

# OpenRC

OpenRC is a dependency based service management system. It works with the system provided init program, normally */sbin/init*.

## Features

OpenRC provides a number of features like hardware initiated initscript run and cgroups support, without requiring large layout changes.

## Installation

### Pre installation

The */etc/init.d* directory (a symlink to */etc/rc.d/init.d*) will need to be moved:

```
# mv /etc/init.d /etc/init.d-bkp
```

### Installing

Two [Slackbuilds](#) are available, [openrc](#), which contains the OpenRC init system, and [openrc-services](#), which contains various services for use with OpenRC.

### Post installation

After installing, */etc/inittab* will need to be replaced. The old one can be backed up:

```
# cp /etc/inittab /etc/inittab.sysvinit  
# mv /etc/inittab.new /etc/inittab
```

The main configuration file for OpenRC is */etc/rc.conf*, and contains various options.

A common option that could be changed is to enable boot logging by setting `rc_logger="YES"`, this way any errors encountered via booting could be logged and examined later (default log location is */var/log/rc.log*).

## On reboot

After installing openrc and openrc-services, on rebooting one is booted to a command line with only the bare minimum of services enabled.

It may show a warning about deprecated support for `/etc/mtab` as a file, and how to correct it:

```
# cp /etc/mtab /etc/mtab.bak
# ln -snf /proc/self/mounts /etc/mtab
```

It may also complain about missing `/etc/sysctl.conf` file which can be created as:

```
# touch /etc/sysctl.conf
```

## Enabling some services

Services can be enabled as:

```
# rc-service add <service> <runlevel>
```

They can be disabled as:

```
# rc-service del <service> <runlevel>
```

Some common services that could be enabled:

```
# rc-update add dbus default
# rc-update add syslogd default
# rc-update add dcron default
# rc-update add alsasound default # for desktop
# rc-update add consolekit default # for desktop
# rc-update add sshd default # for server
```

Enabled services in current runlevel can be queried with:

```
$ rc-status
```

Enabled services across all runlevels can be queried with:

```
$ rc-update
```

Some services that are enabled by default for the **sysinit** runlevel include `udev` and `udev-postmount`.

Users who use `dmccrypt`, `lvm`, or `mdraid` could add the following services respectively to the **boot** runlevel:

```
# rc-update add dmccrypt boot # dmccrypt
# rc-update add device-mapper boot # lvm
```

```
# rc-update add lvm boot          # lvm
# rc-update add mdraid boot       # mdraid
```

## Network

If using ethernet via DHCP, the **dhcpcd** service could be enabled:

```
# rc-update add dhcpcd default
```

If using wifi with laptops the **NetworkManager** or **wicd** service could be enabled. The combination of dhcpcd and wpa\_supplicant (along with a frontend like wpa\_gui or wpa\_cli) could also be used as a lightweight alternative.

A static network can be configured by editing */etc/conf.d/network*.

## Display manager

To boot to a graphical display manager, */etc/conf.d/xdm* can be edited to specify the display manager, and the xdm service could be enabled:

```
# rc-update add xdm default
```

If using a laptop, the **acpid** service could be enabled as well.

## Migrating existing enabled services

To check existing enabled services, following code could be used:

```
for file in /etc/rc.d/*; do
  if [ -x "${file}" ]; then
    echo "enabled ${file}"
  fi
done
```

For these services corresponding OpenRC services could be enabled, for example:

```
# rc-update add acpid default
# rc-update add cgmanager default
# rc-update add gpm default
...
```

All services present can be queried via:

```
$ rc-update -v
```

# Configuration

OpenRC services are present in the `/etc/init.d` folder, and corresponding configuration files are present in `/etc/conf.d`

Some common configuration files include:

```
/etc/conf.d/modules    # modules to be loaded at boot
/etc/conf.d/hostname  # hostname of the system
/etc/conf.d/keymaps    # console keymap
```

## Services

Services can be started/stopped/restarted as:

```
# rc-service <service> <action>
```

For example,

```
# rc-service sshd start
```

## openrc-init

Since version **0.25**, openrc provides *openrc-init* which can be used to directly boot the system.

To use it,

\* Revert inittab changes done

```
cp /etc/inittab /etc/inittab.bkp
mv /etc/inittab.sysvinit /etc/inittab
```

\* Setup theagetty services

```
# main tty
ln -s /etc/init.d/agetty /etc/init.d/agetty.tty1
/sbin/rc-update add agetty.tty1 default
cp /etc/conf.d/agetty /etc/conf.d/agetty.tty1
echo 'agetty_options="--noclear"' >> /etc/conf.d/agetty.tty1

# additional ttys
for i in {2..6}; do
  ln -s /etc/init.d/agetty /etc/init.d/agetty.tty${i}
  /sbin/rc-update add agetty.tty${i} default
done
```

```
done

# serial tty (for servers)
ln -s /etc/init.d/agetty /etc/init.d/agetty.ttyS0
/sbin/rc-update add agetty.ttyS0 default

cp /etc/conf.d/agetty /etc/conf.d/agetty.ttyS0
echo 'agetty_options="--noclear"' >> /etc/conf.d/agetty.ttyS0
```

\* Add the following to your boot parameters:

```
init=/sbin/openrc-init
```

Note- To shutdown or reboot, one will need to use **openrc-shutdown**.

For more info, check out the [Gentoo wiki](#).

## Troubleshooting

At the moment only a subset of the included services have been tested, so some of them may not run correctly.

If some service does not work, try the system provided one in */etc/rc.d* (if available).

### mysqld

Try adding the following lines to */etc/my.cnf*

```
[mysqld]
user = mysql
basedir = /usr
datadir = /var/lib/mysql
pid-file = /run/mysql/mysql.pid
socket = /var/run/mysql/mysql.sock
```

### Dealing with crashed services

Sometimes openrc reports a service's status as "crashed". The process may have died or its pid file disappeared/changed.

If one tries to start a crashed service, ``rc-service`` reports:

- WARNING: <service> has already been started

So one tries to stop it before starting again.

However in some situations, the service does not stop. This leads to a deadlock where one can neither stop the service nor start it. For such cases:

```
# rc-service <service> zap
* Manually resetting <service> to stopped state
```

**zap** resets the service state, allowing us to start it again.

## Errors while booting

After installing or updating the **openrc-services** packages, one may get errors like:

- checkpath: owner `netdata:netdata' not found

This is because **openrc-services** contains services for some packages not found in the base Slackware install, but present on SBo.

These usually go away on their own after the openrc cache is updated.

## See Also

[Wikipedia](#)

[Gentoo Wiki](#)

[Github](#)

[User guide](#)

[LQ thread](#)

[openrc-services repo](#)

## Sources

\* Originally written by [Aaditya](#)

[howtos](#), [init](#), [author aaditya](#)

From:  
<https://docs.slackware.com/> - **SlackDocs**

Permanent link:  
[https://docs.slackware.com/howtos:general\\_admin:openrc](https://docs.slackware.com/howtos:general_admin:openrc)

Last update: **2018/10/08 04:02 (UTC)**

