

# Making your package work with systemd

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# Topics

- How systemd works (for pkg maintainers)
- Example service file
- tmpfiles.d(5), dh-systemd
- More advanced examples
- Questions



# Non-topics

- systemd sucks, let's use `$initsys` instead
- When will Debian switch the default?
- Essentially, anything that ever came up on `debian-devel` ;-)



# How systemd works

- **Service files** correspond to init scripts:

```
/etc/init.d/apache2
```

```
→ /lib/systemd/system/apache2.service
```

- **systemctl** does what `service(8)` did:

```
service apache2 start
```

```
→ systemctl start apache2.service
```



# How systemd works (2)

- **Targets** correspond to runlevels:  
basic.target, multi-user.target,  
graphical.target, ...  
(see `systemd.special(7)`)
- **symlinks** still enable a service:  
update-rc.d apache2 defaults  
→ `systemctl enable apache2.service`



# Example service file: vnstat.service

```
[Unit]
Description=Network traffic monitor

[Service]
User=vnstat
ExecStart=/usr/sbin/vnstatd -n
ExecReload=/bin/kill -HUP $MAINPID

[Install]
WantedBy=multi-user.target
```



# tmpfiles.d(5)

- useful e.g. for runtime directories:

```
$ cat /usr/lib/tmpfiles.d/lighttpd.conf  
d /run/lighttpd 0750 www-data www-data -
```

- more powerful:
  - files, directories, pipes, symlinks, ...
  - automatic cleanup



# Service file location

- service files often shipped by upstream
- if not, use `debian/pkg.{service,tmpfile}`
- `dh_installinit` **installs** these files
- send service files upstream!





# Getting your service enabled

- Build-Dep: dh-systemd, dh --with=systemd
- maintscripts will contain appropriate code
- deb-systemd-helper instead of systemctl
- (avoids Depends: systemd)



# Testing your package

- Install systemd, boot with `init=/bin/systemd`
- Check your service starts properly on boot
- Check reload, stop, start, restart



# Advanced examples: more features

```
[Unit]
```

```
Description=Debian Code Search: web frontend
```

```
[Service]
```

```
User=dcs
```

```
Group=dcs
```

```
ExecStart=/usr/bin/dcs-web \
```

```
    -template_pattern=/usr/share/dcs/templates/*
```

```
StandardOutput=null
```

```
StandardError=journal
```

```
RestartSec=1
```

```
Restart=on-failure
```

```
[Install]
```

```
WantedBy=multi-user.target
```



# Advanced examples: dbus-activated

```
[Unit]
```

```
Description=Manage, Install and  
Generate Color Profiles
```

```
[Service]
```

```
Type=dbus
```

```
BusName=org.freedesktop.ColorManager
```

```
ExecStart=/usr/lib/colord/colord
```

```
User=colord
```

```
PrivateTmp=yes
```



# Advanced examples: dh-systemd

```
# Only cleanup on purge,  
# don't enable service by default.
```

```
override_dh_systemd_enable:
```

```
    dh_systemd_enable \  
        --no-enable
```

```
override_dh_systemd_start:
```

```
    dh_systemd_start \  
        --restart-after-upgrade
```



# Need help?

- Check <https://wiki.debian.org/Systemd/Packaging>
- Stop by at #debian-systemd any time
- Ask pkg-systemd-maintainers@lists.alioth.debian.org
- We mean it. Please ask.



# Finding documentation

- Manpages:

`systemd.service(5)`, `systemd.exec(5)`, ...

- <http://www.freedesktop.org/wiki/Software/systemd/>
  - “The systemd for Administrators Blog Series”
  - “Package repositories of the various distributions”



# Thanks! Any questions?

- Thanks for your attention
- Add systemd support today ♥
- Questions?

