

ProviewR

OPEN SOURCE PROCESS CONTROL



Installation Guide

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2 Debian

System requirements

Debian version: 11 (Bullseye)
Architecture: amd64

Development environment pwr59

1. Download pwr59_5.9.0-1_amd64.deb from the ProviewR download page.

2. Open a terminal window and install dependency packages

```
> sudo apt-get update
> sudo apt-get install -y libgtk2.0-0 libasound2 \
libdb5.3 libdb5.3++ libsqlite3-0 librsvg2-2 g++ xterm libmariadb3 \
librabbitmq4 libusb-1.0-0 libhdf5-openmpi-103 librabbitmq4 libmosquitto1 \
libgstreamer1.0-0 libgstreamer-plugins-base1.0-0 openjdk-11-jdk \
xterm xfonts-100dpi sudo procps libpython3-dev python3
```

3. Go to the download directory

```
> cd Downloads
```

4. Install the ProviewR package

```
> sudo dpkg -i pwr59_5.9.0-1_amd64.deb
```

5. Logout and login as user 'pwrp' with the same password. Start ProviewR from the desktop icon, or from a terminal window with

```
>pwra
```

6. Follow the Getting Started Guide to create and configure a project.

7. If you enable Mqttlo in BuildOptions, install libmosquitto-dev.

Demo project pwrdemo

1. Install the pwr59 package.

2. Download pwrdemo59_5.9.0-1_amd64.deb from the ProviewR download page.

3. Go to the download directory.

```
> cd Downloads
```

4. Install the ProviewR demo package

```
> sudo dpkg -i pwrdemo59_5.9.0-1_amd64.deb
```

5. Attach the project from the desktop icon, or from a terminal window with

```
> sdf pwrdemo59  
> rt_ini &  
> rt_xtt op  
...  
> source pwr_stop.sh
```

6. Open in web browser with <http://hostname/pwrdemo/index.html>

Runtime environment pwrvt

1. Download pwrvt_5.9.0-1_amd64.deb from the ProviewR download page.

2. Open a terminal window and install dependency packages

```
> sudo apt-get update  
> sudo apt-get install -y libgtk2.0-0 libasound2 \  
libdb5.3 libdb5.3++ libsqlite3-0 librsvg2-2 g++ xterm libmariadb3 \  
librabbitmq4 libmosquitto1 libusb-1.0-0 libhdf5-openmpi-103 \  
libgstreamer1.0-0 libgstreamer-plugins-base1.0-0 \  
xterm xfonts-100dpi sudo procps python3 python3-pandas python3-seaborn \  
python3-statsmodels python3-sklearn
```

3. Go to the download directory

```
> cd Downloads
```

4. Install the ProviewR package

```
> sudo dpkg -i pwrvt_5.9.0-1_amd64.deb
```

5. Configure, build and distribute a node from the development environment.

6. Enter the configured qcomBusId in /etc/proview.cnf

7. Login as user pwrp and start ProviewR runtime

```
> pwr start
```

8. Enable autostart of ProviewR at boot with

```
> systemctl enable pwr
```

Rpi crosscompilation package pwrrpi

1. Install the pwr59 package.
2. Download pwrrpi59_5.9.0-1_amd64.deb from the ProviewR download page.
3. Go to the download directory.

```
> cd Downloads
```

4. Install the ProviewR pwrrpi package

```
> sudo dpkg -i pwrrpi59_5.9.0-1_amd64.deb
```

3 Ubuntu

System requirements

Ubuntu version: 20.04 LTS
Architecture: amd64

Development environment pwr59

1. Download pwr59_5.9.0-1_amd64.deb from the ProviewR download page.

2. Open a terminal window and install dependency packages

```
> sudo apt-get update
> sudo apt-get install -y libgtk2.0-0 libasound2 \
libdb5.3 libdb5.3++ libsqlite3-0 librsvg2-2 g++ xterm libmariadb3 \
librabbitmq4 libusb-1.0-0 libhdf5-openmpi-103 librabbitmq4 libmosquitto1\
libgstreamer1.0-0 libgstreamer-plugins-base1.0-0 openjdk-11-jdk \
xterm xfonts-100dpi sudo procps libpython3-dev python3
```

3. Go to the download directory

```
> cd Downloads
```

4. Install the ProviewR package

```
> sudo dpkg -i pwr59_5.9.0-1_amd64.deb
```

5. Logout and login as user 'pwrp' with the same password. Start ProviewR from the desktop icon, or from a terminal window with

```
>pwra
```

6. Follow the Getting Started Guide to create and configure a project.

7. If you enable Mqttlo in BuildOptions, install libmosquitto-dev.

Demo project pwrdemo

1. Install the pwr59 package.

2. Download pwrdemo59_5.9.0-1_amd64.deb from the ProviewR download page.

3. Go to the download directory.

```
> cd Downloads
```

4. Install the ProviewR demo package

```
> sudo dpkg -i pwrdemo59_5.9.0-1_amd64.deb
```

5. Attach the project from the desktop icon, or from a terminal window with

```
> sdf pwrdemo59
> rt_ini &
> rt_xtt op
...
> source pwr_stop.sh
```

6. Open in web browser with <http://hostname/pwrdemo/index.html>

Runtime environment pwrtr

1. Download pwrtr_5.9.0-1_amd64.deb from the ProviewR download page.

2. Open a terminal window and install

```
> sudo apt-get update
> sudo apt-get install -y libgtk2.0-0 libasound2 \
libdb5.3 libdb5.3++ libsqlite3-0 librsvg2-2 g++ xterm libmariadb3 \
librabbitmq4 libmosquitto1 libusb-1.0-0 libhdf5-openmpi-103 \
libgstreamer1.0-0 libgstreamer-plugins-base1.0-0 \
xterm xfonts-100dpi sudo procps python3 python3-pandas python3-seaborn \
python3-statsmodels python3-sklearn
```

3. Go to the download directory

```
> cd Downloads
```

4. Install the ProviewR package

```
> sudo dpkg -i pwrtr_5.9.0-1_amd64.deb
```

5. Configure, build and distribute a node from the development environment.

6. Start ProviewR runtime

```
> pwr start
```

Rpi crosscompilation package pwrspi

1. Install the pwr59 package.

2. Download pwrspi59_5.9.0-1_amd64.deb from the ProviewR download page.

3. Go to the download directory.

```
> cd Downloads
```

4. Install the ProviewR pwrrpi package

```
> sudo dpkg -i pwrrpi59_5.9.0-1_amd64.deb
```


4 Raspberry Pi OS

System requirements

Raspberry Pi OS version: Debian 10 (Buster)
Architecture: armhf

Development environment pwr59

1. Download pwr59_5.9.0-1_armhf.deb from the ProviewR download page.
2. Open a terminal window and install dependency packages

```
> sudo apt-get update
> sudo apt-get install -y libgtk2.0-0 libasound2 \
libdb5.3 libdb5.3++ libsqlite3-0 librsvg2-2 g++ xterm libmariadb3 \
libusb-1.0-0 libhdf5-openmpi-103 librabbitmq4 libmosquitto1 \
libgstreamer1.0-0 libgstreamer-plugins-base1.0-0 openjdk-11-jdk \
xterm xfonts-100dpi sudo procps libpython3-dev python3
```

3. Go to the download directory

```
> cd Downloads
```

4. Install the ProviewR package

```
> sudo dpkg -i pwr59_5.9.0-1_armhf.deb
```

5. Logout and login as user 'pwrp' with the same password. Start ProviewR from the desktop icon, or from a terminal window with

```
>pwra
```

6. Follow the Getting Started Guide to create and configure a project.
7. If you enable Mqttlo in BuildOptions, install libmosquitto-dev.

Demo project pwrdemo

1. Install the pwr59 package.
2. Download pwrdemo59_5.9.0-1_armhf.deb from the ProviewR download page.
3. Go to the download directory.

```
> cd Downloads
```

4. Install the ProviewR demo package

```
> sudo dpkg -i pwrdemo59_5.9.0-1_armhf.deb
```

5. Attach the project from the desktop icon, or from a terminal window with

```
> sdf pwrdemo59  
> rt_ini &  
> rt_xtt op  
...  
> source pwr_stop.sh
```

6. Open in web browser with <http://hostname/pwrdemo/index.html>

Runtime environment pwrvt

1. Download pwrvt_5.9.0-1_armhf.deb from the ProviewR download page.

2. Open a terminal window and install

```
> sudo apt-get update  
> sudo apt-get install -y libgtk2.0-0 libasound2 \  
libdb5.3 libdb5.3++ libsqlite3-0 librsvg2-2 g++ xterm libmariadb3 \  
libusb-1.0-0 libhdf5-openmpi-103 librabbitmq4 libmosquitto1 \  
libgstreamer1.0-0 libgstreamer-plugins-base1.0-0 \  
xterm xfonts-100dpi sudo procs python3 python3-pandas python3-seaborn \  
python3-statsmodels python3-sklearn
```

3. Go to the download directory

```
> cd Downloads
```

4. Install the ProviewR package

```
> sudo dpkg -i pwrvt_5.9.0-1_armhf.deb
```

5. Configure, build and distribute a node from the development environment.

6. Increase the Message Queue max size by adding this line to `/etc/sysctl.conf`

```
fs.mqueue.msg_max = 20
```

and reboot.

7. Start ProviewR runtime

```
> pwr start
```

5 Docker

Install in a docker container

5.1 Install in docker container on Linux

In this example the development environment and demo project is installed.

1. Run docker

```
> docker run -it --volume="/tmp/.X11-unix:/tmp/.X11-unix:rw" debian:11 /bin/bash
```

2. Install dependency packages

```
> apt-get update
> apt-get install -y wget
> apt-get install -y libgtk2.0-0 libasound2 \
  libdb5.3 libdb5.3++ libsqlite3-0 librsvg2-2 g++ xterm libmariadb3 \
  librabbitmq4 libusb-1.0-0 libhdf5-openmpi-103 librabbitmq4 \
  libgstreamer1.0-0 libgstreamer-plugins-base1.0-0 openjdk-11-jdk \
  xterm xfonts-100dpi sudo procps libpython3-dev python3
```

3. Download the development environment and demo project

```
> wget http://downloads.sourceforge.net/project/proview/proview/proviewr_5.9.0-1/\
debian11/pwr59_5.9.0-1_amd64.deb
> wget http://downloads.sourceforge.net/project/proview/proview/proviewr_5.9.0-1/\
debian11/pwrdemo59_5.9.0-1_amd64.deb
```

4. Install pwr59 and pwrdemo59

```
> dpkg -i pwr59_5.9.0-1_amd64.deb
> dpkg -i pwrdemo59_5.9.0-1_amd64.deb
```

5. Login as user 'pwrp'

```
> su - pwrp
> export DISPLAY=unix:0
```

6. Attach and start the demo project

```
> sdf pwrdemo59
> pwr_rtmon
```

7. Create a new project

```
> pwra
```

5.2 Install in docker container on Mac OSX

In this example the development environment and demo project is installed.

1. Install and start the X11 server XQuartz.

Download and install XQuartz

Activate 'Allow connections from network clients' in the security settings.

Restart XQuartz to activate the new settings.

In the XQuartz terminal, allow access from local host

```
> xhost + 127.0.0.1
```

2. Run docker in a docker terminal

```
> docker run -it debian:11 /bin/bash
```

3. Install dependency packages

```
> apt-get update
> apt-get install -y wget
> apt-get install -y libgtk2.0-0 libasound2 \
  libdb5.3 libdb5.3++ libsqlite3-0 librsvg2-2 g++ xterm libmariadb3 \
  librabbitmq4 libusb-1.0-0 libhdf5-openmpi-103 librabbitmq4 \
  libgstreamer1.0-0 libgstreamer-plugins-base1.0-0 openjdk-11-jdk \
  xterm xfonts-100dpi sudo procps libpython3-dev python3
```

4. Download pwr59 and pwrdemo59 packages

```
> wget http://downloads.sourceforge.net/project/proview/proview/proviewr_5.9.0-1/\
debian11/pwr59_5.9.0-1_amd64.deb
```

```
> wget http://downloads.sourceforge.net/project/proview/proview/proviewr_5.9.0-1/\
debian11/pwrdemo59_5.9.0-1_amd64.deb
```

5. Install pwr59 and pwrdemo59

```
> dpkg -i pwr59_5.9.0-1_amd64.deb
> dpkg -i pwrdemo59_5.9.0-1_amd64.deb
```

6. Login as user 'pwrp'

```
> su - pwrp
> export DISPLAY=host.docker.internal:0
```

7. Attach and start the demo project

```
> sdf pwrdemo59
> pwr_rtmon
```

8. Create a new project

```
> pwra
```