

1.113.1

Configure and manage inetd, xinetd, and related services

Weight 4

Linux Professional Institute Certification — 102

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2005 July

Outline

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

tcpwrappers

xinetd

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Topic 113 Networking Services [24]

Where we are up to

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- 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]

Description of Objective

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

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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:

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`/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` ↔

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/`

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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

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hosts.allow / hosts.deny

“TCP Wrappers” aka `tcpd`

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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
```

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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