

CQG/NET Technical Specifications

March 26, 2012 | Version 2012-02

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About this Document

This document provides the information you need to understand computer and installation requirements; Internet connectivity; bandwidth use; and support of firewalls, proxies, and other software applications.

The most current version of this document is always available at:

<http://www.cqg.com/Docs/COGNETTechSpec.pdf>

Publication History

Date	Version	Changes
March 26, 2012	2012-02	Changed last two IP ranges in Internet Communication . Changed notation for firewall ranges in Name Resolution – DNS/Hostfile .
March 5, 2012	2012-01	Changed server destination port from 2824 to 443 in Internet Communication . Updated firewall ranges in Name Resolution – DNS/Hostfile .
December 2, 2011	2011-06	Changed 208.248.16.253 to 208.248.16.217 in the Qwest through Equinix table in Name Resolution – DNS/Hostfile.
September 1, 2011	2011-05	Updated hard drive specifications.

Customer Support

CQG Customer Support is available to help you. Please call us at 1-800-525-1085 or e-mail us at websupt@cqg.com.

Related Documents

CQG Integrated Client user guides can be found on our [website](#).

Other helpful documents can be found on our [Customer Education page](#).

CQG Integrated Client

CQG Integrated Client has earned a solid reputation through decades of reliable performance, providing traders with an innovative trading interface complete with accurate global market data, professional analytical tools, and advanced order routing.

CQG operates with Windows® 7, Windows Vista®, and Windows XP® and is available over the Internet.

CQG/NET

CQG/NET provides additional levels of flexibility and robustness for CQG IC:

- CQG/NET allows each CQG client to log on and off at his or her convenience.
- CQG/NET delivers real-time data to each CQG client.
- CQG/NET permits a CQG client to access the server from any remote location that has access to the Internet.
- CQG/NET is architected to support redundant servers. If a single CQG/NET server fails, the CQG client's connection is transferred to an alternate CQG/NET server. An alternate server is always available.

CQG/NET uses the industry standard TCP/IP-based transport and name resolution services supported by Winsock 1.1. Data delivery is via TCP/IP over the [Internet](#).

CQG/NET client software consists of 32-bit Windows® applications developed for Intel® X86 architecture computers.

Computer Specifications

These specifications are appropriate for single and dual monitor set ups. If you have three or four monitors, you will need a higher-performance processor, video card, and network connection.

	Required	Recommended
Operating System	Windows 7, Windows Vista, or Windows XP.	64-bit Windows 7.
Processor	Dual-Core. Intel Core 2 Duo (2.33GHz or better).	Intel Core i5 or i7.
Memory	4GB RAM.	6GB DDR3 SDRAM or more.
Hard Drive	200GB, 7200RPM with 4GB of free hard disk space.	500GB SATA 6.0Gbit/s HDD.
Video Card	Dual port graphics adapter with 128Mb of memory, 64Mb per port.	1GB DDR3 or better.

Internet Access: Internet service via a high-speed connection, such as DSL, cable, or fixed wireless/wireless local loop (WLL). Wireless internet connections not recommended, especially broadband over a wifi card. Dial up not supported.

System Setting Requirements: Hibernate and standby modes cannot be used on a system running CQG IC. Hard drive power-saving features should also be disabled.

Bandwidth Utilization

CQG/NET requires approximately 20K bytes/sec sustained and an average 100K bytes/sec of additional bandwidth per user for burst mode. Optimal figures are 60K bytes/sec and 500K bytes/sec.

Because Ethernet performance degrades significantly when the network load exceeds 30%, the number of CQG clients per network segment should be limited to 60, given a normal distribution. CQG/NET would then consume approximately 2% of the available bandwidth, leaving sufficient reserve capacity for other network functionality.

Task	Duration	Bandwidth Usage
Startup	Short burst < 1 sec	30-50 kbps
	10-15 sec	3-5 kbps avg
Page change uncached, first time viewed	Short burst < 1 sec	5-30 kbps depending on page complexity
Page change cached, already viewed	Short burst < 1 sec	1-3 kbps
Page viewing	As long as page is displayed on screen	1-3 kbps avg sustained
Typical 10-min session including startup, shutdown, and multiple page changes	10 min	2-3 kbps avg

CQG Multiple-Monitor Services

CQG offers Dual Monitor Service, Triple Monitor Service, or Quad Monitor Service. Each additional monitor adds an additional amount of bandwidth usage, approximately equal to the figures shown in the above table. For example, a typical 10-minute session on a CQG system enabled for CQG Triple Monitor Service can be expected to use approximately 6-9 kbps averaged over the 10-minute period.

CQG Market Scan

A CQG/NET system utilizes additional bandwidth when a market scan is executed. Scans are user-initiated and can run from several seconds to several minutes, over which time they use an average of approximately 10-50 kbps. CQG's Market Scan Service is optional.

Internet Communication

Use	Protocol	Client Source Port	Server Destination Port
Client/server communication	TCP	System-assigned	2823, 443

- All traffic between CQG clients and servers use the TCP protocol. The UDP protocol is not used.
- All network connections between CQG clients and servers are initiated from the client side. No connections are initiated by the server.
- Destination port numbers at the server side are 2823 and 443 (CQG's registered port number).
- Source ports at the client side will always be system-assigned port numbers in the 1025-5000 range.
- User-specific secure information, such as passwords, are encrypted.
- Only one simultaneous connection per user is permitted.

Network	Subnet Bits	Subnet Mask	IP Range
67.152.7.192	26	255.255.255.192	67.152.7.193 to 67.152.7.254
208.48.16.0	24	255.255.255.0	208.48.16.1 to 208.48.16.254
64.208.51.192	26	255.255.255.192	64.208.51.193 to 64.208.51.254
66.77.164.128	26	255.255.255.192	66.77.164.129 to 66.77.164.190
216.219.76.64	26	255.255.255.192	216.219.76.65 to 216.219.76.126
202.147.38.224	27	255.255.255.224	202.147.38.225 to 202.147.38.254
203.192.141.160	27	255.255.255.224	203.192.141.161 to 203.192.141.190

Name Resolution – DNS/Hostfile

Firewall Ranges

U.S.		Pacific Rim	
Chicago	64.208.51.192 /26	Singapore	202.147.38.224 /27
Equinix	208.48.16.0 /24	Sydney	203.192.141.160 /27
New York	67.152.7.192 /26	Europe	
Qwest	66.77.164.128 /26	London	216.219.76.64 /26

IP Addresses

Chicago	
cqginchi001i.cqgnet.com 64.208.51.224	cqginchi016i.cqgnet.com 64.208.51.239
cqginchi002i.cqgnet.com 64.208.51.225	cqginchi017i.cqgnet.com 64.208.51.240
cqginchi003i.cqgnet.com 64.208.51.226	cqginchi018i.cqgnet.com 64.208.51.241
cqginchi004i.cqgnet.com 64.208.51.227	cqginchi019i.cqgnet.com 64.208.51.242
cqginchi005i.cqgnet.com 64.208.51.228	cqginchi020i.cqgnet.com 64.208.51.243
cqginchi006i.cqgnet.com 64.208.51.229	cqginchi021i.cqgnet.com 64.208.51.244
cqginchi007i.cqgnet.com 64.208.51.230	cqginchi022i.cqgnet.com 64.208.51.245
cqginchi008i.cqgnet.com 64.208.51.231	cqginchi023i.cqgnet.com 64.208.51.246
cqginchi009i.cqgnet.com 64.208.51.232	cqginchi024i.cqgnet.com 64.208.51.247
cqginchi010i.cqgnet.com 64.208.51.233	cqginchi025i.cqgnet.com 64.208.51.248
cqginchi011i.cqgnet.com 64.208.51.234	cqginchi026i.cqgnet.com 64.208.51.249
cqginchi012i.cqgnet.com 64.208.51.235	cqginchi027i.cqgnet.com 64.208.51.250
cqginchi013i.cqgnet.com 64.208.51.236	cqginchi028i.cqgnet.com 64.208.51.251
cqginchi014i.cqgnet.com 64.208.51.237	cqginchi029i.cqgnet.com 64.208.51.252
cqginchi015i.cqgnet.com 64.208.51.238	cqginchi030i.cqgnet.com 64.208.51.253

New York	
cqginny001i.cqgnet.com 67.152.7.224	cqginny016i.cqgnet.com 67.152.7.239
cqginny002i.cqgnet.com 67.152.7.225	cqginny017i.cqgnet.com 67.152.7.240
cqginny003i.cqgnet.com 67.152.7.226	cqginny018i.cqgnet.com 67.152.7.241
cqginny004i.cqgnet.com 67.152.7.227	cqginny019i.cqgnet.com 67.152.7.242
cqginny005i.cqgnet.com 67.152.7.228	cqginny020i.cqgnet.com 67.152.7.243
cqginny006i.cqgnet.com 67.152.7.229	cqginny021i.cqgnet.com 67.152.7.244
cqginny007i.cqgnet.com 67.152.7.230	cqginny022i.cqgnet.com 67.152.7.245
cqginny008i.cqgnet.com 67.152.7.231	cqginny023i.cqgnet.com 67.152.7.246
cqginny009i.cqgnet.com 67.152.7.232	cqginny024i.cqgnet.com 67.152.7.247
cqginny010i.cqgnet.com 67.152.7.233	cqginny025i.cqgnet.com 67.152.7.248
cqginny011i.cqgnet.com 67.152.7.234	cqginny026i.cqgnet.com 67.152.7.249
cqginny012i.cqgnet.com 67.152.7.235	cqginny027i.cqgnet.com 67.152.7.250
cqginny013i.cqgnet.com 67.152.7.236	cqginny028i.cqgnet.com 67.152.7.251
cqginny014i.cqgnet.com 67.152.7.237	cqginny029i.cqgnet.com 67.152.7.252
cqginny015i.cqgnet.com 67.152.7.238	cqginny030i.cqgnet.com 67.152.7.253

Qwest through Equinix	
cqginqwc001i.cqgnet.com 208.48.16.224	cqginqwc016i.cqgnet.com 208.48.16.239
cqginqwc002i.cqgnet.com 208.48.16.225	cqginqwc017i.cqgnet.com 208.48.16.240
cqginqwc003i.cqgnet.com 208.48.16.226	cqginqwc018i.cqgnet.com 208.48.16.241
cqginqwc004i.cqgnet.com 208.48.16.227	cqginqwc019i.cqgnet.com 208.48.16.242
cqginqwc005i.cqgnet.com 208.48.16.228	cqginqwc020i.cqgnet.com 208.48.16.243
cqginqwc006i.cqgnet.com 208.48.16.229	cqginqwc021i.cqgnet.com 208.48.16.244
cqginqwc007i.cqgnet.com 208.48.16.230	cqginqwc022i.cqgnet.com 208.48.16.245
cqginqwc008i.cqgnet.com 208.48.16.231	cqginqwc023i.cqgnet.com 208.48.16.246

Qwest through Equinix	
cqginqwc009i.cqgnet.com 208.48.16.232	cqginqwc024i.cqgnet.com 208.48.16.247
cqginqwc010i.cqgnet.com 208.48.16.233	cqginqwc025i.cqgnet.com 208.48.16.248
cqginqwc011i.cqgnet.com 208.48.16.234	cqginqwc026i.cqgnet.com 208.48.16.249
cqginqwc012i.cqgnet.com 208.48.16.235	cqginqwc027i.cqgnet.com 208.48.16.250
cqginqwc013i.cqgnet.com 208.48.16.236	cqginqwc028i.cqgnet.com 208.48.16.251
cqginqwc014i.cqgnet.com 208.48.16.237	cqginqwc029i.cqgnet.com 208.48.16.252
cqginqwc015i.cqgnet.com 208.48.16.238	cqginqwc030i.cqgnet.com 208.48.16.217
im.cqgnet.com 208.48.16.208	

London	
cqginlon001i.cqgnet.com 216.219.76.112	cqginlon008i.cqgnet.com 216.219.76.119
cqginlon002i.cqgnet.com 216.219.76.113	cqginlon009i.cqgnet.com 216.219.76.120
cqginlon003i.cqgnet.com 216.219.76.114	cqginlon010i.cqgnet.com 216.219.76.121
cqginlon004i.cqgnet.com 216.219.76.115	cqginlon011i.cqgnet.com 216.219.76.122
cqginlon005i.cqgnet.com 216.219.76.116	cqginlon012i.cqgnet.com 216.219.76.123
cqginlon006i.cqgnet.com 216.219.76.117	cqginlon013i.cqgnet.com 216.219.76.124
cqginlon007i.cqgnet.com 216.219.76.118	cqginlon014i.cqgnet.com 216.219.76.125

Sydney	
cqginsyd001i.cqgnet.com 203.192.141.171	cqginsyd006i.cqgnet.com 203.192.141.176
cqginsyd002i.cqgnet.com 203.192.141.172	cqginsyd007i.cqgnet.com 203.192.141.177
cqginsyd003i.cqgnet.com 203.192.141.173	cqginsyd008i.cqgnet.com 203.192.141.178
cqginsyd004i.cqgnet.com 203.192.141.174	cqginsyd009i.cqgnet.com 203.192.141.179
cqginsyd005i.cqgnet.com 203.192.141.175	cqginsyd010i.cqgnet.com 203.192.141.180

Singapore	
cqginsng001i.cqgnet.com 202.147.38.235	cqginsng006i.cqgnet.com 202.147.38.240
cqginsng002i.cqgnet.com 202.147.38.236	cqginsng007i.cqgnet.com 202.147.38.241
cqginsng003i.cqgnet.com 202.147.38.237	cqginsng008i.cqgnet.com 202.147.38.242
cqginsng004i.cqgnet.com 202.147.38.238	cqginsng009i.cqgnet.com 202.147.38.243
cqginsng005i.cqgnet.com 202.147.38.239	cqginsng010i.cqgnet.com 202.147.38.244

Firewalls and Proxies

Firewalls

CQG/NET supports the following firewall configurations:

- Network address translation
- Dynamically assigned ports on the client side

Proxies

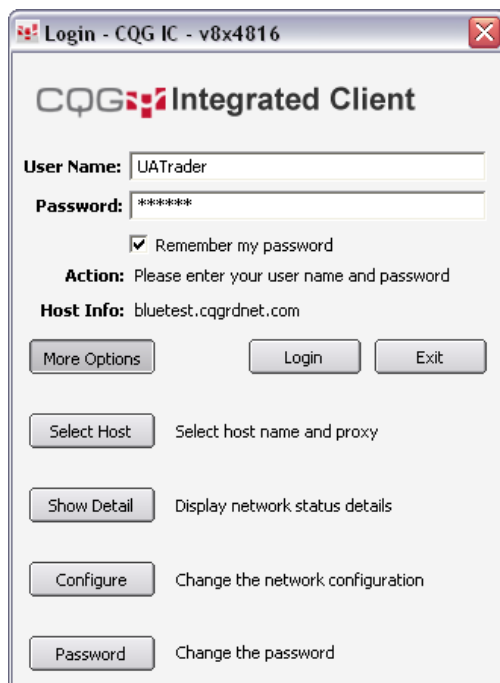
CQG/NET supports SOCKS 4, SOCKS 5, and HTTP proxy services as well as a Winsock redirector, such as Microsoft® Proxy Server 2.0.

Following the successful installation of CQG/NET, you must modify configuration settings in order to connect through a proxy server.

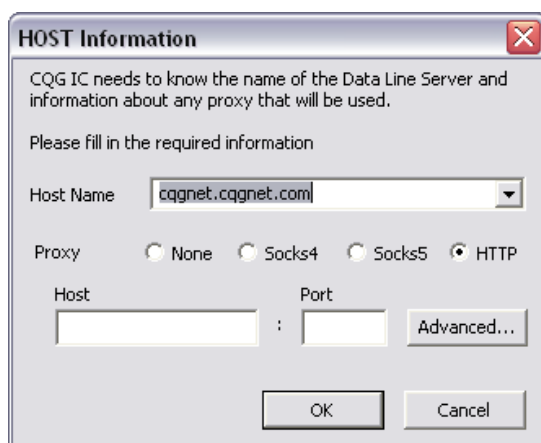
You can make these modifications [using the software](#) or by [changing the INI files](#).

Updating Proxy Settings Using CQG/NET

1. Click the **More Options** button to display the **Select Host**, **Show Detail**, **Configure**, and **Password** buttons.



2. Click **Select Host**.
3. Select **Socks4**, **Socks5**, or **HTTP**, and define the proxy server host and port.



4. To configure additional settings, such as server side DNS, click the **Advanced** button.
5. Click **OK** to exit the windows.

Updating Proxy Settings Using INI Files

CQG/NET can be configured to work through a proxy server by changing its configuration settings.

Proxy settings are defined in the [NETS] section of two INI files simultaneously and identically:

- cqq.ini (Private folder, by default \Documents and Settings\All Users\Documents\CQGNet\Private)
- cqqcInt.ini (CQGNet folder, by default \Documents and Settings\All Users\Documents\CQGNet)

Please make sure that you are not logged on to CQG/NET when you modify the INI file.

Default values in the INI file are preceded by a colon (:). You should remove those colons when you change default values.

General proxy configuration

Key	Value	Description
ProxyType	<proxy_tag> one of: {SOCK4 SOCKS5 HTTP None <any_name>} default: None	1st (or only) proxy in chain. 'None' disables proxy. For example, to set up using a single SOCK4 proxy, specify SOCK4 here.
ProxyReplyTimeout	<integer number> default: 30	Timeout to get through the whole proxy chain.
ServerProxyHost	<string> must be valid domain name or IPv4	To be supported at a future date. Enables FX Trader-specific "last proxy in chain." Works even if ProxyType = None .
ServerProxyPort	<number> default: 2824	To be supported at a future date. CQG/NET-specific port of server proxy.

Settings for specific proxy

Key	Value	Description
<proxy-tag>_Type	one of: { SOCK4 SOCKS5 HTTP None }	Optional if <proxy-tag> is SOCK4, SOCK5, HTTP, or None.
<proxy-tag>_Host	<string> must be valid domain name or IPv4	Mandatory.
<proxy-tag>_DNS	one of: { 0 1 } default: 0	Optional. 0 = use standard DNS lookup 1 = use proxy for DNS lookup
<proxy-tag>_Port	<integer number>	Optional. Default is type-specific.
<proxy-tag>_User	<username>	Optional. Plaintext username for proxy authentication.
<proxy-tag>_Password	<password>	Optional. Plaintext password.
<proxy-tag>_UseFor	<match> (see below) default "*"	Optional. Defines matches for target host to use this proxy for. Applied to the TARGET host, not the next proxy in chain.
<proxy-tag>_DirectFor	<match> (see below) default ""	Optional. Defines matches for target host to SKIP this proxy for. Applied to the TARGET host, not the next proxy in chain.
<proxy-tag>_Next	<proxy_tag> one of: { SOCK4 SOCKS5 HTTP None <any_name> } default: None	Optional. Next proxy in the chain AFTER this proxy.

Key	Value	Description
<proxy-tag>_DirectNext	<proxy-tag> default: same as <proxy-tag>_Next	Optional. Next proxy in the chain INSTEAD of this proxy. Used if proxy is skipped due to *_DirectFor match.

For example, to configure CQG/NET to use Socks 5 proxy at 172.24.3.144:3128, you should modify both cqgg.ini and cqgcInt.ini, so that they read:

```
[NETS]
ProxyType=SOCKS5
SOCKS5_Host=172.24.3.144
SOCKS5_Port=3128
```

Formal settings syntax definition

```

<separator> := ',' | ';' | ' ' | '\t'
<digit> := '0' - '9'
<char> := 'A'-'Z' | 'a'-'z' | <digit> | '.' | '-' | '+' | '_'
<string> := <char> { <char> } # not empty string
<range> := '[' ( <string> | ( <char> '-' <char> ) ) ']'
<single-match> := { '*' | '?' | <char> | <range> } # * means any string, ? means any char
<match> := <single-match> { <separator> <single-match> }
<host> := <string> # must be valid domain name or IPv4
<port> := <digit> [ { digit } ] # must be integer within 1-65535
<any-name> := <string>
<supported-type> := SOCK4 | SOCKS5 | HTTP | None
<proxy-tag> := <supported-type> | <any-name>

# General proxy configuration
ProxyType=<proxy-tag> # specifies 1st (or only) proxy in chain. 'None' disables proxy.
ProxyReplyTimeout=30 # timeout to get through the whole proxy chain
ServerProxyHost = <host> # optional, enables mandatory 'last proxy in chain'. Works even 'None' proxy is
                        # used.
ServerProxyPort= <port> # optional, port of server proxy. default 2824

# Specific proxy configuration:

<proxy-tag>_Type = <supported-type> # optional if <proxy-tag> == <supported-type>
<proxy-tag>_Host = <host> # mandatory
<proxy-tag>_Port = <port> # optional, default is type-specific
<proxy-tag>_User = <username> # optional, plaintext username for proxy authentication
<proxy-tag>_Password = <password> # optional, plaintext password
<proxy-tag>_UseFor = <match> # optional, defines matches for target host to use this proxy for. Default
""
<proxy-tag>_DirectFor = <match> # optional, defines matches for target host to SKIP this proxy for.
Default ""
<proxy-tag>_Next = <proxy-tag> # optional, next proxy in the chain AFTER this proxy. Default: None
<proxy-tag>_DirectNext = <proxy-tag> # optional, next proxy in the chain INSTEAD this proxy. Default: same
as *_Next
# .. used if proxy is skipped due to *_DirectFor match.

# *_UseFor and *_DirectFor are applied to the TARGET host, not to next proxy in chain.

```

News Specifications

The following host names and IPs should be used when accessing CQG's News application.

Version	Host Name	IP	Port
7.6 and later	cqgnews.cqgdata.com	66.77.164.163	2823
7.4 and 7.5	news.cqgdata.com	66.77.164.162	2823

Installation

Because CQG/NET is a real-time, mission-critical application, we recommend that it and the working directory be loaded on a local hard drive.

For best performance, we recommend setting the working directory to a file server and not running CQG/NET from an application server.

User-modified files are backed up daily by CQG.

You must register COM and ActiveX[®] components on the client system.

IMPORTANT: User permissions on the main CQG folder and all subfolders and files must be set to “Modify” or “Full Control.” Installing CQG/NET on a restricted drive and assigning it limited permissions, such as “Read & Execute,” impede performance and may prevent the CQG/NET from working at all.

Entitlements and Permissioning

CQG remotely manages entitlements associated with CQG/NET. Each user has a specific set of entitlements that are accurately reflected in CQG's monthly billing. CQG is able to flag customer accounts to prevent any unauthorized entitlement.

CQG / NET and Other Applications

The CQG/NET is DDE-compliant and can provide data to software, such as Excel® and Visual Basic®. CQG does not publish its data feed for general price databases.

CQG offers an API interface for use in third-party applications. For more information, please visit our [website](#).