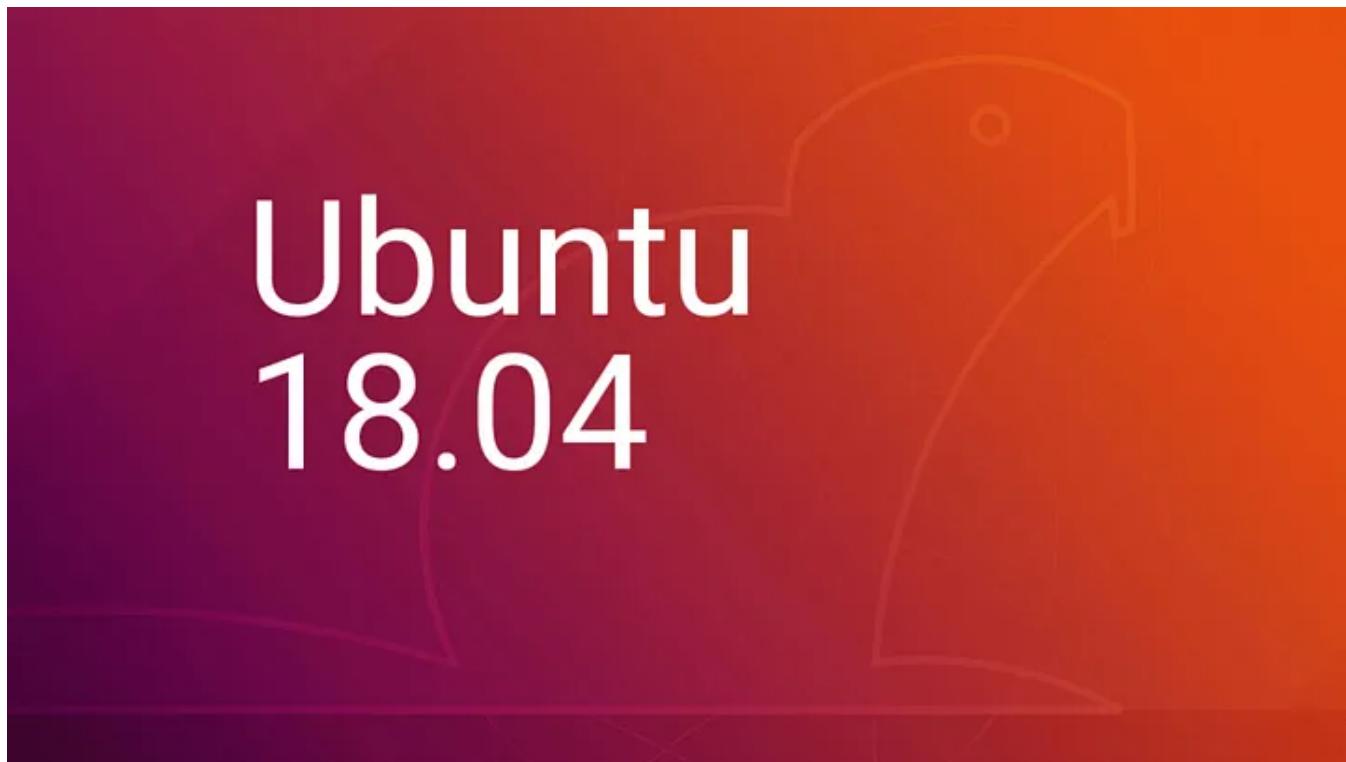


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Ubuntu 18.04 LTS + Apache、MySQL、PHP (LAMP) 安裝設定

Yu-Cheng Hung · [Follow](#)

7 min read · Dec 18, 2019

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引用：<https://www.swhosting.com/blog/en/the-new-ubuntu-18-04-lts-bionic-beaver-available-get-to-know-whats-new/>

嗨大家好，筆者這星期的工作項目較著重在Ubuntu系統安裝及設定，因為過程中不斷的掉入各種坑(QQ)，多虧前輩們的幫助才讓系統環境能順利架設成功，因此趁印象深刻時趕緊紀錄下來，希望能幫助到有需要的夥伴！

本篇將會做Ubuntu 18.04設定Netplan靜態IP教學及如何在Ubuntu 18.04中安裝Apache、MySQL、PHP (LAMP，L表Linux)。

• • •

Ubuntu 18.04 設定 Netplan 靜態 IP

首先是Ubuntu 18.04的安裝，筆者使用iso映像檔掛載方式安裝(下載)，安裝過程一般參照預設值設定，安裝完成並登入Ubuntu後，需要進行靜態IP設定以利後續相關軟體安裝。

那麼該怎麼樣進行設定呢？我們先以指令查看目前系統中所有連線的網路介面卡：

```
$ ifconfig -a
```

```
*** System restart required ***
kyriehong@ubuntu:~$ ifconfig -a
ens160: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
        inet 192.168.1.100 netmask 255.255.255.0 broadcast 192.168.1.255
              ether 00:50:56:a2:8b:9e txqueuelen 1000 (Ethernet)
              RX packets 542293 bytes 833633012 (833.6 MB)
              RX errors 0 dropped 0 overruns 0 frame 0
              TX packets 278957 bytes 72621700 (72.6 MB)
              TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
        inet 127.0.0.1 netmask 255.0.0.0
              inet6 ::1 prefixlen 128 scopeid 0x10<host>
                  loop txqueuelen 1000 (Local Loopback)
                  RX packets 213112 bytes 16236396 (16.2 MB)
                  RX errors 0 dropped 0 overruns 0 frame 0
                  TX packets 213112 bytes 16236396 (16.2 MB)
                  TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

kyriehong@ubuntu:~$
```

lo是loop back的介面卡，因此我們要將ens160乙太網路介面配置一個靜態IP，而網路介面卡的名稱並不一定是ens160，ens後的數字可能不同。接著執行以下指令到netplan資料夾：

```
$ cd /etc/netplan
```

筆者的系統在安裝時就已在這邊自動建立一個YAML檔案 `01-netcfg.yaml`，如果沒有，則執行以下指令自動產生一個設定檔：

```
$ sudo netplan generate
```

打開設定檔並依圖中方式設定ipv4和gateway IP，這邊注意千萬不能設顛倒：

```
# This file describes the network interfaces available on your system
# For more information, see netplan(5).
network:
  version: 2
  renderer: networkd
  ethernets:
    ens160:
      dhcp4: no
      addresses: [192.168.0.10/24]
      gateway4: 192.168.0.1
      nameservers:
        addresses: [8.8.8.8, 8.8.4.4]
```

設定好後記得套用設定：

```
$ sudo netplan apply
```

可以ping看看連線是否成功(亦可ping gateway IP)：

```
$ ping 8.8.8.8
```

最後我們進行Ubuntu Server系統版本更新到最新：

```
$ sudo apt update && sudo apt upgrade && sudo apt dist-upgrade
```

• • •

安裝Apache

執行：

```
$ sudo apt install apache2
```

檢查Apache是否正常運行：

```
$ sudo systemctl status apache2
```

```
kyriehong@ubuntu:/etc/netplan$ sudo systemctl status apache2
[sudo] password for kyriehong:
● apache2.service - The Apache HTTP Server
  Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
  Drop-In: /lib/systemd/system/apache2.service.d
            └─apache2-systemd.conf
     Active: active (running) since Mon 2019-12-16 17:41:01 CST; 23h ago
   Process: 26242 ExecStop=/usr/sbin/apachectl stop (code=exited, status=0/SUCCESS)
   Process: 4587 ExecReload=/usr/sbin/apachectl graceful (code=exited, status=0/SUCCESS)
   Process: 26247 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
 Main PID: 26274 (apache2)
    Tasks: 11 (limit: 4660)
   CGroup: /system.slice/apache2.service
           ├─ 4592 /usr/sbin/apache2 -k start
           ├─ 4593 /usr/sbin/apache2 -k start
           ├─ 4594 /usr/sbin/apache2 -k start
           ├─ 4595 /usr/sbin/apache2 -k start
           ├─ 4650 /usr/sbin/apache2 -k start
           ├─ 4651 /usr/sbin/apache2 -k start
           ├─ 4653 /usr/sbin/apache2 -k start
           ├─ 6141 /usr/sbin/apache2 -k start
           ├─ 6405 /usr/sbin/apache2 -k start
           ├─ 6725 /usr/sbin/apache2 -k start
           └─ 26274 /usr/sbin/apache2 -k start

Dec 16 17:41:01 ubuntu systemd[1]: Started The Apache HTTP Server.
Dec 17 06:25:01 ubuntu systemd[1]: Reloading The Apache HTTP Server.
Dec 17 06:25:01 ubuntu apachectl[2345]: AH00558: apache2: Could not reliably determine the server's
Dec 17 06:25:01 ubuntu systemd[1]: Reloaded The Apache HTTP Server.
Dec 17 09:50:33 ubuntu systemd[1]: Reloading The Apache HTTP Server.
Dec 17 09:50:33 ubuntu apachectl[4492]: AH00558: apache2: Could not reliably determine the server's
Dec 17 09:50:33 ubuntu systemd[1]: Reloaded The Apache HTTP Server.
Dec 17 10:00:31 ubuntu systemd[1]: Reloading The Apache HTTP Server.
Dec 17 10:00:31 ubuntu apachectl[4587]: AH00558: apache2: Could not reliably determine the server's
Dec 17 10:00:31 ubuntu systemd[1]: Reloaded The Apache HTTP Server.
Lines 1-33/33 (END)
```

接著要調整UFW防火牆設定以允許Apache進行遠端連線，以指令查看ufw application profile：

```
$ sudo ufw app list
```

```
kyriehong@ubuntu:/etc/netplan$ sudo ufw app list
Available applications:
  Apache
  Apache Full
  Apache Secure
```

執行下列指令以允許HTTP和HTTPS傳輸：

```
$ sudo ufw allow in "Apache Full"
```

好，現在以 [http://\[Your IP-Address \]/](http://[Your IP-Address]/) 來測試Apache Web Server，若出現apache預設頁面則代表設定成功！



Apache2 Ubuntu Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at /var/www/html/index.html) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in /usr/share/doc/apache2/README.Debian.gz**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the apache2-doc package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   '-- ports.conf
|-- mods-enabled
|   '-- *.load
|   '-- *.conf
|-- conf-enabled
|   '-- *.conf
|-- sites-enabled
|   '-- *.conf
```

• • •

安裝MySQL

執行：

```
$ sudo apt install mysql-server
```

檢查MySQL是否正常運行：

```
kyriehong@ubuntu:/etc/netplan$ sudo systemctl status mysql
[sudo] password for kyriehong:
● mysql.service - MySQL Community Server
  Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: enabled)
  Active: active (running) since Mon 2019-12-16 11:33:53 CST; 1 day 6h ago
    Main PID: 7404 (mysqld)
       Tasks: 29 (limit: 4660)
      CGroup: /system.slice/mysql.service
              └─7404 /usr/sbin/mysqld --daemonize --pid-file=/run/mysqld/mysqld.pid

Dec 16 11:33:53 ubuntu systemd[1]: Starting MySQL Community Server...
Dec 16 11:33:53 ubuntu systemd[1]: Started MySQL Community Server.
```

設定MySQL root user的密碼：

```
$ sudo mysql_secure_installation
```

接下來會選擇設定密碼的複雜層級，設定完成後會問一些問題，全部回答 "Y" 即可。

因為之後會用phpMyAdmin以外部方式管理MySQL，所以我們要把預設的驗證方式 `auth_socket` 更改為 `mysql_native_password`，進入MySQL prompt：

```
$ sudo mysql
```

查看目前所有用戶的驗證方式：

```
SELECT user,authentication_string,plugin,host from mysql.user;
```

user	authentication_string	plugin	host
root	*THISISNOTAVALIDPASSWORDTHATCANBEUSEDHERE	auth_socket	localhost
mysql.session	*THISISNOTAVALIDPASSWORDTHATCANBEUSEDHERE	mysql_native_password	localhost
mysql.sys	*THISISNOTAVALIDPASSWORDTHATCANBEUSEDHERE	mysql_native_password	localhost
debian-sys-maint	*CE27635178A924C0A836C7CD22BAC7789D496F52	mysql_native_password	localhost

4 rows in set (0.01 sec)

以指令更改：

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password
BY '[Your Password]';
```

Update設定：

```
FLUSH PRIVILEGES;
```

再查看一次：

```
SELECT user,authentication_string,plugin,host FROM mysql.user;
```

```
mysql> select user,authentication_string,plugin,host from mysql.user;
+-----+-----+-----+-----+
| user | authentication_string | plugin | host   |
+-----+-----+-----+-----+
| root | *F446C894F73A46F460B9D23EF?FAAFB19A14DFE2 | mysql_native_password | localhost |
| mysql.session | *THISISNOTAVALIDPASSWORDTHATCANBEUSEDHERE | mysql_native_password | localhost |
| mysql.sys | *THISISNOTAVALIDPASSWORDTHATCANBEUSEDHERE | mysql_native_password | localhost |
| debian-sys-maint | *CE27635178A924C0A836C7CD22BAC7789D496F52 | mysql_native_password | localhost |
+-----+-----+-----+-----+
4 rows in set (0.01 sec)
```

修改成功！現在離開MySQL prompt，準備安裝PHP：

```
exit
```

• • •

安裝PHP

```
$ sudo apt install php libapache2-mod-php php-mysql
```

現在我們要在Apache的根目錄資料夾中建立一個 `info.php` 來測試是否能正常運行。Ubuntu 18.04 LTS的Apache根目錄資料夾路徑為 `/var/www/html`。

```
$ sudo vi /var/www/html/info.php
```

填入測試程式碼：

```
<?php
    phpinfo();
?>
```

別忘了重啟Apache讓設定生效

```
$ sudo systemctl restart apache2
```

瀏覽器開啟 [http://\[Your IP-Address\]/info.php](http://[Your IP-Address]/info.php) 測試：

System	Linux ubuntu 4.15.0-55-generic #60-Ubuntu SMP Tue Jul 2 18:22:20 UTC 2019 x86_64
Build Date	Oct 28 2019 12:07:07
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/7.2/apache2
Loaded Configuration File	/etc/php/7.2/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/7.2/apache2/conf.d
Additional .ini files parsed	/etc/php/7.2/apache2/conf.d/10-mysqlind.ini, /etc/php/7.2/apache2/conf.d/10-opcache.ini, /etc/php/7.2/apache2/conf.d/10-pdo.ini, /etc/php/7.2/apache2/conf.d/20-calendar.ini, /etc/php/7.2/apache2/conf.d/20-ctype.ini, /etc/php/7.2/apache2/conf.d/20-exif.ini, /etc/php/7.2/apache2/conf.d/20-fileinfo.ini, /etc/php/7.2/apache2/conf.d/20-fp.ini, /etc/php/7.2/apache2/conf.d/20-gettext.ini, /etc/php/7.2/apache2/conf.d/20-iconv.ini, /etc/php/7.2/apache2/conf.d/20-json.ini, /etc/php/7.2/apache2/conf.d/20-mysqli.ini, /etc/php/7.2/apache2/conf.d/20-pdo_mysql.ini, /etc/php/7.2/apache2/conf.d/20-phar.ini, /etc/php/7.2/apache2/conf.d/20-postr.ini, /etc/php/7.2/apache2/conf.d/20-readline.ini, /etc/php/7.2/apache2/conf.d/20-shmop.ini, /etc/php/7.2/apache2/conf.d/20-sockets.ini, /etc/php/7.2/apache2/conf.d/20-sysvmsg.ini, /etc/php/7.2/apache2/conf.d/20-sysvsem.ini, /etc/php/7.2/apache2/conf.d/20-sysvshm.ini, /etc/php/7.2/apache2/conf.d/20-tokenizer.ini
PHP API	20170718
PHP Extension	20170718
Zend Extension	320170718
Zend Extension Build	API320170718.NTS
PHP Extension Build	API20170718.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled

若看到以上畫面則代表測試成功！另外，當使用者向Web發出請求時，Apache預設會優先查找名為 `index.html` 的檔案，若想將php檔案列為優先查找，則需去 `dir.conf` 中將 `index.php` 改至第一順位：

```
$ sudo vi /etc/apache2/mods-enabled/dir.conf
```

改成如圖所示：

```
<IfModule mod_dir.c>
    DirectoryIndex index.php index.html index.cgi index.pl index.xhtml index.htm
</IfModule>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
```

一樣需重啟Apache讓設定生效：

```
$ sudo systemctl restart apache2
```

最後提供幾個與PHP modules相關的指令，

列出所有可獲得的PHP modules：

```
$ sudo apt-cache search php- | less
```

查看PHP module：

```
$ sudo apt-cache show [PHP module name]
```

安裝PHP module：

```
$ sudo apt install [PHP module name]
```

記得安裝完成後一樣需重啟Apache服務哦！

• • •

總結

經過了一系列的操作，目前各位的環境中應該已經安裝好了：

- Ubuntu 18.04.3 LTS
- Apache 2.4.29 (Ubuntu)
- MySQL 5.7.28
- PHP 7.2.24

若有任何問題歡迎交流討論，那就下次見啦！掰掰！

• • •

2020/08/19補充：

今天再次替另一台VM安裝Ubuntu 20.04.1 LTS，再補充一下幾個小地方：

1. iso映像檔需使用：64-bit PC (AMD64) server install image ex. ubuntu-20.04.1-live-server-amd64.iso
2. VMware Remote Console 掛載印象檔時會需要時間讀取，一開始會以為沒有反應，請耐心等候

Ubuntu

Apache

MySQL

PHP



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Yu-Cheng Hung

七分鐘學會GitLab

大家好，會想寫這個主題緣起於筆者目前與其他資深工程師一起合作進行專案開發，並且使用GitLab來做版本控制。當前網路上雖然有玲瑯滿目的GitLab相關資源，然而對於初學者來說並...

6 min read · Dec 4, 2019



102



```
[ 3236.382571] 0000000000000000 00000000656de4d6 ffff88018f587db8 ffffffff81597b3e
[ 3236.383612] 0000000000000000 ffffffff816f7fb8 ffff88018f587e38 ffffffff815969d3
[ 3236.384636] ffff880100000010 ffff88018f587e48 ffff88018f587de8 00000000656de4d6
[ 3236.385659] Call Trace:
[ 3236.385904] [<ffffffffff81597b3e>] dump_stack+0x4c/0x6e
[ 3236.386263] [<ffffffffff815969d3>] panic+0xd0/0x203
[ 3236.386608] [<ffffffffff818fc621>] mount_block_root+0x297/0x2a6
[ 3236.386998] [<ffffffffff818fc684>] mount_root+0x54/0x58
[ 3236.387365] [<ffffffffff818fc7c0>] prepare_namespace+0x138/0x171
[ 3236.387758] [<ffffffffff818fc22e>] kernel_init_freeable+0x1ec/0x215
[ 3236.388163] [<ffffffffff8158e130>] ? rest_init+0x90/0x90
[ 3236.388526] [<ffffffffff8158e13e>] kernel_init+0xe/0xf0
[ 3236.389237] [<ffffffffff8159d8a2>] ret_from_fork+0x42/0x70
[ 3236.389241] [<ffffffffff8159d8a2>] ? rest_init+0x90/0x90
```



Yu-Cheng Hung

解決Ubuntu 16.04重啟錯誤：Kernel Panic—not syncing: VFS: Unable to mount root fs on unknown-block(0,0)

午安各位讀者們新年快樂！鼠年行大運！筆者前陣子在執行將新舊VM做IP轉換的工作，而IP轉換完畢後，Ubuntu 16.04版的這個舊server需要重新啟動才能完全棄掉舊的IP而使用新的IP(不...)

4 min read · Jan 24, 2020



The screenshot shows a POST request to `/users/register`. The body is set to `form-data` and contains four fields:

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> name	Kevin Durant	
<input checked="" type="checkbox"/> email	kevindurant@gmail.com	
<input checked="" type="checkbox"/> password	kevin123456	
<input checked="" type="checkbox"/> password_confirmation	kevin123456	

The response status is `201 Created`, time `794 ms`, size `567 B`.

Yu-Cheng Hung

在Laravel 8 REST API中應用JSON Web Token (JWT)

各位讀者們好，前陣子 Laravel 更新至 8 版且有讀者詢問是否有相關的 JWT 應用範例，因此我也試著研究了一下在 Laravel 8 中如何應用 JWT 驗證，算是承接前篇文章 – 在 Laravel 6 REST API 中...

13 min read · Mar 3, 2021



 Yu-Cheng Hung

Ubuntu 16.04和Ubuntu 18.04設置DNS Nameservers

前陣子處理兩台Ubuntu Server間的相關設定，因為分別為16.04和18.04兩種版本，而Ubuntu在這兩種版本的設定方式剛好做了一次改版而有所不同，所以在這邊想做個跟DNS(Domain Nam...

3 min read · Jan 31, 2020



See all from Yu-Cheng Hung

Recommended from Medium

{ JSON } is slow?

```
{
  "name": "JSON is slow!",
  "blog": true,
  "writtenAt": 1695884403,
  "topics": ["JSON", "Javascript"]
}
```



Alternatives?



Vaishnav Manoj in DataX Journal

JSON is incredibly slow: Here's What's Faster!

Unlocking the Need for Speed: Optimizing JSON Performance for Lightning-Fast Apps and Finding Alternatives to it!

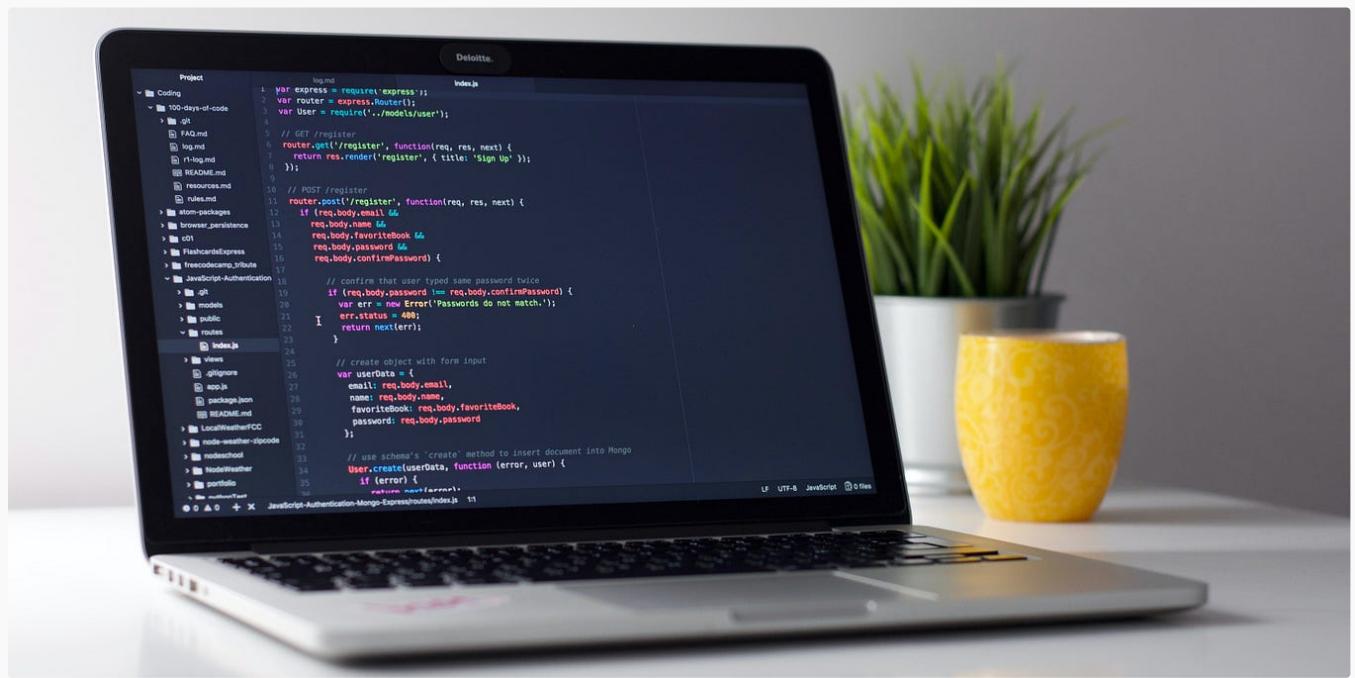
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6.3K



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Paul Bullen in Version 1

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In April 2023, Oracle announced the release of Oracle Database 23c Free. Here's a summary of what you need to know about this release.

4 min read · May 9



7

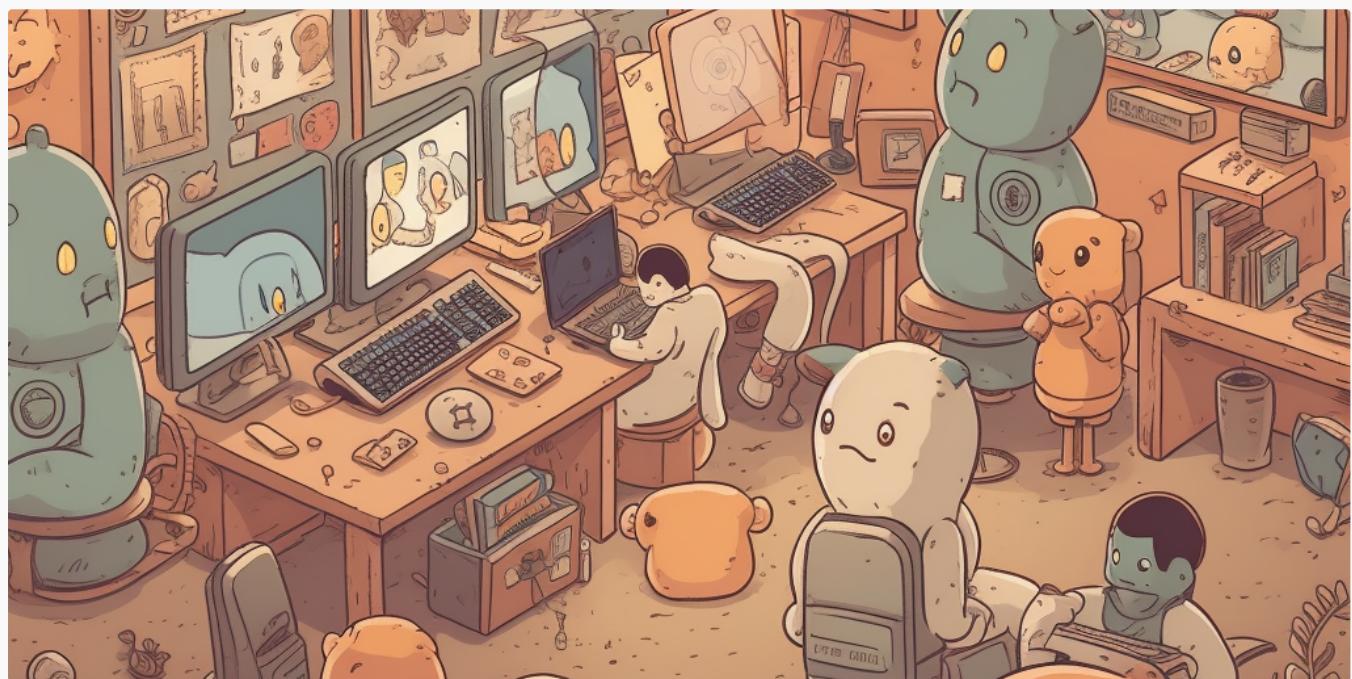


Lists



New_Reading_List

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1.7K



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 Devan Naratama

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 Manikanta K

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Brief Overview

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1



Felix Mulei

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3 min read · Jul 12



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