MCclickASX

MCclick Server – ASXTrade System

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Related Documents:

If you intend doing Market Connect Development:-

MC_technical_overview.doc :- Technical Overview of Market Connect ASXTrade Solution.

MC_Getting_Started.doc :- Guide to beginning all types of application development using Market Connect.

Sample MC API, java and .net applications are also available.

If you are running MCTrades :-

MCTradesASX.pdf – details how to install, configure and run MCTradesASX.

MCTradesAT.pdf – details how to install, configure and run MCTradesAT.

Once all issues with the ASX Trade system have been resolved we intended to phase out support for MCTradesASX, probably around March/April 2011.

This Document:

MClickASX.pdf – ASXTrade System – this document details how to install, configure and run MCclickASX and associated applications.

Revision:

23/09/2010 – M.G. – Produced the ASXTrade version of this manual.

1. Running MCclickASX:

The MCclickASX can be configured to talk to an ASX ITS system. Market Connect API clients can initiate a number of connections to the ITS system via MCclickASX.

MCServer can be configured to start a number of other applications, typically MCclickASX servers and MCTradesASX.

The use of MCServer is optional; in future versions of MCServer we may build in facilities to manage multiple gateways/multiple exchanges.

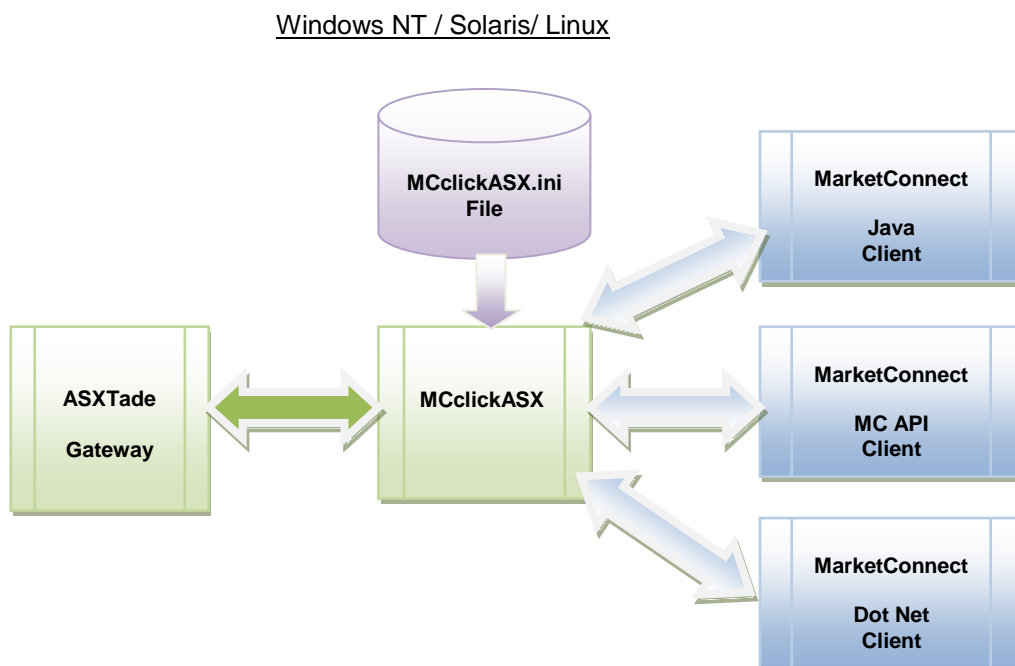The Current version MCServer is of limited use.

Windows NT / Solaris/ Linux

Figure 1. Running MCclickASX

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1.1 Requirements:

To configure MCclickASX, you will need to know the Hostname / port for the ASXTrade gateway you wish to use. Client applications will require a user name / password for each session that they wish to establish with a gateway.

The use of multiple ITS gateways us supported by running multiple copies of MCclickASX.

1.1.1 Windows NT :

The recommended server requirements are :-
CPU:
At least an AMD XP Athlon 2400 or INTEL PENTIUM equivalent.
Preferably an AMD Sempron 3000+ or INTEL PENTIUM equivalent.

Memory:
At least 1Gig pc3200 DDR 400 type memory.
More is always better.

Hard Drive:
At least 80 Gigabyte storage.

1.1.2 Solaris :

The recommended server requirements are similar to Windows NT
Operating system Solaris 2.8 (5.8) or higher.

1.1.3 Linux :

The recommended server requirements are similar to Windows NT
The operating system used for Linux development is - Linux Redhat Rhel4 x86 (32 bit)

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2 MCclickASX Install:

2.1 Windows

Simply copy all files to the relevant directory.

MCclickASX.exe- required for ASXTrade connections
        ssleay32.dll   - loaded by MCclickASX *
        libeay32.dll   - loaded by MCclickASX *
        oapintmt.dll   - loaded by MCclickASX *
        zlib1.dll   - loaded by MCclickASX *

* From OM API kit supplied via the ASX.

MCclickASX.ini – ASXTrade connection configuration.

\plogASX.exe   - ASXTrade printlog program.

MCclickASX writes its own data and log files, typical these would be stored in the following directories:-
- ASXClick\data
- \ASXClick\logs

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2.2 Solaris and Linux

Typically, a Solaris or Linux release containing MCclickASX will be supplied as a gzipped .tar file.

➔ at(nnn)tar.gz (e.g. at201tar.gz)

Copy and unpack – at(nnn)tar.gz. .

➔ gunzip at201.tar
➔ tar -xvf at201.tar

You will need to copy the files to a suitable location. You can put the files anywhere you like as long as you understand the relationship between files. The directory structure contained in the .tar file above is a good starting point.

The following MCclickASX related files should all be stored in the one directory:-

MCclickASX.ini   - ASXTrade config file.
MCclickASX   - required for ASXTrade connections *
plogASX   - Printlog utility for ASXTrade.

* If required these executable files can be stored in a different location to config /definition files.

To connect to ASXTrade you must simply run the MCclickASX binary, by default this reads the MCclickASX.ini file in the same directory, but you can also specify a different .ini file or run directory.

Usage: MCclickASX <iniFile> [<Directory>]

As MCclickASX uses the OM API the OMX Click dynamic library must also be installed and set up refer 2.2.1 below.

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MCclickASX

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2.2.1 OMX Click Dynamic Library Setup

ASX Click uses a dynamic library's e.g.   "liboapi.so".
This file can be found in the omlib directory.
The file is supplied by OM, RJE merely distributes the file we receive.

Iinstall the shared libraries in a suitable directory in your LD_LIBRARY_PATH.

3. MCclickASX Configuration:

3.1 MCclickASX.ini:

3.1.1 Important Parameters:

Example :-

* MCclickASX.ini
```
*===============
CLIENTS_PORT     =7001
ASX_CLICK_GATEWAY =CLK210
ASX_CLICK_PORT    =15025
OMNIAPI_COMPRESS  =YES
OMNIAPI_ENCRYPT   =YES
LOG_PATH         =logs\
DATA_PATH        =data\
```

CLIENTS_PORT=<port no> :- TCP/IP port number which clients of all types connect to.

ASX_CLICK_GATEWAY =<hostname> :- Hostname of ITS Click gateway, will be supplied by the ASX.

ASX_CLICK_PORT   =<port no> :- Port number of ITS Click gsateway, will be supplied by the ASX.

Note: If you wish to use multiple ITS Click gateways then you must run multiple copies of MCclickASX.

OMNIAPI_COMPRESS =<YES/NO> :- Enables OM API compression for all clients that connect via this copy of MCclickASX.

OMNIAPI_ ENCRYPT =<YES/NO> :- Enables OM API encryption for all clients that connect via this copy of MCclickASX.

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3.1.2 Optional Parameters:

DELTA_FILES=3 - Delta files versions to keep - default = 3

Performance:

TCPIP_CONNECTIONS =n Allow 'n' concurrent TCP/IP connect attempts (backlog), Default = 5.

BCAST_POLL_RATE=n - Broadcast Poll Rate - Polls per second (default = 10)
The ASX may instruct users to set the poll rate to a particular value.

BCAST_HBEAT_POLL=n – Special poll rate for order entry apps not subscribed to any broadcasts (default = 1).

 PUSH_THROTTLE=n - Throttle 'Push Mode' to 'n' messages per second - zero default = no throttle.

CLIENT_PUSH_THREAD=NO – Turns off the use of a separate thread for 'Push Clients' – not recommended.

QUIT_DELAY='n' milliseconds - time to wait before closing client socket after sending quit response. Default = 200 M/S. (You should not need to use this.)

Performance Statistics:

BCAST_STATS=n - Output Broadcast Stats every 'n' seconds - zero default = no stats

PUSH_STATS=n - Output Push Client Stats every 'n' seconds - zero default = no stats

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3.1.3 Message Logging / Diagnostics:

DIAGNOSTIC_LEVEL =1 - controls how much information is logged in text diagnostics messages. Higher number mean more information is logged. Just use the default value unless otherwise instructed by RJE support personnel.

LOG_MESSAGES   =A - controls amount of info logged
 A=All, C=Client, X=Exchange, T=Text, W=Warning, E=Error, N=None
 Can specific a single type or multiples (e.g. C+T)
 A=C+X+T
 T -> All Text messages includes warnings & errors.
 W - > Warnings includes errors
 Lowest setting is E -> Error messages only.
 Error messages are always logged if logging is enabled.
 N -> Turns logging off
 Log files can get big quickly but logged info gives us the ability to diagnose problems.

 LOG_FILTER - further control on amount of info logged for Exchange & MC API messages
 D = log deals
 5 = log BO5's
When the filter is set no other query response/broadcast message types are logged.
 By default the filter is not set and all message types are logged.
Example – the recommended settings for MCTrades are:-
- LOG_MESSAGES   =C+W
- LOG_FILTER   =D5

4. Daily Operations:

Once started MCclickASX continues to run unless stopped manually. It can be considered to be 'stateless', all activity is driven by the client applications.

MCclickASX also caches some ASXTrade reference data and uses this data to enhance messages. This data is only retained while a client has a connection to ASXTrade.

5. Expiry of the ASXTrade Click Password:

The latest versions of MCTradesASX and MCTradeAT have automatic password changing for ASXTrade passwords. (See MCTradesAT.pdt)

Customers should be aware :-
1) The ASXTrade password can expire.
2) When the ASX sets up a new ASXTrade user for you, the password will probably be pre-expired.

You should also periodically monitor 'Days To Expiry' or your ASXTrade user password or institute some other procedure to avoid nasty surprises.

You can change the Click (ITS) password via the RJE supplied program MC_password.exe (Windows) and mcpass (Solaris/Linux), this program is also supplied in source form as MC_password.c.

```
E:\Projects\Market Connect Development\03.10.02\Debug>mc_password
[S]EATS or [C]lick ? [S/C]
C
Enter UserID:
288RJETEST1
Enter Password:
PASSWORD07
Change Password ? [Y/N]
Y
Enter New Password:
PASSWORD08
Connected

2004-06-17:11:42:21 waiting for message

Wait for Rxed msg_code=1700, req_ID=1
Click Logon Successful.
```

Note: When changing an expired Click password you will get an error. However, the password change will still work correctly.

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6. Testing ITS Connections via MCScript:

You can use the MCScript tool to test the installation of MCclickASX.
However, care must be taken to in production environments, please ensure you only use
simple non-trading scripts. (e.g. its_logon_test.txt).

You will need to complete the following steps:-

1. Copy the MCScript directory to a suitable location.

2. Locate the MCclient.ini file and change the computer name to the name of the
   computer you are running, or intend to run the MCclickASX server application.
   Editing the MCclient.ini file.
   rjecom4 7001
   Replace 'rjecom4' with the host name of the computer running
   MCclickASX Change 7001 to the value of CLIENTS_PORT used for
   MCclickASX.
   (*You only need to change this if you change the value for MCclickASX.*)

3. Set the UserId/Password in its_logon_test.txt
   FUNC=LOGON|SYS=C|USR=<user>|PWD=<password>|
   e.g FUNC=LOGON|SYS=C|USR=myUser|PWD=myPassword|

4. Run as follows:- mcscript its_logon_test.txt

This test should prove that you have installed/configured MCclickASX correctly and that
your ITS userID/Password are valid.

MCscript makes a TCP/IP connection to MCclickASX, so MCclickASX must be running
in order to successfully complete this test.

MCScript runtime parameters are as follows :-
    MCScript <script file> <ini file> <push mode>
Hence to run in 'Push Mode' you must supply all parameters:-
e.g. mcscript examples/its_tr11.txt MCclient.ini P

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7. Testing ITS Connections via MC_Password:

The example program MC_ITS_Order_entry.c is supplied in source and binary form in a Market Connect Developer Release.

Windows :- locate and edit 'its_test.bat'.

Solaris :- locate and edit the shell script file 'itstest'.

In both cases you must edit the .ini file specified to reference the host/port where MCclickASX is running.

The MC_Password program can be used to change passwords / test ITS connections.
It is supplied in binary form for both Windows and Solaris.
MC_Password uses `"MCclient.ini"` or takes a .ini file as it 1st parameter.

On Solaris MC_password is supplied as the binary "mcpass".

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8. Troubleshooting

8.1 Common Problems:

8.1.1 Application Data / Performance Problem:

Check the Message Log, this contains all messages to/from exchange gateways and the times those messages were sent. As well, it contains all messages sent to/from the MCclickASX by each client and the times those messages were sent.
For most 'Application Level' problems, this is the place to look, see 11.2 below.

8.1.2 MCclickASX Connection Periodically Broken:

Another client may have signed on to the OM Click system using your user id and password. This will cause the OM system to break your connection. You need to track down the offending application or change your user id and password to one that is not used elsewhere.

8.2 MCclickASX Logfiles – MCclickASX_<date>_nn.txt:

These typically record all messages to/from clients and all messages to/form the ITS system in raw binary form.

For this reason a separate 'printlog' utility can be used to dump selected options of the log in text form.

Examples of running printlog :-
plogASX
2005-10-05:17:13:09 Usage: plogASX <date> <hour> <logpath>
    :   YYYYmmDD nn
    : e.g. 20050111 10
Log File Date: 20051005
Log File Hour: 15
Filter Type [T=Tagged messages;S=SessionId;M=Time-from/to]m
Enter Time From: 150701
Enter Time To: 150704
2005-10-05:17:13:33 Error opening log file MCclickASX_20051005_15.log
Log File path: logs/
2005-10-05:17:13:36 Text File Output >>: logs/MCclickASX_20051005_15.txt.
2005-10-05:17:13:36 Processing logs/MCclickASX_20051005_15.log.

8.3 Printlog Filter Files:

The plogASX facility with the ability to do more intelligent string searches on data so you will not need to send large files.

This works by specifying a 'filter file' which can contain a number of strings defining the set of data we are interested in. It works a bit like grep.

```
plogASX
2008-02-04:18:16:06 Usage: plogASX <date> <hour> <logpath>
    :     YYYYmmDD nn
    : e.g. 20050111 10
Log File Date: 20080404
Log File Hour: 12
Filter Type [F=filters filename ** File may be suplied by RJE **]
Filter Type [T=Tagged messages;A=MC API;S=SessionId;M=Time-from/to;X=Text Messag
es]
Filter Type [ITS System OM API D=Deals, 5=BO5 Broadcasts]f
Enter Filters Filename: filt1.txt
File filt1.txt: Opened For Read.
filt1.txt Done Filters: 7
```

We can send you these filter files via email, but it is not hard to construct your own.

An example follows below.

```
MSG_C_COUNTRY_MARKET
ORN=4325673434833470296
ORN=4493969066020038008
EXN=1210276824
MSG_C_DEAL,EXN=1210277177
MSG_C_DEAL,SNA=SEV,PRI=11150
MSG_C_DEAL,SNA=SKI,PRI=1935
*
```

Where :-
i.e. ORN=4325673434833470296 – get all records containing this order number. (deals & BO5's)
MSG_C_DEAL,SNA=SKI,PRI=1935 – get all deals for SKI price = 1935