

runit

- A UNIX daemon/service supervision scheme:
 - manual and automatic start/stop/restart of services/daemons
 - always clean process state
 - complete log handling
 - very fast, very small, portable
 - based on [daemontools](#), by Dan Bernstein (djb)
- <http://smarden.org/runit/>

why use runit?

- running services and programming daemons is *much easier*
 - daemon need only run in foreground and write everything to stdout
 - uniform service setup – simple directory structure
 - identical interface for all daemons
 - no pid guessing, lock files, etc.
- **no need to deal with logging at all**
 - log filtering, rotation, and cleanup handled automatically

runit utilities

- **runsvdir**: starts and monitors a collection of runsv processes
- **runsv**: starts and monitors a service and svlogd
- **svlogd**: logging daemon
- **chpst**: service environment setup utility
- **sv**: reports the current status and controls the state of services monitored by runsv

a runit service directory

```
<servicename>/
  run . . . . . run script (setup env and exec
                    daemon)
  finish . . . . . finish script
  supervise/ . . . . . supervise directory (process info
                    and control sockets)
  log/ . . . . . log run directory
    run . . . . . log run script
    main/ . . . . . log directory
      current . . . . . current log file
      @<timestamp> . . . . . rotated, timestamped log file
    supervise/ . . . . . log supervise directory
  env/ . . . . . environment directory
    VAR . . . . . environment variable definition
```

typical run and log run scripts

```
omega@hydra1:~ 0$ cat online/H1-S6-simulation/run
```

```
#!/bin/sh
```

```
set -e
```

```
exec 2>&1
```

```
PATH=$(cat ./env/PATH)
```

```
exec chpst -e ./env -L lock wonline_supervisor .
```

```
omega@hydra1:~ 0$ cat online/H1-S6-simulation/log/run
```

```
#!/bin/sh
```

```
set -e
```

```
LOG=$(readlink -f ./main)
```

```
test -d "$LOG" || mkdir -p -m0755 "$LOG"
```

```
exec svlogd -tt "$LOG"
```

```
omega@hydra1:~ 0$
```

a runit process tree

```
omega@hydra1:~ 0$ pstree -ac -G 4771
runsvdir -P /scratch/omega/service...
├─runsv L1-S6-simulation
│   └─svlogd -tt L1-S6-simulation/log/main
├─runsv H1-S6-simulation
│   ├──svlogd -tt H1-S6-simulation/log/main
│   └─wonline_supervisor -e wonline_supervisor .
│       ├──sleep 10
│       ├──wonline_search -e wonline_search 919011424 ...
│       ├──wonline_search -e wonline_search 919011456 ...
│       │   └─sleep 100
│       ├──wonline_search -e wonline_search 919011488 ...
│       │   └─sleep 100
│       └─wonline_search -e wonline_search 919011520 ...
│           └─sleep 100
└─runsv V1-S6-simulation
    └─svlogd -tt V1-S6-simulation/log/main
omega@hydra1:~ 0$
```