Apache HTTP Server Version 2.2

Binding

Available Languages: de | en | fr | ja | ko | tr

Configuring Apache to listen on specific addresses and ports.

- Overview
- Special IPv6 Considerations
- How This Works With Virtual Hosts

See also

- Virtual Hosts
- DNS Issues

Overview

<table>
<tr><td align="center" colspan="1">**Related Modules**</td><td align="center">**Related Directives**</td></tr>
</table>

Related Modules
- `core`
- `mpm_common`

Related Directives
- `<VirtualHost>`
- `Listen`

When Apache starts, it binds to some port and address on the local machine and waits for incoming requests. By default, it listens to all addresses on the machine. However, it may need to be told to listen on specific ports, or only on selected addresses, or a combination of both. This is often combined with the Virtual Host feature, which determines how Apache responds to different IP addresses, hostnames and ports.

The `Listen` directive tells the server to accept incoming requests only on the specified ports or address-and-port combinations. If only a port number is specified in the `Listen` directive, the server listens to the given port on all interfaces. If an IP address is given as well as a port, the server will listen on the given port and interface. Multiple `Listen` directives may be used to specify a number of addresses and ports to listen on. The server will respond to requests from any of the listed addresses and ports.

For example, to make the server accept connections on both port 80 and port 8000, on all interfaces, use:

```
Listen 80
Listen 8000
```

To make the server accept connections on port 80 for one interface, and port 8000 on another, use

```
Listen 192.0.2.1:80
Listen 192.0.2.5:8000
```

IPv6 addresses must be enclosed in square brackets, as in the following example:

```
Listen [2001:db8::a00:20ff:fea7:ccea]:80
```

Special IPv6 Considerations

A growing number of platforms implement IPv6, and APR supports IPv6 on most of these platforms, allowing Apache to allocate IPv6 sockets, and to handle requests sent over IPv6.

One complicating factor for Apache administrators is whether or not an IPv6 socket can handle both IPv4 connections and IPv6 connections. Handling IPv4 connections with an IPv6 socket uses IPv4-mapped IPv6 addresses, which are allowed by default on most platforms, but are disallowed by default on FreeBSD, NetBSD, and OpenBSD, in order to match the system-wide policy on those platforms. On systems where it is disallowed by default, a special `configure` parameter can change this behavior for Apache.

On the other hand, on some platforms, such as Linux and Tru64, the **only** way to handle both IPv6 and IPv4 is to use mapped addresses. If you want Apache to handle IPv4 and IPv6 connections with a minimum of sockets, which requires using IPv4-mapped IPv6 addresses, specify the `--enable-v4-mapped` `configure` option.

`--enable-v4-mapped` is the default on all platforms except FreeBSD, NetBSD, and OpenBSD, so this is probably how your Apache was built.

If you want Apache to handle IPv4 connections only, regardless of what your platform and APR will support, specify an IPv4 address on all `Listen` directives, as in the following examples:

```
Listen 0.0.0.0:80
Listen 192.0.2.1:80
```

If your platform supports it and you want Apache to handle IPv4 and IPv6 connections on separate sockets (i.e., to disable IPv4-mapped addresses), specify the `--disable-v4-mapped` [configure](#) option. `--disable-v4-mapped` is the default on FreeBSD, NetBSD, and OpenBSD.

How This Works With Virtual Hosts

The [Listen](#) directive does not implement Virtual Hosts - it only tells the main server what addresses and ports to listen on. If no [<VirtualHost>](#) directives are used, the server will behave in the same way for all accepted requests. However, [<VirtualHost>](#) can be used to specify a different behavior for one or more of the addresses or ports. To implement a VirtualHost, the server must first be told to listen to the address and port to be used. Then a [<VirtualHost>](#) section should be created for the specified address and port to set the behavior of this virtual host. Note that if the [<VirtualHost>](#) is set for an address and port that the server is not listening to, it cannot be accessed.

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[Modules](#) | [Directives](#) | [FAQ](#) | [Glossary](#) | [Sitemap](#)