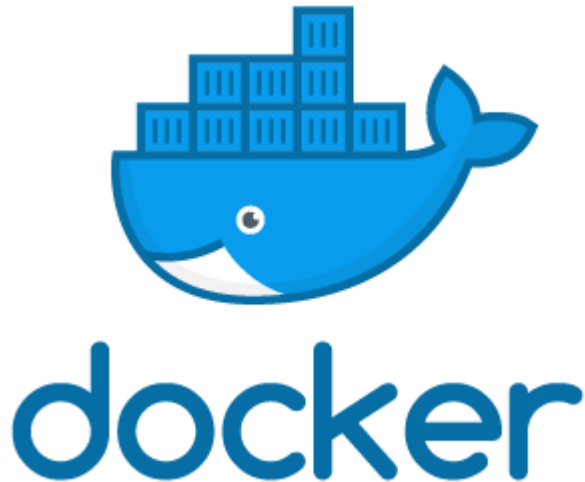# Task 26 : Run GUI Application on Docker

1. Check Connectivity- ping google.com

```
File  Edit  View  Search  Terminal  Help
[root@MiWiFi-R3L-srv ~]# ping google.com
PING google.com (142.250.195.142) 56(84) bytes of data.
64 bytes from maa03s40-in-f14.1e100.net (142.250.195.142): icmp_seq=1 ttl=119 time=56.2 ms
64 bytes from maa03s40-in-f14.1e100.net (142.250.195.142): icmp_seq=2 ttl=119 time=69.2 ms
64 bytes from maa03s40-in-f14.1e100.net (142.250.195.142): icmp_seq=3 ttl=119 time=53.10 ms
64 bytes from maa03s40-in-f14.1e100.net (142.250.195.142): icmp_seq=4 ttl=119 time=77.6 ms
64 bytes from maa03s40-in-f14.1e100.net (142.250.195.142): icmp_seq=5 ttl=119 time=52.1 ms
^C
--- google.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 11ms
rtt min/avg/max/mdev = 52.063/61.802/77.638/9.933 ms
[root@MiWiFi-R3L-srv ~]#
```

2.Check Docker version- docker –version and see images

```
[root@MiWiFi-R3L-srv ~]# docker --version
Docker version 20.10.5, build 55c4c88
[root@MiWiFi-R3L-srv ~]# systemctl start docker
[root@MiWiFi-R3L-srv ~]# docker images
REPOSITORY     TAG          IMAGE ID         CREATED         SIZE
centos         latest       300e315adb2f     4 months ago    209MB
ubuntu         14.04        df043b4f0cf1     7 months ago    197MB
```

3. start one container and check for 1 gui application

```
[root@9930ff7d1bb0 /]# yum install firefox -y
Failed to set locale, defaulting to C.UTF-8
CentOS Linux 8 - AppStream
CentOS Linux 8 - BaseOS
CentOS Linux 8 - Extras
Dependencies resolved.
================================================================================
 Package                          Architecture          Version
================================================================================
Installing:
 firefox                          x86_64                78.9.0-1.el8_3
Upgrading:
 crypto-policies                  noarch                20210209-1.gitbfb6bed.el8
Installing dependencies:
 adwaita-cursor-theme             noarch                3.28.0-2.el8
 adwaita-icon-theme               noarch                3.28.0-2.el8
 alsa-lib                         x86_64                1.2.3.2-1.el8
 at-spi2-atk                      x86_64                2.26.2-1.el8
 at-spi2-core                     x86_64                2.28.0-1.el8
 atk                              x86_64                2.28.1-1.el8
 avahi-libs                       x86_64                0.7-19.el8
 cairo                            x86_64                1.15.12-3.el8
 cairo-gobject                    x86_64                1.15.12-3.el8
 centos-indexhtml                 noarch                8.0-0.el8
 colord-libs                      x86_64                1.4.2-1.el8
```

```
[root@9930ff7d1bb0 /]# firefox
Failed to open connection to "session" message bus: Unable to autolaunch a dbus-daemon without a $DISPLAY for X11
Running without a11y support!

(firefox:173): Gtk-WARNING **: 06:04:14.235: Locale not supported by C library.
        Using the fallback 'C' locale.
Error: no DISPLAY environment variable specified
```

Firefox is not starting

4. Exit from Docker and Code a Dockerfile

```
File  Edit  View  Search  Terminal  Help
FROM centos:latest
RUN yum install firefox -y
CMD ["/usr/bin/firefox"]
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
```

5. Now build an image using the Dockerfile using a tag -firefox

```
[root@MiWiFi-R3L-srv code]# docker build -t firefox .
Sending build context to Docker daemon  2.048kB
Step 1/3 : FROM centos:latest
 ---> 300e315adb2f
Step 2/3 : RUN yum install firefox -y
 ---> Running in 940375330b09
CentOS Linux 8 - AppStream                         850 kB/s | 6.3 MB     00:07
CentOS Linux 8 - BaseOS                            900 kB/s | 2.3 MB     00:02
CentOS Linux 8 - Extras                            9.9 kB/s | 9.6 kB     00:00
Dependencies resolved.
================================================================================
 Package                  Arch    Version                      Repo        Size
================================================================================
Installing:
 firefox                  x86_64 78.9.0-1.el8_3               appstream 102 M
Upgrading:
 crypto-policies          noarch 20210209-1.gitbfb6bed.el8_3  baseos     62 k
Installing dependencies:
 adwaita-cursor-theme     noarch 3.28.0-2.el8                 appstream 647 k
 adwaita-icon-theme       noarch 3.28.0-2.el8                 appstream  11 M
 alsa-lib                 x86_64 1.2.3.2-1.el8                appstream 469 k
 at-spi2-atk              x86_64 2.26.2-1.el8                 appstream  89 k
 at-spi2-core             x86_64 2.28.0-1.el8                 appstream 169 k
```

6. Check if the image is created

```
 ---> 501147f2c872
Step 3/3 : CMD ["/usr/bin/firefox"]
 ---> Running in 5b4e548bdde5
Removing intermediate container 5b4e548bdde5
 ---> fc7fdad12acc
Successfully built fc7fdad12acc
Successfully tagged firefox:latest
[root@MiWiFi-R3L-srv code]# docker images
REPOSITORY    TAG       IMAGE ID        CREATED          SIZE
firefox       latest    fc7fdad12acc    14 seconds ago   575MB
centos        latest    300e315adb2f    4 months ago     209MB
ubuntu        14.04     df043b4f0cf1    7 months ago     197MB
```

7.Run the image with Env Variable DISPLAY to enable GUI

```
[root@MiWiFi-R3L-srv code]# docker container run -it --env="DISPLAY" --net=host firefox
Failed to open connection to "session" message bus: D-Bus library appears to be incorrectly set up: see the manual page for dbus-uuidgen
e '/var/lib/dbus/machine-id' should contain a hex string of length 32, not length 0, with no other text; UUID file '/etc/machine-id' sho
h 32, not length 0, with no other text)
Running without a11y support!
Gtk-Message: 06:12:55.087: Failed to load module "pk-gtk-module"
Gtk-Message: 06:12:55.118: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:12:55.187: Failed to load module "pk-gtk-module"
Gtk-Message: 06:12:55.187: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:12:58.572: Failed to load module "pk-gtk-module"
Gtk-Message: 06:12:58.572: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:12:58.576: Failed to load module "pk-gtk-module"
Gtk-Message: 06:12:58.576: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:12:58.777: Failed to load module "pk-gtk-module"
Gtk-Message: 06:12:58.782: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:12:58.789: Failed to load module "pk-gtk-module"
Gtk-Message: 06:12:58.789: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:13:00.953: Failed to load module "pk-gtk-module"
Gtk-Message: 06:13:00.978: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:13:00.986: Failed to load module "pk-gtk-module"
Gtk-Message: 06:13:00.986: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:13:00.991: Failed to load module "pk-gtk-module"
Gtk-Message: 06:13:00.991: Failed to load module "canberra-gtk-module"
Gtk-Message: 06:13:01.012: Failed to load module "pk-gtk-module"
Gtk-Message: 06:13:01.013: Failed to load module "canberra-gtk-module"
^[nGtk-Message: 06:13:10.739: Failed to load module "pk-gtk-module"
```

8.Thus GUI application is launched in Docker