PathTrak™ Reverse Proxy Configuration

This Application Note provides instructions on how to configure Apache HTTP Server as a reverse proxy to PathTrak™. The reverse proxy is typically used to make PathTrak accessible from an external IP address without putting PathTrak directly on an external IP.

This document does not cover installation of Apache HTTP Server (http://httpd.apache.org/), nor the creation of a SSL certificate for optional HTTPS access (http://www.openssl.org/).

These instructions apply to Apache HTTP Server 2.2 installed on a Windows Server, but the steps should be portable across other OSs.

In the instructions that follow, be sure to use your settings in place of these placeholders:

Placeholder	Default	Description
<pathtrak-host>	localhost	Hostname or IP address of the PathTrak server
<pathtrak-http-port>	80	HTTP port of the PathTrak server
<pathtrak-https-port>	443	HTTPS port of the PathTrak server
<pathtrak-ajp-port>	8009	AJP port of the PathTrak server
<proxy-host>	pathtrak.example.com	Hostname or IP address of the Proxy server
<proxy-http-port>	80	HTTP port of the Proxy server
<proxy-https-port>	443	HTTPS port of the Proxy server

Q. How do I determine which ports are being used by PathTrak?

PathTrak's Tomcat uses the default ports as listed below. However, they are configurable. Therefore, check the configuration properties file, typically located on the PathTrak server at C:\Program Files\JDSU\PathTrak 4.X\cfg\PathTrakServer.properties.

```
PT_HTTP_PORT=80
PT_HTTPS_PORT=443
PT_AJP_PORT=8009
```

If the line is commented (begins with #), then it is using the default value. If the line is uncommented (no #), then it is using the port specified.

Q. How do I set up a reverse proxy in order to allow PathTrak accessibility from outside my internal network?

Depending on your Apache HTTP Server installation, the main configuration file may be named **apache2.conf** or **httpd.conf**, and may be located in a directory named **apache2** or **httpd**, or one of its sub-folders. The main configuration file may reference additional configuration files and/or modules.

Typically, the configuration file(s) already include the necessary directives, but may be disabled by a # at the beginning of the line. To enable a directive, uncomment it by removing the # at the beginning of the line.

1) Enable the following modules by adding or uncommenting the LoadModule directives.

    LoadModule proxy_module modules/mod_proxy.so
    LoadModule proxy_ajp_module modules/mod_proxy_ajp.so

2) Look for the Listen and ServerName directives and ensure they are both uncommented and configured properly.

    Listen *<proxy-http-port>*
    ServerName *<proxy-host>*

3) Add the following proxy settings.

    # Proxy Settings

ProxyRequests Off
ProxyPassReverse / http://*<pathtrak-host>***:***<pathtrak-http-port>***/**
ProxyPassReverse / https://*<pathtrak-host>***:***<pathtrak-https-port>***/**
ProxyPass / ajp://*<pathtrak-host>***:***<pathtrak-ajp-port>***/**

4) Restart Apache HTTP Server.
5) Update the Proxy URL setting in PathTrak. In the PathTrak application, navigate to the **System Settings**. Under the **General** heading, select **Server** and set the **Proxy URL** to your proxy server's URL (**http://***<proxy-host>***/pathtrak**).

Q. How do I allow HTTPS accessibility from outside my internal network?

This is an extension to the above configuration.

1) Enable the following modules by adding or uncommenting the LoadModule directives.

   LoadModule ssl_module modules/mod_ssl.so

2) Add or uncomment the Include directive(s) for SSL configurations. For example:

   Include conf/extra/httpd-ssl.conf

3) Look for the Listen directive for the SSL configuration and ensure it is uncommented and configured properly. It may be in a file named httpd-ssl.conf or ssl.conf or ports.conf.

   Listen *<proxy-https-port>*

4) Look for the SSLEngine and SSLProxyEngine directives and ensure they are uncommented and configured properly. It may be in a file named httpd-ssl.conf or ssl.conf and/or within a VirtualHost section.

   SSLEngine on
   SSLProxyEngine on

5) If necessary, create an SSL certificate appropriate for your server and copy the generated certificate files to the Apache2 HTTP Server installation.
6) Restart Apache HTTP Server.
6) You may want to update the Proxy URL setting in PathTrak. In the PathTrak application, navigate to the **System Settings**. Under the **General** heading, select **Server** and set the **Proxy URL** to your proxy server's URL (**https://***<proxy-host>***/pathtrak**).

Q. How do I set up a reverse proxy in order to redirect WebView URLs to PathTrak?

You may want to redirect calls to /ActernaDCS to the new system so that users are automatically switched over from the old Webview to the new PathTrak.

This is an extension to the above configuration.

1) Replace the Proxy Settings listed above with the following Proxy Settings

   # Proxy Settings
   ProxyRequests Off
   ProxyPassReverse / http://*<pathtrak-host>***:***<pathtrak-http-port>***/**
   ProxyPassReverse / https://*<pathtrak-host>***:***<pathtrak-https-port>***/**
   ProxyPassMatch /ActernaDCS/(.+)$ ajp://*<pathtrak-host>***:***<pathtrak-ajp-port>***/ActernaDCS/$1**
   ProxyPassMatch /([^A].+)$ ajp://*<pathtrak-host>***:***<pathtrak-ajp-port>***/$1**
   Redirect permanent /ActernaDCS http://*<proxy-host>***/pathtrak**

2) Restart Apache HTTP Server.