

# Network Connection Specifications

## **Disclaimer**

The information included in this document is believed to be accurate. The Montreal Exchange does not guarantee the completeness or accuracy of any information herein included. This document was produced with the understanding that Montreal Exchange is providing information and not in any way providing engineering or other professional services.

## **Overview**

This document outlines the specifications for connecting to the Montreal Exchange's SAM trading network. The applications available through the Montreal Exchange's network include, but are not limited to, the SAM trading system API, HSVF market feed services, STAMP, and ATR.

## **Available Environments**

Clients can obtain access to the Montreal Exchange's development and production environments through the SAM trading network. There are different connectivity options for each of these environments.

## **Development Access**

To obtain access to the Montreal Exchange's development environment, clients can choose from the following connectivity options:

- LAN-to-LAN VPN connections. Typically the VPN connections are setup in tunnel mode between the client's router/firewall and Montreal Exchange's VPN routers. Traffic between the client's internal hosts and Montreal Exchanges' hosts will then pass over the established VPN tunnel.
- PPP modem dialup. Clients will be assigned a PAP username and password and static IP address to configure their dialup client.
- Other methods may be available if VPN or dialup cannot be used. Please contact our Telecom department for more information.

All connections to the Montreal Exchange development network come through our Montreal site. Access to the development network is NOT available via the production network.



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## Production Access

To obtain access to the production environment, clients must connect to the production network. Access to the production network can be obtained by one of the following methods.

- Direct Connection. A direct connection can be made to one or more of the Montreal Exchange Points of Presence (POPs). A list of the POPs is available at the end of this document. Physical connectivity to the production network is provided by a 10Mb Ethernet connection. The client is responsible for supplying the appropriate telecommunications lines and router at the POP.
- Third party network providers. Montreal Exchange connectivity can be obtained via the SAVVIS and RADIANTZ networks.

Access to the production environment is NOT available via the development network.

## Production Bandwidth Requirements

Bandwidth requirements are determined by whether or not a client receives the market data feed and which information is read. The base requirement for all applications is 128kbps. Please refer to the following table for bandwidth required for the HSVF data feed.

Type of Traffic	Bandwidth required
Futures only	128kbps
Options - Best Limit (includes Futures)	512kbps
Options - Five Best Limits (Includes Best Limit and Futures)	1.5mbps

## Redundancy

If the client wishes, the Montreal Exchange can accept multiple connections for redundancy. At each location, the Montreal Exchange has redundant equipment and can therefore provide diverse connections to the SAM trading network.

## Network Locations

The Montreal site is located at:  <i>Bourse de Montreal Inc. 800 Square Victoria 4th Floor Montreal, Quebec H4Z 1A9 NPA-NXX: 514-871</i>	The Toronto site is located at:  <i>Montreal Exchange C/o ADP 4 king Street West Suite 600 Toronto, Ontario M5H 1B6 NPA-NXX : 416-364</i>
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Before ordering their telecommunications lines clients **MUST** advise the Montreal Exchange Telecom Department. The Montreal Exchange Telecom Department can be reached at (514)871-3512 or via email at [telecom@m-x.ca](mailto:telecom@m-x.ca).

### **WAN IP Addressing**

The IP network addresses assigned to the WAN link connecting the client to the Montreal Exchange trading network will be assigned by the Montreal Exchange unless the clients wish to supply their own addresses instead.

### **Host IP Addressing**

Depending on the application(s) that the client will connect to, the Montreal Exchange will provide the IP addresses and TCP ports of the hosts that the client will need to connect to. The client must provide the IP addresses of its hosts that will connect to the Montreal Exchange applications. The clients must supply public IP addresses assigned to them by the IANA. If public IP addresses are not available to the client, the Montreal Exchange will provide a range of private (non-routable) addresses from the reserved IP address ranges as outlined in RFC1597. It is the client's responsibility to NAT (Network Address Translation) their IP addresses if required.

### **IP Routing**

Depending on the need, IP routing to and from client networks can be done using static routing, BGP, or a combination of both.

### **Network Security**

The Montreal Exchange trading network and hosts are protected by the use of packet filtering and firewalls. The security measures in place are meant to protect the Montreal Exchange's trading network and hosts from intentional or accidental access from client connections. These measures are in no way intended to provide security to the clients themselves. If clients feel they require additional security for their network, they are encouraged to put in place the necessary security measures they feel appropriate.