CQ Gate User's Guide
javAPRSSrvr 4.3

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Section 1 - Introduction

CQ Gate was written to provide the amateur radio APRS community a simple means to call CQ to a known subset of APRS users.

CQGate extends net.ae5pl.aprssrvr.ClientRcv and therefore requires javAPRSSrvr to provide the network interface and packet parsing.

Section 2 - Program Requirements and Description

CQGate is designed to run on any OS and Java VM supported by javAPRSSrvr.

CQGate is comprised of a number of classes which Java looks at as objects. The main class is net.ae5pl.cqgate.CQGate. This class is called at startup, sets parameters, and begins execution.

CQGate monitors the feed from javAPRSSrvr to determine if a station has sent a message to it. If it receives a message, it responds depending on the message content (CQSRVR is used as StationCall for these examples):

STN1>APRS::CQSRVR :CQ GROUPABC Hi everyone!{00}

Will cause the following to be sent by CQGate (STN2 already a member of the group):

CQSRVR>APJIC1,TCPIP*::STN1 :1 messages sent to GROUPABC{NN}00
STN1>APJIC1,qAR,CQSRVR::STN2 :CQ GROUPABC Hi everyone!

Note that CQSRVR only sends unnumbered messages from the proxied station. It appears to STN2 that “Hi everyone!” came directly from STN1 which allows them to respond directly without relying on CQSRVR.

Once a CQ message is received by the CQGate, that station will remain registered with that group for 12 hours after their last CQ message. A group will remain active as long as there is at least one message within the last 12 hours. STN1 can unregister from GROUPABC by sending the following message:

STN1>APRS::CQSRVR :U GROUPABC{01

CQSRVR will respond with an ack and a message indicating that they have been removed from GROUPABC.

The commands (CQ and U) and the group names are case insensitive and are converted to upper case by CQGate.

CQGate uses the net.ae5pl.aprssrvr.ClientRcv message handler which automatically performs independent acks if necessary or lets CQGate use the Reply-Ack protocol if the original sender indicates it is Reply-Ack capable.

Section 3 - Configuration Properties

The configuration properties reside in properties files for each client adjunct, server adjunct, and port. The main properties file is called javaprssrvr.properties by default. You can use any text file for the main properties file if you pass the name into javAPRSSrvr as a command line parameter.

The property names are not case sensitive but the values can be. Defaults are shown below.

NOTE: UNLESS YOU REQUIRE A SETTING OTHER THAN THE DEFAULT, DO NOT INCLUDE ANY PARAMETERS WITH DEFAULT SETTINGS.

List parameters (L) may be defined on the property line or may be defined in a text file with the suffix .lst. If defined on the line, each entry is separated by a semicolon. If defined in a file, each entry is put on a separate line in the .lst file and the file name is the property value. Do not put blank lines in the file. For instance, this could be a definition for ListProperty (example only):

ListProperty=first.aprs.net:1313;second.aprs.net:1313

Or you could have the following 2 lines in a file named hubs.lst:

first.aprs.net:1313
second.aprs.net:1313

with ListProperty=hubs.lst

Properties preceded by a (M) are unchangeable and should not be included in your properties files. They are included in the descriptions below to indicate what common properties are available vs. those that have been forcibly overridden.

javAPRSSrvr Properties

Clients=

(L) This must include the CQGate properties file.

CQGate General Properties

ClassPath=

(L) Must be set to CQGate.jar.

Class=

Must be set to net.ae5pl.cqgate.CQGate.

StationCall=

This is the callsign-SSID for CQGate.
It must be different from javAPRSSrvr's userCall (the server's callsign-SSID) and conform to APRS-IS standards.

(M)Upstream=false

(M)FullFeed=false

(M)ReadOnly=false

(M)LocalOnly=false

(M)ServerCommand=

(M)FixedCommand=false

(M)LoginCommands=

(M)MessageHoldTime=-1

(M)LastHeardTime=-1

CQ Gate Properties

MinSendTime=25

Minimum time between messages from one station to one group (minutes).

MaxIdleTime=12

Maximum time in hours that a group or station may remain inactive before it is deleted.

GroupBackupFile=groups.bak

File is updated every time a member joins or leaves a group including the creation/deletion of groups. This provides persistence over restarts.

Section 4 - Recommended Configurations

I recommend that all settings be left to default. CQSRVR is a reserved StationCall so use any other valid, non-duplicate callsign-ssid.

Section 5 - Installation Instructions

You must include CQGate.jar in the ClassPath property in your CQGate properties file.

Section 6 – Operator Guide

This section describes how users interact with the server.

To send a message to a group (and register with that group):

Send a numbered APRS message to StationCall with “CQ groupname message” as the message text.

AE5PL-10>APRS::CQSRVR :cq scouts Hi everyone!{00

The group name must be a single word and is case-insensitive (is converted to upper case by CQGate).

To unregister from a group:

Send a numbered APRS message to StationCall with the letter U (case-insensitive) followed by a space and then the group name.

AE5PL-10>APRS::CQSRVR :u scouts{01

To list all groups:

Send an APRS message to StationCall with the ? character.

AE5PL-10>APRS::CQSRVR :?

To show number of members of group:

Send an APRS message to StationCall with the ? character followed by a space and then the group name.

AE5PL-10>APRS::CQSRVR :? scouts

To list all groups I am a member of:

Send a numbered APRS message to StationCall with the letter L (case-insensitive).

AE5PL-10>APRS::CQSRVR :L{02

Section 7 – XML Status Page

General XML

<clientrcv>
<time>
<connect utc="1341166062790"/>
<lastlinein utc="1341232414429"/>
</time>
<upstream>
false
</upstream>
<readonly>
false
</readonly>
<login>
<callssid verified="true">
CQSRVR
</callssid>
<software version="4.0.0">
CQGate
</software>
</login>
<rcvdfrom bytes="520" lines="8" packets="8">
<udp bytes="0" lines="0" packets="0"/>
</rcvdfrom>
<clientxmt>
<upstream>
false
</upstream>
<sentto bytes="1074" lines="17" packets="17">
<lastlinems>
1341232415823
</lastlinems>
<udp bytes="0" lines="0" packets="0"/>
</sentto>
<xmtqueue depth="0" depthms="0"/>
<adjuncts/>
</clientxmt>
<cqgate>
<aprsmessages rcvd="7" sent="3"/>
<commands invalid="0" valid="5"/>
<groups current="1">
<group members="1" name="APRSIS32"/>
</groups>
</cqgate>
</clientrcv>

Detail XML


```
<clientrcv>
<time>
<connect utc="1341166062790"/>
<lastlinein utc="1341232414429"/>
</time>
<class name="CQGate">
<package name="net.ae5pl.cqgate" revision="b01" title="CQ Server" version="4.0.0"/>
</class>
<messages callssids="3" unacked="0"/>
<upstream>
false
</upstream>
<readonly>
false
</readonly>
<login>
<callssid verified="true">
CQSRVR
</callssid>
<software version="4.0.0">
CQGate
</software>
</login>
<rcvdfrom bytes="520" lines="8" packets="8">
<udp bytes="0" lines="0" packets="0"/>
</rcvdfrom>
<clientxmt>
<class name="CQXmt">
<package name="net.ae5pl.cqgate" revision="b01" title="CQ Server" version="4.0.0"/>
</class>
<upstream>
false
</upstream>
<sentto bytes="1074" lines="17" packets="17">
<lastlinems>
1341232415823
</lastlinems>
<udp bytes="0" lines="0" packets="0"/>
</sentto>
<xmtqueue depth="0" depthms="0"/>
<adjuncts/>
</clientxmt>
<cqgate>
<aprsmessages rcvd="7" sent="3"/>
<commands invalid="0" valid="5"/>
<groups current="1">
<group members="1" name="APRSIS32"/>
</groups>
</cqgate>
```

</clientrcv>