

# 1.113.1 Configure and manage inetd, xinetd, and related services

Weight 4

Linux Professional Institute Certification — 102

Angus Lees [gus@inodes.org](mailto:gus@inodes.org)

Geoffrey Robertson [ge@ffrey.com](mailto:ge@ffrey.com)

Nick Urbanik [nicku@nicku.org](mailto:nicku@nicku.org)

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## Outline

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## 1 Context

**Topic 113 Networking Services [24]**

**1.113.1 Configure and manage inetd, xinetd, and related services [4]**

**1.113.2** Operate and perform basic configuration of sendmail [4]

**1.113.3** Operate and perform basic configuration of Apache [4]

**1.113.4** Properly manage the NFS, smb, and nmb daemons [4]

**1.113.5** Setup and configure basic DNS services [4]

**1.113.7** Set up secure shell (OpenSSH) [4]

## 2 Objective

### Description of Objective

Candidates should be able to configure which services are available through `inetd`, use `tcpwrappers` to allow or deny services on a host-by-host basis, manually start, stop, and restart internet services, configure basic network services including `telnet` and `ftp`. Set a service to run as another user instead of the default in `inetd.conf`.

### Key files, terms, and utilities include:

`/etc/inetd.conf` — configuration file for the older `inetd`

`/etc/hosts.allow` — TCP Wrappers configuration file, consulted first

`/etc/hosts.deny` — TCP Wrappers configuration file, consulted second

`/etc/services` — file mapping service names ↔ network ports

`/etc/xinetd.conf` — configuration file for `xinetd`, which has built-in support for TCP Wrappers, so is now used more than `inetd`

`/etc/xinetd.log` — a file that appears to exist only in LPI objectives, but see

\$ `man 5 xinetd.log` ↔

## 3 inetd, xinetd

### inetd/xinetd

- The internet “super-server”
- A daemon which listens on many ports and fires off the appropriate command to handle incoming requests
- `inetd` is used in older/smaller systems
  - Controlled through `/etc/inetd.conf`
- `xinetd` is an enhanced replacement
  - Controlled through `/etc/xinetd.conf...`
  - ... and through individual files in directory `/etc/xinetd.d/`

### 3.1 inetd.conf

Fields are:

*service\_name sock\_type proto flags user server\_path args*

```
# UW-IMAP server
imap2 stream tcp nowait root /usr/sbin/tcpd /usr/sbin/imapd
imap3 stream tcp nowait root /usr/sbin/tcpd /usr/sbin/imapd
imaps stream tcp nowait root /usr/sbin/tcpd /usr/sbin/imapd

# Exim mail server
smtp stream tcp nowait mail /usr/sbin/exim exim -bs
```

#### Built-in services (often disabled)

```
echo      stream  tcp  nowait  root    internal
echo      dgram   udp  wait    root    internal
chargen   stream  tcp  nowait  root    internal
chargen   dgram   udp  wait    root    internal
discard   stream  tcp  nowait  root    internal
discard   dgram   udp  wait    root    internal
daytime   stream  tcp  nowait  root    internal
daytime   dgram   udp  wait    root    internal
time      stream  tcp  nowait  root    internal
time      dgram   udp  wait    root    internal
```

## 4 tcpwrappers

### hosts.allow / hosts.deny

Manpage is `hosts_access(5)`

```
# /etc/hosts.allow
sshd: ALL
imapd: 10.0.6.19
ALL: 10.0.128.96/255.255.255.224
```

```
# /etc/hosts.deny
#ALL: PARANOID
ALL: ALL
```

## 5 xinetd

### xinetd

- Same function as `inetd`
- Has built-in support for TCP Wrappers, so is now used for recent distributions instead of `inetd`
- package management system (i.e., `dpkg`, `rpm`) drops a file into directory `/etc/xinetd.d/` instead of having to edit `/etc/inetd.conf`
- Here is such a file for the `exim` mail server to run under `xinetd`:

```
service smtp
{
    socket_type      = stream
    protocol        = tcp
    wait            = no
    user            = mail
    server          = /usr/sbin/exim
    server_args     = -bs
}
```

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