

# Source-Live Network Configuration



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This document is designed to assist IT/Network administrators to configure your network to allow Source-Live traffic in and out of your firewalled or NAT network.

## Notes:

1. 'local' means the internal static IP of the Pro Tools machine, e.g. 192.168.1.5, where the machine is behind NAT. If the Pro Tools machine is on DHCP, you should provide the machine with a static NAT IP first.
2. The IP of source-elements.com is 64.38.14.66. If the traffic from the test server is disallowed, the test will return failed however it may be irrelevant if you are allowing inbound traffic from certain trusted IPs.

## Configure:

1. Port forward/map the following TCP ports to the local IP:

6000 – 6001

The above ports may be modified to preferred ports, between 1024 and 65535. The ports must be an even number plus the port immediately following, e.g. 10060 and 10061 or 25980 and 25981.

2. Ensure the firewall has been specified to allow inbound access on the 2 selected TCP ports.

Once you have done this, you can log in. Then, to check that your TCP ports are not firewalled and are mapped to your local IP, the status panel has a port status message. If the test comes back 'successful', it means that the source-elements.com server is able to send and receive a TCP request from your computer. If you get 'failed' it means that there is either a firewall or there is incorrect or absent port mappings for the TCP ports.

Source-Live is peer to peer, and for the network test to return successful you will need to allow outbound/inbound TCP from source-elements.com (64.38.14.66). Note that this rule is not necessarily required for successful operation of Source-Live, it simply allows the user to be assured that the network is properly functioning. As long as the IP address of the connection partner you wish to use is enabled then Source-Live will function as expected.

## **Introduction to how Source-Live works.**

Source-Live transfers a real-time, high-quality audio stream between remote locations via the TCP protocol, and thus relies on network access to TCP ports.

Generally, the machine running Source-Live is on a private network address (behind NAT, or Network Address Translation). The type of TCP request Source-Live uses is unable to independently negotiate NAT, so the network (secured by a router and/or firewall) must be configured with specific Port Mapping (or Port Forwarding) rules.

If for some reason Port Mapping is not possible, e.g. the user has no administration access to the network, Source-Live will not be accessible from any computer not on the subnet.

### **Using other port numbers:**

Source-Live allows the user to specify a particular set of TCP ports. First, the user must configure their internal network settings to connect via a static IP, rather than DHCP, and then configure port mapping on the router. For example, the user configures the router to forward all incoming TCP data on ports 6000 and 6001 to their internal IP address, and enters the number 6000 in the Settings Panel of Source-Live. (Ports may be any even number between 1024 - 65534 and this number plus one).

### **How Source-Live determines its network status**

1. Source-Live determines the internal(private/local) and external (public) IP addresses. The external IP address is determined by sending an HTTP request to a remote application on our server, [source-elements.com:80](http://source-elements.com:80).
2. Source-Live determines the port mapping status by sending an HTTP request to our remote server to begin forwarding a series of test TCP packets to the specified ports (e.g. 6000 and 6001) on the determined IP address.

If Source-Live receives these test TCP packets, it knows that port mapping is enabled, and will use these ports for the incoming audio stream.

If Source-Live does not receive any of the TCP packets, it will time-out and inform the user that the test has returned '**failed**'. If 'failed' it is highly unlikely that there will be received audio by the person who wishes to listen to the audio stream.

## **Common issues:**

### **Connection Test: 'failed'**

The user is able to properly configure their network for TCP port mapping however the connection test does not return successfully.

### **Possible causes:**

- The user's ISP will filter HTTP traffic on port 80
- The user is behind a HTTP proxy
- All TCP ports are firewalled

In these cases Source-Live will not be able to determine the user's public IP address, and the test TCP packets will be 'lost' within the ISP's network. The test will not return successful..

In instances where port mapping is simply not possible we suggest using Source-Stream:

<http://www.source-elements.com/source-stream>

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