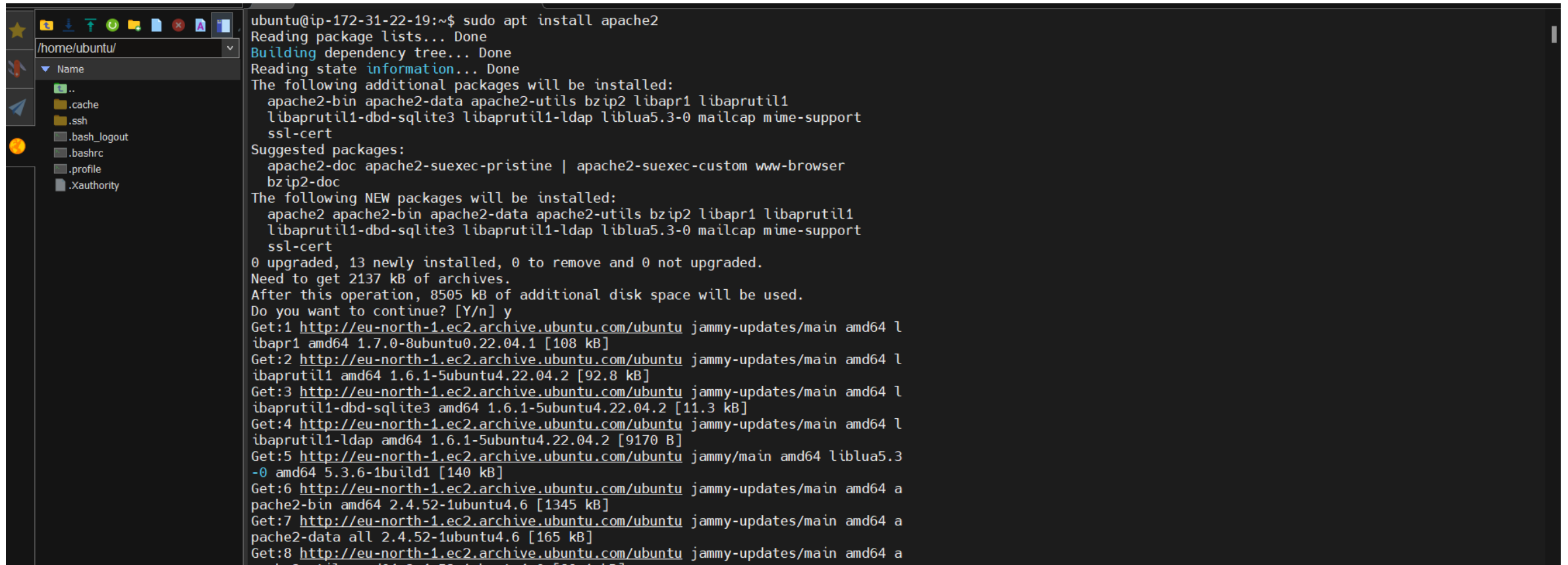
[Launch instance](#)



# Connect Via SSH - MobaXterm



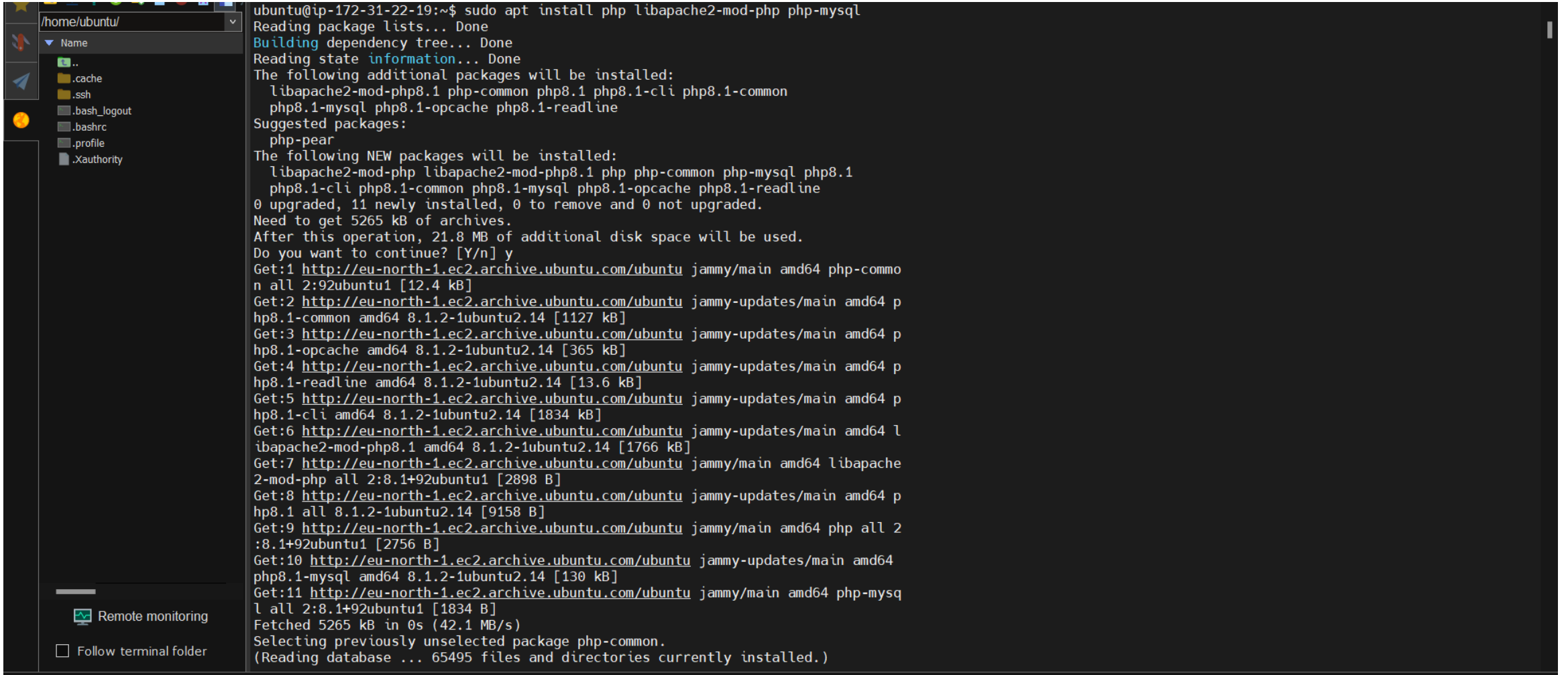
# Step 1 – Installing Apache Server



A terminal window with a dark background and light text. On the left is a sidebar showing a file manager view of the `/home/ubuntu/` directory, listing files like `.cache`, `.ssh`, `.bash_logout`, `.bashrc`, `.profile`, and `.Xauthority`. The main terminal area shows the execution of the command `sudo apt install apache2`. The output displays the package lists, dependency tree, and a list of additional packages to be installed along with their sizes. It also shows suggested packages and the disk space requirements for the installation.

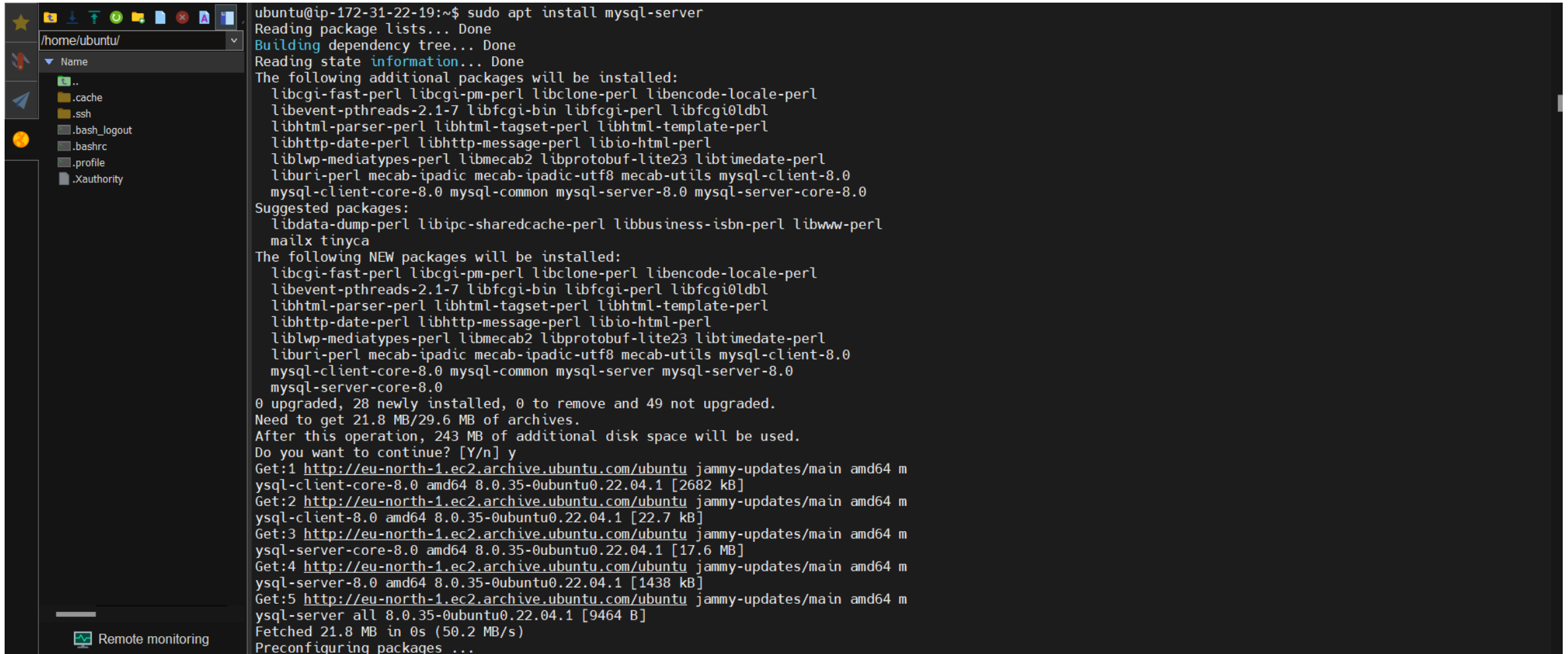
```
ubuntu@ip-172-31-22-19:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support
  ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
  bzip2-doc
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support
  ssl-cert
0 upgraded, 13 newly installed, 0 to remove and 0 not upgraded.
Need to get 2137 kB of archives.
After this operation, 8505 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 l
ibapr1 amd64 1.7.0-8ubuntu0.22.04.1 [108 kB]
Get:2 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 l
ibaprutil1 amd64 1.6.1-5ubuntu4.22.04.2 [92.8 kB]
Get:3 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 l
ibaprutil1-dbd-sqlite3 amd64 1.6.1-5ubuntu4.22.04.2 [11.3 kB]
Get:4 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 l
ibaprutil1-ldap amd64 1.6.1-5ubuntu4.22.04.2 [9170 B]
Get:5 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 liblua5.3
-0 amd64 5.3.6-1build1 [140 kB]
Get:6 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 a
pache2-bin amd64 2.4.52-1ubuntu4.6 [1345 kB]
Get:7 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 a
pache2-data all 2.4.52-1ubuntu4.6 [165 kB]
Get:8 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 a
pache2-utils amd64 2.4.52-1ubuntu4.6 [590.1 kB]
```

# Step 2 – Installing PHP Runtime and MySQL Connector



```
ubuntu@ip-172-31-22-19:~$ sudo apt install php libapache2-mod-php php-mysql
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libapache2-mod-php8.1 php-common php8.1 php8.1-cli php8.1-common
  php8.1-mysql php8.1-opcache php8.1-readline
Suggested packages:
  php-pear
The following NEW packages will be installed:
  libapache2-mod-php libapache2-mod-php8.1 php php-common php-mysql php8.1
  php8.1-cli php8.1-common php8.1-mysql php8.1-opcache php8.1-readline
0 upgraded, 11 newly installed, 0 to remove and 0 not upgraded.
Need to get 5265 kB of archives.
After this operation, 21.8 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 php-commo
n all 2:8.1+92ubuntu1 [12.4 kB]
Get:2 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 p
hp8.1-common amd64 8.1.2-1ubuntu2.14 [1127 kB]
Get:3 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 p
hp8.1-opcache amd64 8.1.2-1ubuntu2.14 [365 kB]
Get:4 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 p
hp8.1-readline amd64 8.1.2-1ubuntu2.14 [13.6 kB]
Get:5 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 p
hp8.1-cli amd64 8.1.2-1ubuntu2.14 [1834 kB]
Get:6 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 l
ibapache2-mod-php8.1 amd64 8.1.2-1ubuntu2.14 [1766 kB]
Get:7 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libapache
2-mod-php all 2:8.1+92ubuntu1 [2898 B]
Get:8 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 p
hp8.1 all 8.1.2-1ubuntu2.14 [9158 B]
Get:9 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 php all 2
:8.1+92ubuntu1 [2756 B]
Get:10 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64
php8.1-mysql amd64 8.1.2-1ubuntu2.14 [130 kB]
Get:11 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 php-mysq
l all 2:8.1+92ubuntu1 [1834 B]
Fetched 5265 kB in 0s (42.1 MB/s)
Selecting previously unselected package php-common.
(Reading database ... 65495 files and directories currently installed.)
```

# Step 3 - Installing MySQL Server

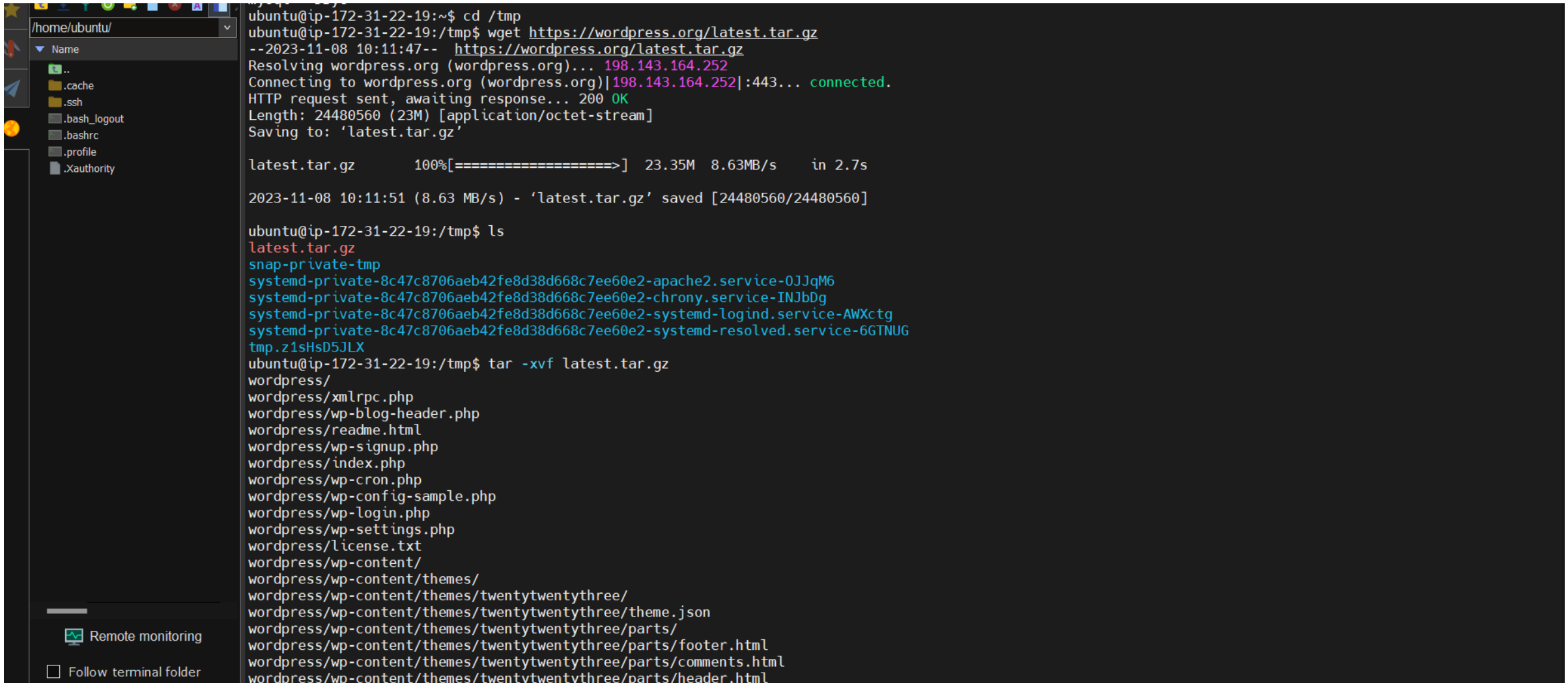


A terminal window with a dark background and light text. On the left is a sidebar with a file manager showing the directory `/home/ubuntu/` with files like `.cache`, `.ssh`, `.bash_logout`, `.bashrc`, `.profile`, and `.Xauthority`. The main terminal area shows the command `sudo apt install mysql-server` and its output. The output lists additional packages to be installed, suggested packages, and new packages to be installed. It also shows the disk space requirements and the progress of downloading the packages from the Ubuntu archive.

```
ubuntu@ip-172-31-22-19:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libcgi-fast-perl libcgi-pm-perl libclone-perl libencode-locale-perl
  libevent-pthreads-2.1-7 libfcgi-bin libfcgi-perl libfcgi0ldbl
  libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl
  libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libmecab2 libprotobuf-lite23 libtimedate-perl
  liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-common mysql-server-8.0 mysql-server-core-8.0
Suggested packages:
  libdata-dump-perl libipc-sharedcache-perl libbusiness-isbn-perl libwww-perl
  mailx tinyc
The following NEW packages will be installed:
  libcgi-fast-perl libcgi-pm-perl libclone-perl libencode-locale-perl
  libevent-pthreads-2.1-7 libfcgi-bin libfcgi-perl libfcgi0ldbl
  libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl
  libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libmecab2 libprotobuf-lite23 libtimedate-perl
  liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-common mysql-server mysql-server-8.0
  mysql-server-core-8.0
0 upgraded, 28 newly installed, 0 to remove and 49 not upgraded.
Need to get 21.8 MB/29.6 MB of archives.
After this operation, 243 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 m
ysql-client-core-8.0 amd64 8.0.35-0ubuntu0.22.04.1 [2682 kB]
Get:2 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 m
ysql-client-8.0 amd64 8.0.35-0ubuntu0.22.04.1 [22.7 kB]
Get:3 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 m
ysql-server-core-8.0 amd64 8.0.35-0ubuntu0.22.04.1 [17.6 MB]
Get:4 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 m
ysql-server-8.0 amd64 8.0.35-0ubuntu0.22.04.1 [1438 kB]
Get:5 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 m
ysql-server all 8.0.35-0ubuntu0.22.04.1 [9464 B]
Fetched 21.8 MB in 0s (50.2 MB/s)
Preconfiguring packages ...
```



# Step 4 – Installing Wordpress



The image shows a terminal window on an Ubuntu system. The left sidebar displays the file manager view of the home directory, showing folders like .cache, .ssh, .bash\_logout, .bashrc, .profile, and .xauthority. The main terminal area shows the following commands and output:

```
ubuntu@ip-172-31-22-19:~$ cd /tmp
ubuntu@ip-172-31-22-19:/tmp$ wget https://wordpress.org/latest.tar.gz
--2023-11-08 10:11:47-- https://wordpress.org/latest.tar.gz
Resolving wordpress.org (wordpress.org)... 198.143.164.252
Connecting to wordpress.org (wordpress.org)|198.143.164.252|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 24480560 (23M) [application/octet-stream]
Saving to: 'latest.tar.gz'

latest.tar.gz      100%[=====>] 23.35M  8.63MB/s   in 2.7s

2023-11-08 10:11:51 (8.63 MB/s) - 'latest.tar.gz' saved [24480560/24480560]

ubuntu@ip-172-31-22-19:/tmp$ ls
latest.tar.gz
snap-private-tmp
systemd-private-8c47c8706aeb42fe8d38d668c7ee60e2-apache2.service-0JJqM6
systemd-private-8c47c8706aeb42fe8d38d668c7ee60e2-chrony.service-INJbDg
systemd-private-8c47c8706aeb42fe8d38d668c7ee60e2-systemd-logind.service-AWXctg
systemd-private-8c47c8706aeb42fe8d38d668c7ee60e2-systemd-resolved.service-6GTNUG
tmp.z1sHsD5JLX
ubuntu@ip-172-31-22-19:/tmp$ tar -xvf latest.tar.gz
wordpress/
wordpress/xmlrpc.php
wordpress/wp-blog-header.php
wordpress/readme.html
wordpress/wp-signup.php
wordpress/index.php
wordpress/wp-cron.php
wordpress/wp-config-sample.php
wordpress/wp-login.php
wordpress/wp-settings.php
wordpress/license.txt
wordpress/wp-content/
wordpress/wp-content/themes/
wordpress/wp-content/themes/twentytwentythree/
wordpress/wp-content/themes/twentytwentythree/theme.json
wordpress/wp-content/themes/twentytwentythree/parts/
wordpress/wp-content/themes/twentytwentythree/parts/footer.html
wordpress/wp-content/themes/twentytwentythree/parts/comments.html
wordpress/wp-content/themes/twentytwentythree/parts/header.html
```

At the bottom of the terminal window, there are two checkboxes: ☒ Remote monitoring and ☐ Follow terminal folder.

# Static Webpage - Deployed Successfully

