

Installation af Docker på Ubuntu 24.04.

Der findes generelt 2 mest brugte måder at installere Docker. En Nem, og en lidt mere besværlig måde. Vi starter med den lidt mere besværlige måde:

Start med at logge på din server med SSH.

Vi starter med at opsætte vores apt repository, altså det sted hvor vi installerer Docker fra. Altså henter vores Docker filer fra.

For at kunne opsætte det skal vi først have repositoryets GPG key indlæst. Altså det der gør at vi kan godkende stedet hvorfra vi henter Docker. Jeg vil ikke gå nærmere ind på hvad de forskellige kommandoer laver.

Kommandoer:

```
sudo apt-get update
sudo apt-get install ca-certificates curl
sudo install -m 0755 -d /etc/apt/keyrings
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o
/etc/apt/keyrings/docker.asc
sudo chmod a+r /etc/apt/keyrings/docker.asc
```

Resultatet vil se sådan lignende ud:

```
dtmek@testserver:~$ sudo apt-get update
[sudo] password for dtmek:
Hit:1 http://dk.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://dk.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://dk.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://dk.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [894 kB]
Get:6 http://dk.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [203 kB]
Get:7 http://dk.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 B]
Get:8 http://dk.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:9 http://dk.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1,033 kB]
Get:10 http://dk.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [259 kB]
Get:11 http://dk.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [364 kB]
Get:12 http://dk.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:13 http://dk.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [208 B]
Get:14 http://dk.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:15 http://dk.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [208 B]
Get:16 http://dk.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:17 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [647 kB]
Get:18 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [128 kB]
Get:19 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [9,960 B]
Get:20 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:21 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [815 kB]
Get:22 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [176 kB]
Get:23 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [11,9 kB]
Get:24 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Fetched 5,135 kB in 1s (3,830 kB/s)
Reading package lists... Done
dtmek@testserver:~$ sudo apt-get install ca-certificates curl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ca-certificates is already the newest version (20240203).
ca-certificates set to manually installed.
curl is already the newest version (8.5.0-ubuntu10.4).
curl set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
dtmek@testserver:~$ sudo install -m 0755 -d /etc/apt/keyrings
dtmek@testserver:~$ sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
dtmek@testserver:~$ sudo chmod a+r /etc/apt/keyrings/docker.asc
dtmek@testserver:~$
```

Så har vi Tilføjet vores GPG key, og vi kan tilføje Dockers officielle repository med følgende Kommandoer (Det fremhævede er EN stor kommando!! SKAL kopieres i en omgang, og indsættes af en omgang):

```
echo \
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc]
https://download.docker.com/linux/ubuntu \
$(. /etc/os-release && echo "${UBUNTU_CODENAME:-$VERSION_CODENAME}") stable" | \
sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update
```

Resultat:

```
dtmek@testserver:~$ echo \
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
$(. /etc/os-release && echo "${UBUNTU_CODENAME:-$VERSION_CODENAME}") stable" | \
sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
dtmek@testserver:~$ sudo apt-get update
Hit:1 http://dk.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://dk.archive.ubuntu.com/ubuntu noble-updates InRelease
Get:3 https://download.docker.com/linux/ubuntu noble InRelease [48.9 kB]
Hit:4 http://dk.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:5 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:6 https://download.docker.com/linux/ubuntu noble/stable amd64 Packages [20.3 kB]
Fetched 69.2 kB in 0s (158 kB/s)
Reading package lists... Done
dtmek@testserver:~$
```

Så installerer vi Docker med følgende Kommando:

```
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin
```

Resultat:

Der skulle gerne komme en hel masse tekst, og efter noget tid, er du tilbage i prompten. Ikke alt tekst er gengivet.

```
dtmek@testserver:~$ sudo apt-get update
[sudo] password for dtmek:
Hit:1 http://dk.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://dk.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://dk.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://dk.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [896 kB]
Get:6 http://dk.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [209 kB]
Get:7 http://dk.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 kB]
Get:8 http://dk.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:9 http://dk.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1,033 kB]
Get:10 http://dk.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [259 kB]
Get:11 http://dk.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [364 kB]
Get:12 http://dk.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:13 http://dk.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [208 B]
Get:14 http://dk.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:15 http://dk.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [20.0 kB]
Get:16 http://dk.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
```

For at teste om Docker er installeret, kan vi prøve at køre følgende kommando:

```
sudo docker run hello-world
```

Det skulle gerne resultere i nedenstående:

```
dtmek@testserver:~$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
e6590344b1a5: Pull complete
Digest: sha256:bfb0cc14f13f9ed1ae96abc2b9f11181dc50d779807ed3a3c5e55a6936dbdd5
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

dtmek@testserver:~$
```

Docker er nu installeret. Hvis du har udført ovenstående hop venligst over den nemme installation og fortsæt ved "Fortsæt Installation af Docker her:"

******* Start Nem Installation *******

Nu viser jeg den nemme måde at installere Docker på:

Først henter vi et Shell script:

```
curl -fsSL https://get.docker.com -o get-docker.sh
```

Resultat:

```
dtmek@testserver:~$ curl -fsSL https://get.docker.com -o get-docker.sh
dtmek@testserver:~$
```

Så kører vi shellskriptet med kommandoen:

```
sudo sh get-docker.sh
```

Resultat. Der kommer en hel masse tekst, og man ender op i prompten igen. Skriptet har udført alle de kommandoer som vi gennemgik i det forrige afsnit med manuel installation.

```
dtmek@testserver:~$ sudo sh get-docker.sh
[sudo] password for dtmek:
# Fetching docker install script, commit: 463a5e5e10ef64b3b3f6a9a5e5f5bde
# sh -c apt-get -q update >/dev/null
# sh -c DEBIAN_FRONTEND=noninteractive apt-get -y -q install ca-certificates curl >/dev/null
# sh -c install -m 0755 -i /etc/apt/keyring
# sh -c curl -fsSL https://download.docker.com/linux/ubuntu/gpg > /etc/apt/keyring/docker.asc
# sh -c chmod a+r /etc/apt/keyring/docker.asc
# sh -c echo "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable" > /etc/apt/sources.list.d/docker.list
# sh -c apt-get -q update >/dev/null
# sh -c DEBIAN_FRONTEND=noninteractive apt-get -y -q install docker-ce docker-ce-cli containerd.io docker-compose-plugin docker-ce-rootless-extras docker-buildx-plugin >/dev/null
# Cleaning up the environment...
# sh -c docker version
Client: Docker Engine - Community
Version: 24.0.1
API version: 1.43
```

******* Slut Nem Installation *******

Fortsæt Installation af Docker her:

For at gøre det nemmere for os selv, vil vi sørge for at vores normale bruger kan starte Docker containere. Ellers er det kun med sudo vi kan starte containere.

Vi starter med at kontrollere at der er oprettet en gruppe der hedder docker, Hvis den er der, som forventet, vil der komme nedenstående fejl:

Kommando:

```
sudo groupadd docker
```

Resultat:

```
dtmek@testserver:~$ sudo groupadd docker
groupadd: group 'docker' already exists
dtmek@testserver:~$
```

Så tilføjer vi lige vores bruger. Den bruger vi er logget ind med på vores server. Det gøres sådan: "sudo usermod -aG docker brugernavn" I vores eksempel hedder denne bruger "dtmek", så vores kommando er:

```
sudo usermod -aG docker dtmek
```

Resultat:

```
dtmek@testserver:~$ sudo usermod -aG docker dtmek
dtmek@testserver:~$
```

Nu SKAL server genstartes! Hvis det er gået for lang tid, skal der lige indtastes password til vores bruger.

```
sudo reboot
```

Resultat:

```
dtmek@testserver:~$ sudo reboot

Broadcast message from root@testserver on pts/1 (Tue 2025-03-04 08:36:50 CET):

The system will reboot now!

dtmek@testserver:~$
```

Efter genstart er server klar til at oprette docker containere.