

RTRS SUBSCRIBER CONNECTIVITY VERSION 1.0

PREPARED FOR:



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Purpose

The purpose of this document is to help subscribers set up their connectivity with the MSRB Price dissemination service to receive the real-time trade feed. The MSRB dissemination service will publish real-time Municipal Bond trades to subscribers over the Internet or leased lines via TCP Sockets or IBM Websphere MQ, that is, subscribers can select one out of the following four combinations to connect to the price dissemination service:

- TCP Sockets over Internet
- TCP Sockets over leased line
- MQ over Internet
- MQ over leased line

In order to receive the real-time feed, subscribers are responsible for developing software and configuring their systems for one of the two communication channels. Subscribers are also responsible for setting up leased lines, security and configuring firewalls, wherever applicable

TCP Socket

Subscribers can develop an application to receive the real-time trade feed on any platform as long as the platform supports TCP Socket connections. Subscribers must supply MSRB with the IP Address of the machine they are going to connect from so that MSRB can open its firewall to accept the connection.

MSRB will provide the following information for setting up the connection with the MSRB dissemination server:

- Login id/password
- Hostname
- Port number

Subscribers behind a firewall must open this TCP port number on their firewall to establish a connection with the MSRB dissemination server.

IBM Websphere MQ

The subscribers must license and configure the IBM Websphere MQ message-oriented middleware software themselves. Subscribers will have to set up a Queue Manager, server connection channel, receiver channel and local queue on their IBM Websphere MQ server. IBM Websphere MQ can be used over the Internet and leased lines.

While configuring IBM Websphere MQ, subscribers must supply MSRB with the following information to connect:

- IP Address of the MQ Series server machine
- Queue Manager and Queue Name

MSRB will provide the following information for setting up MQ:

- Receiver channel name
- Port number for Queue Manager

Subscriber must use the port number provided by MSRB to configure their Queue Manager. No firewall configuration is required for leased lines. Subscribers should configure their firewall to open this port number, to allow incoming MSRB connection over Internet.

After the IBM MQ Series server has been configured, subscribers will have to connect to their local queue in order to access the real time trade messages from the MSRB dissemination server.

Setup

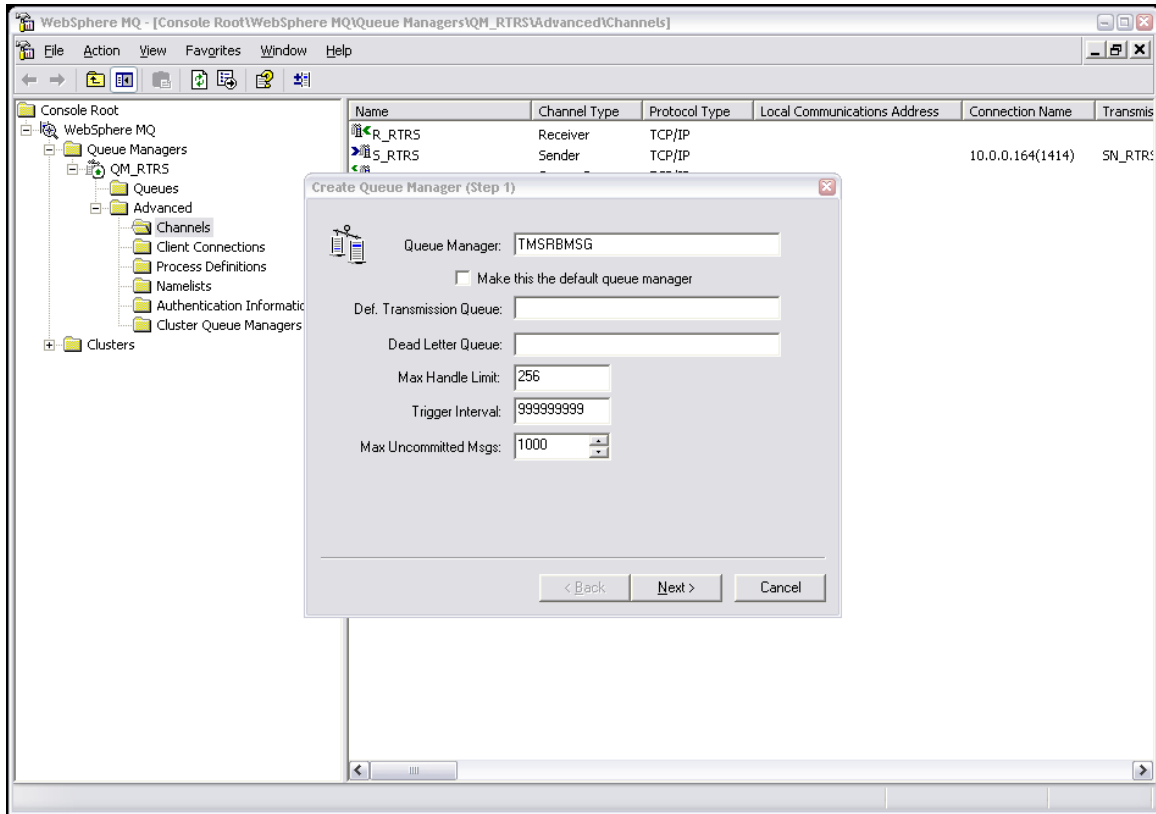
This section details the step-by-step process to configure the IBM WebSphere MQ server on Window platform. It assumes that IBM MQ is already installed and configured with the default configuration.

Start WebSphere MQ Explorer

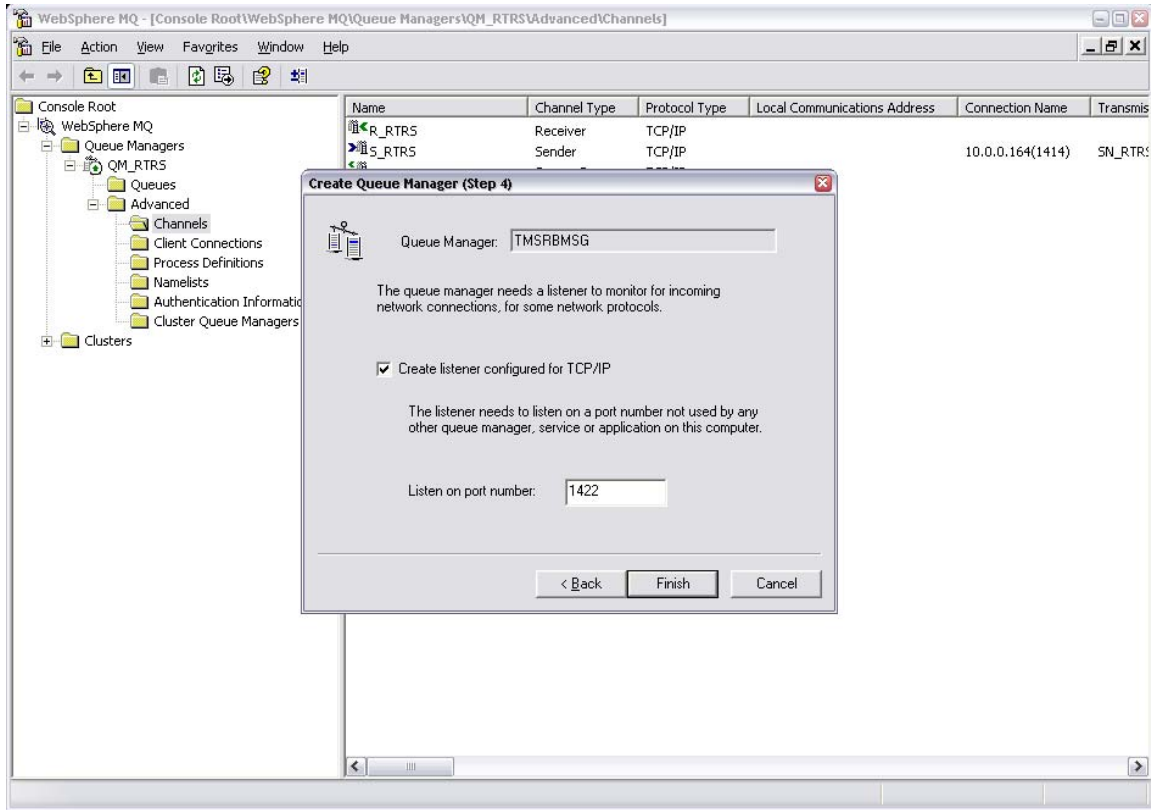
Setting up Queue Manager

Right click Queue Managers option and select New Queue Manager

Dissemination Subscriber Specification



Type the Queue Manager name and click the Next button
One the next screen press the Next button until you come across next screen.

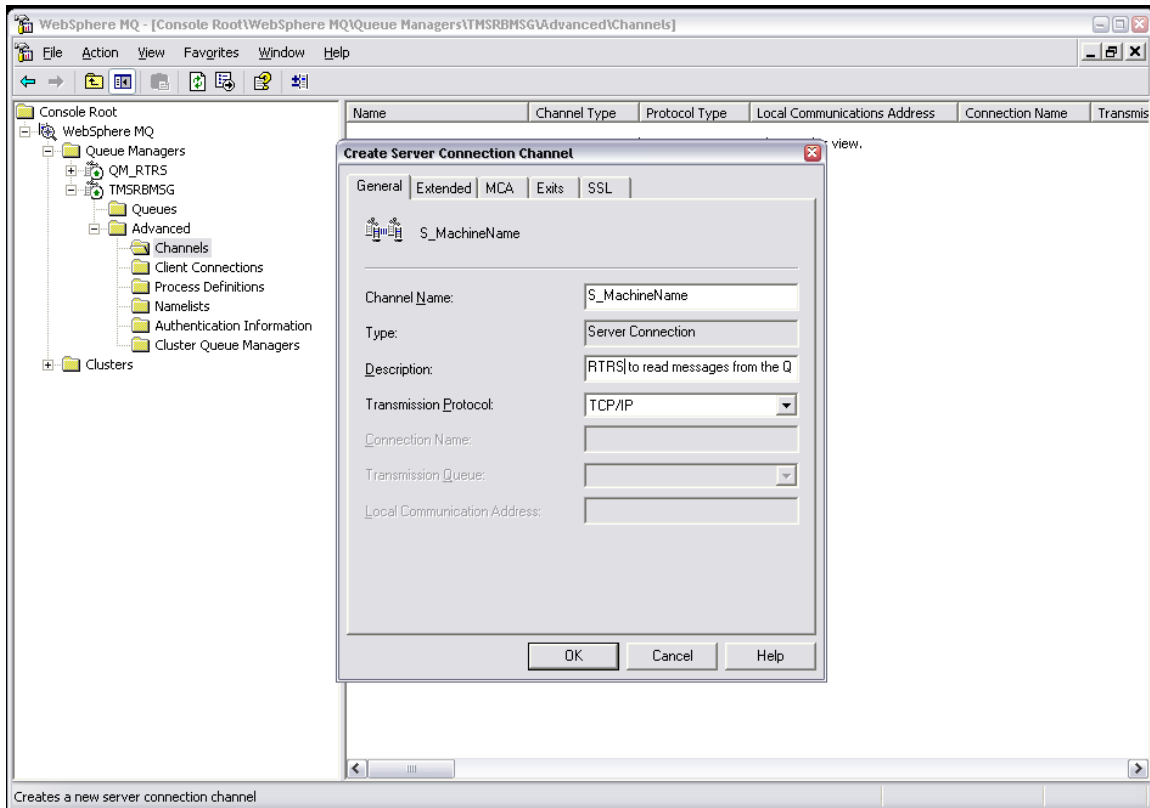


Enter the port number and click finish. If the MQ Series is running over Internet this must be the port no. provided by MSRB. This completes the creation of Queue Manager. Wait until the queue manager is created and started.

Setting up of Channels

Server Connection Channel

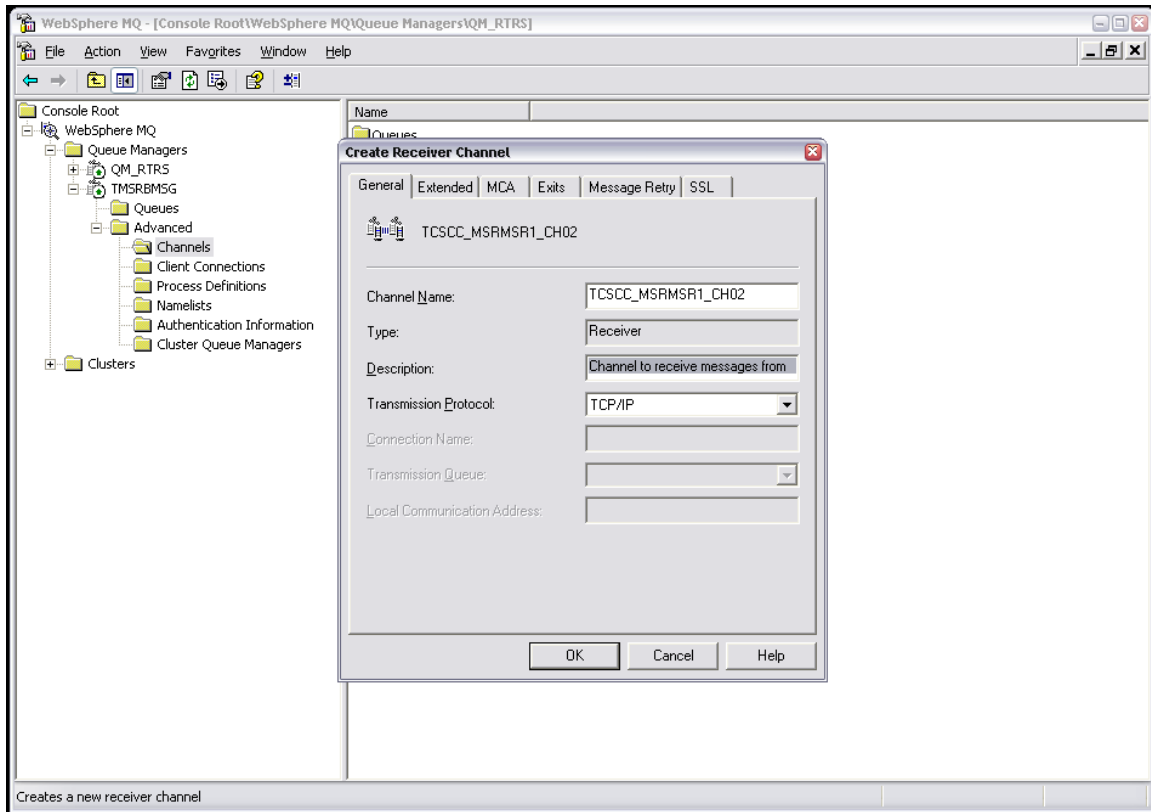
Expand Advanced under the queue manager and right click on Channels and select new/Server connection channel.



Enter the server connection channel name typically it will be S_<Local Machine DNS Name on which MQ server is running> and enter the description for the channel “Channel for Subscribers to connect and retrieve messages from Queue to process” and press OK

Receiver Channel

Again select new channel and this time create a receiver channel

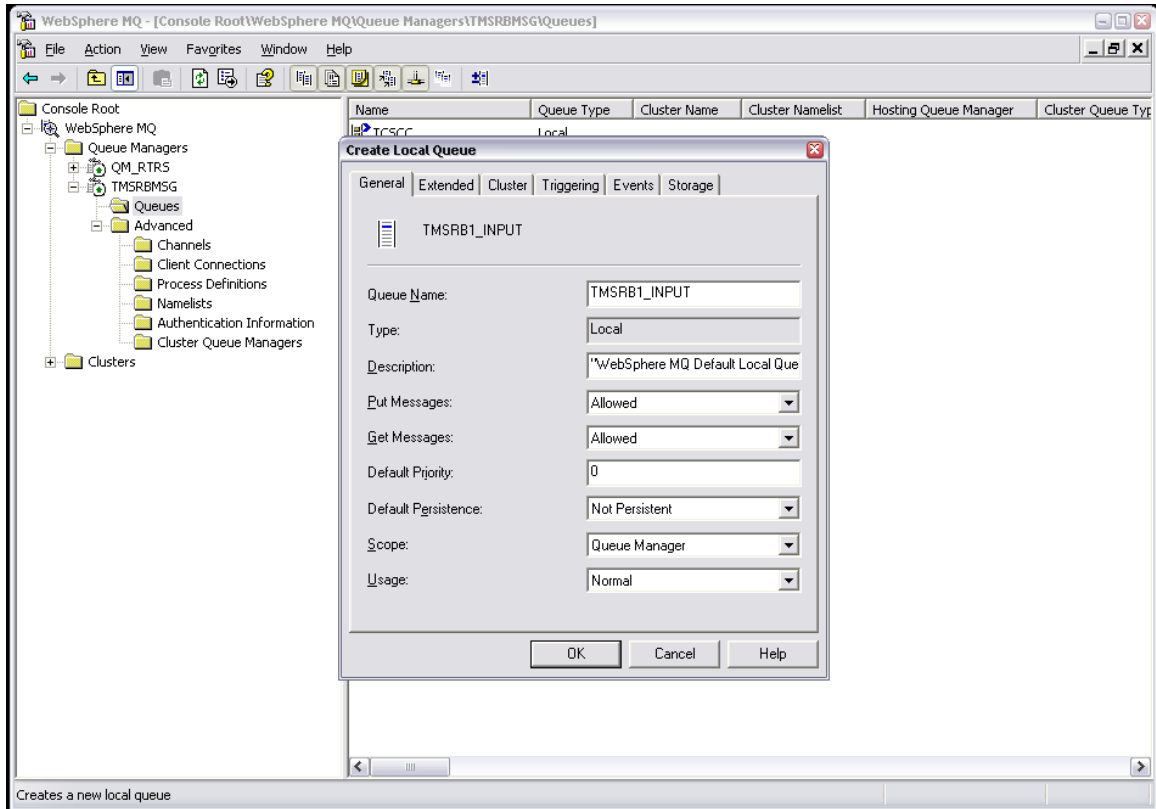


Enter the channel name provided by MSRB, enter the description as “Channel to receive messages from MSRB Dissemination server” and press Ok. The name of this channel should be same as one provided by MSRB.

Setting up Queues

Receiver Queue

Click on Queues menu under Queue manager and click on new local Queue.



Enter the queue name and click OK.

More information regarding IBM Websphere MQ licensing, setup, installation can be obtained at <http://www-306.ibm.com/software/integration/wmq/>.

Leased Lines

Installations of leased lines must be coordinated with the MSRB. Information such as the IP address for each end of the connection must be known when ordering the leased line from the vendor. The subscriber is responsible for any coordination of scheduling necessary during the installation of the line or lines. Once the leased line is installed and operational, configuration of the connection for the Price Dissemination service is identical to that of connections that utilize the Internet.

Business Continuity

MSRB maintains a Hotsite for Business Continuity purposes. Subscribers who choose to use leased lines may wish to have lines installed at both sites. This should be coordinated with the MSRB when initially setting up the connections. Subscribers using TCP sockets will be able to connect to the MSRB Hotsite using the same type of Internet connection. Should a subscriber desire, users of either type of service may maintain active connections to both MSRB sites while transparency information is being disseminated.