

# Localhost Only Webserver Configuration

## Overview

When developing for the VIVO application it is useful to have a local server running on your development workstation, but many work places don't like it when non-servers have open ports. This guide will make sure that our MySQL, Apache, and Tomcat servers are only accessible via localhost.

## Listen/Bind Setup

### MySQL

MySQL is fairly simple to lock-down to only localhost access. Simply make sure the following line exists under your `[mysqld]` heading in the `my.cnf` file (usually located at `/etc/my.cnf` or `/etc/mysql/my.cnf`)

```
bind-address=127.0.0.1
```

### Apache

Apache is also simple to lock-down the basic/default config to only localhost access. In the `httpd.conf` file (also know as `apache.conf` or `ports.conf` amongst other names) we need to change the `Listen` line to the following:

```
Listen 127.0.0.1:80
```

In the case of a more advanced configuration (Ubuntu loves to have a ridiculously complicated apache config layout spanning multiple folders for instance), see your distributions apache config documentation.

### Tomcat

Tomcat, configured in the `server.xml` file is a bit more complicated, but in the default config, you have to add `address="127.0.0.1"` to each `<Connector ... />` tag. An example tomcat config (abbreviated):

```
<Server ... >
...
<Service name="Catalina">
  <Connector port="8080" protocol="HTTP/1.1" address="127.0.0.1"
    connectionTimeout="20000" redirectPort="8443" />
  <Connector port="8009" protocol="AJP/1.3" address="127.0.0.1"
    redirectPort="8443" />
  <Engine ... >
    ...
    <Host ... >
      ...
    </Host>
  </Engine>
</Service>
</Server>
```

## Additional Security

Additional security can be provided by adding a few lines to your `/etc/hosts.allow` and `/etc/hosts.deny` files.

### hosts.allow

Allows connections from localhost and loopback (repetitive, but sometimes needed if `/etc/host.conf` is not setup correctly)

```
mysqld : localhost : ALLOW  
mysqld : 127.0.0.1 : ALLOW  
httpd : localhost : ALLOW  
httpd : 127.0.0.1 : ALLOW
```

## hosts.deny

Denys connections from anything else

```
mysqld : ALL  
httpd : ALL
```