

javAPRSEmail User's Guide

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Section 1 - Introduction

javAPRSEmail was written to provide the amateur radio APRS community a simple means to send and receive one line emails.

This application operates as an IGate adjunct to javAPRSSrvr by implementing the IGateAdjunctInterface. It requires javAPRSSrvr to provide the network interface and do the packet parsing.

Section 2 - Program Requirements and Description

javAPRSEmail is designed to run on any OS with any recent Java Virtual Machine 1.4 or higher, or on .NET 2.0 or higher.

javAPRSEmail is comprised of a number of classes which Java looks at as objects. The main class is javAPRSEmail. This class is called at startup, sets parameters, and begins execution of the different support threads.

javAPRSEmail monitors the Internet feed to determine if a station has sent it a message. If it receives a message, it responds depending on the message content. javAPRSEmail acks all numbered messages received and generates numbered messages to the remote station.

When a message is received from APRS-IS which is properly formatted for processing as email (see section 6), javAPRSEmail will connect to the defined SMTP server and transfer a properly formatted SMTP message to the SMTP server. javAPRSEmail supports both authenticated (SMTPUserName and SMTPPassword defined) and non-authenticated connections to the SMTP server. javAPRSEmail will send an ack to the sending station and then send a confirmation/rejection message to the sending station upon completion of the connection to the SMTP server. Logging of all received messages is always enabled for tracking purposes.

If POP3 is enabled (POP3UserName and POP3Password are defined), javAPRSEmail will continually poll the POP3 server at POP3Interval minute intervals. If a message is received, it is parsed for proper format and authorization (see section 6). If it passes, an APRS message is sent to the requested station MaxAttempts times at one minute intervals. If the message is acked, a "service" email is sent to the sender stating that the message was received. If MaxAttempts are tried and no ack is received, a "service" email is sent stating the message was not received. If the message does not pass parsing, the message is saved in the directory as an error file for further diagnosis and a rejection email is sent to the email originator. Logging is done on all sent messages.

To simplify emailing, a station can create shortcuts for different recipients. The shortcut can be any non-space combination of characters. The station can set this by sending "shortcut email@domain.net" to the server. These are kept in the POP3OkFile so a server restart will not affect them.

Section 3 - Configuration Parameters

The configuration parameters reside in a configuration file which, by default, is called javaprssrvr.cfg. You can use any text file if you pass the name into javAPRSSrvr as a command line parameter.

The parameters are CASE SENSITIVE. Defaults are shown below.

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

List parameters may be defined on the line or may be defined in a text file. 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. Do not put blank lines in the file. The file must have the extension .lst. For instance, this would be the definition for hubs where you want to connect to first.aprs.net and second.aprs.net port 1313:

```
hubs=first.aprs.net:1313;second.aprs.net:1313
```

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

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

You would then put the following line in your configuration file:

```
hubs=hubs.lst
```

(R) at the beginning of the parameter description means that the parameter can be changed on-the-fly from the console with either the S or R commands.

javAPRSSrvr Parameters

IGateAdjunct=

This must be set to javAPRSEmail.

IGate General Parameters

IGateCall=

This is the callsign-SSID for javAPRSEmail.

It should conform to AX.25 standards, be unique, and it must be different from javAPRSSrvr's userCall (the server's callsign-SSID). Do not use EMAIL-2 which is in use.

IGateStatusInterval=20

(R)This specifies the status beacon rate in minutes.

This is needed to ensure reception of messages destined for the IGate. Do not modify unless absolutely necessary.

MaxAttempts=4

(R)This specifies how many tries (at one minute intervals) javAPRSEmail will use to get an APRS message through to the recipient.

SMTP Parameters

FromAddr=

(R)This is the email address of this server which will be placed in the mail header as the “from” address.

SMTPAddr=

(R)This is the DNS/IP address of the SMTP server.

SMTPPort=25

(R)This is the SMTP port number on the server.

SMTPUseSSL=false

(R)Use SSL connection to mail server.

SMTPUseTLS=false

(R)Use STARTTLS command to switch to SSL connection.

SMTPUserName=

(R)This is the login name for the SMTP server.
Leave blank if no authentication used.

SMTPPassword=

(R)This is the password for the SMTP server.
Leave blank if no authentication used.

Caution: This password is stored in plain text.

SMTPDebug=false

(R)Send all SMTP activity to stdout (Java only).

SMTPHelo=ehlo

(R)Set to helo if mail server does not support ehlo.

SMTPLocalDomain=

(R)Set to IP address or computer name of javAPRSEmail server.

SMTPMsgBodyFile=smtbody.txt

(R)This is the body text to be used in emails originated from APRS.

This text will be sent as-is with callsign-SSID substitution being done on any <callssid>, <mycall>, and <message> in the text. <callssid> is replaced with the sending station's callsign-SSID; <mycall> is replaced with the javAPRSEmail callsign-SSID; and <message> is replaced with the APRS message text. The "standard" text file is included with in the .zip file. You may make this anything you want. **I warn against placing reply instructions in the text for security and spam-prevention reasons.**

SMTPRcvdSubject=Your APRS Message has been Received

(R)This is the email subject line to be used in emails indicating the email to APRS was received.

SMTPRcvdBodyFile=rcvdbody.txt

(R)This is the body text to be used in emails indicating the email to APRS was received.

This text will be sent as-is with callsign-SSID substitution being done on any <callssid>, <mycall>, and <message> in the text. <callssid> is replaced with the sending station's callsign-SSID; <mycall> is replaced with the javAPRSEmail callsign-SSID; and <message> is replaced with the APRS message text. The "standard" text file is included with in the .zip file. You may make this anything you want. **I warn against placing reply instructions in the text for security and spam-prevention reasons.**

SMTPNotRcvdSubject=Your APRS Message was Not Received

(R)This is the email subject line to be used in emails indicating the email to APRS was not received.

SMTPNotRcvdBodyFile=notrcvd.txt

(R)This is the body text to be used in emails indicating the email to APRS was not received in the configured number of retries.

This text will be sent as-is with callsign-SSID substitution being done on any <callssid>, <mycall>, and <message> in the text. <callssid> is replaced with the sending station's callsign-SSID; <mycall> is replaced with the javAPRSEmail callsign-SSID; and <message> is replaced with the APRS message text. The "standard" text file is included with in the .zip file. You may make this anything you want. **I warn against placing reply instructions in the text for security and spam-prevention reasons.**

SMTPPositOnlyMsg=Position via APRS

(R) This is the subject when no APRS text is sent.

SMTPNoShortCuts=No shortcuts on file.

(R) This is body text for the shortcut list email if no shortcuts exist for the callsign.

SMTPShortCutList=Shortcut List

(R) This is the subject line for the shortcut list email.

POP3 Parameters

POP3Addr=

(R)This is the DNS/IP address of the POP3 server.

POP3Port=110

(R)This it the POP3 port number on the server.

POP3UseSSL=false

(R)Use SSL connection to mail server.

POP3UseTLS=false

(R)Use STLS command to switch to SSL connection (.NET only).

POP3UseAPOP=false

(R)Use APOP login (password encrypted).

POP3UserName=

(R)This is the login name for the POP3 server.

POP3Password=

(R)This is the password for the POP3 server.

Caution: This password is stored in plain text.

POP3MaxSize=10240

(R)Maximum email size to download.

Larger emails will be deleted without download.

POP3Debug=false

(R)Send all POP3 activity to stdout (Java only).

POP3Interval=1

(R)This is the time between checks on the POP3 server in minutes.

POP3OkFile=pop3ok.txt

(R)This is where allowed ids for POP3 senders are stored.

This is a simple text file where each ID is stored on its own line. This list is also the shortcut list for APRS users. The format for each line is CALL,shortcut=email@domain.net

POP3MsgRejectSubject=Message Rejected

(R) This is the subject for a rejection email.

POP3MsgRejectText=Your message is undeliverable.

(R) This is the body text for a rejection email.

APRS Message Text Parameters

MsgNoAddr=No email address!

(R) This is returned when no email address is specified in the APRS message.

MsgInvalidAddr=Invalid email address!

(R) This is returned when the email address is specified in the APRS message is invalid.

MsgShortAdded=% added.

(R) This is returned when a shortcut is added to the server (% is the placeholder for the shortcut name).

MsgNoAddrFound=No email address found!

(R) This is returned when no email address is found in the shortcut list for the specified shortcut.

MsgShortRemoved=% removed.

(R) This is returned when a shortcut is removed (% is the placeholder for the shortcut name).

MsgEmailSent=Email sent to %

(R) This is returned when an email to % (% is a placeholder) is successfully to the SMTP server.

MsgSendFailed=Send to % failed.

(R) This is returned when an email to % (% is a placeholder) is fails to be sent to the SMTP server.

Section 4 - Recommended Configurations

I recommend using default settings except where necessary for proper operation.

Section 5 - Installation Instructions

Java: Place javAPRSSrvr.jar, javAPRSEmail.jar, mail.jar, and activation.jar in a folder. Add the jar files to the Java classpath (normally in your command-line).

.NET: Place javAPRSSrvr, javAPRSEmail.dll, Mail.dll, and MailLicense.xml into their own directory. Install javAPRSSrvr per the javAPRSSrvr Users Guide.

Place all of the .txt files into the javAPRSEmail directory. Modify them for your own installation.
Set IGateAdjunct=javAPRSEmail in javaprssrvr.cfg.

Section 6 – Operator Guide

This section describes how users interact with the server.

Send an Email from APRS

Send an APRS message to APRSCall with the email address as the first word in the message text. If no other text is given, an email with a link to your position display will be sent.

```
AE5PL-10>APRS::AE5PL-EM :pete@ae5pl.net This is a test
```

Create an Email Shortcut from APRS

Send an APRS message to APRSCall with the shortcut (single alphanumeric word) and the desired email address separated by a space.

```
AE5PL-10>APRS::AE5PL-EM :me pete@ae5pl.net
```

Delete an Email Shortcut from APRS

Send an APRS message to APRSCall with the shortcut (single alphanumeric word) and the single letter r (case-insensitive) separated by a space.

```
AE5PL-10>APRS::AE5PL-EM :me r
```

List Email Shortcuts via Email from APRS

Send an APRS message to APRSCall with the desired shortcut or email address and the single letter L (case-insensitive) separated by a space. This will send an email to the specified address with all of the sending station's shortcuts and email addresses.

```
AE5PL-10>APRS::AE5PL-EM :me l
```

Send an Email using a Shortcut from APRS

Send an APRS message to APRSCall with the shortcut as the first word in the message text. If no other text is given, an email with a link to your position display will be sent.

```
AE5PL-10>APRS::AE5PL-EM :me This is a test
```

Send an APRS message using an Email

Send an email to the POP3 email address of this server. Place the callsign-ssid of the destination station followed by a colon followed by the message text on the subject line. Place userid:shortcut: in the message body where shortcut is the shortcut name associated with the sender's email address.

```
From: pete@ae5pl.net  
To: aprsemail@ae5pl.net  
Subject: AE5PL-10:This is a test  
userid:me:
```

Note: Shortcuts are related to callsigns only (no SSID's) so "me" in the above examples is a valid shortcut for any AE5PL stations. Every licensee controls its own shortcuts (AE5PL shortcuts are different from W5EJL shortcuts).

Section 7 – Status Page

IGate Adjunct	
javAPRSEmail 3.1b01	Copyright © 2007 - Peter Loveall AE5PL
Email Server Callsign	IGateCall
Messages Received	Messages to IGateCall received
Valid Commands	Valid messages received
Invalid Commands	Invalid messages received
Messages Sent	Messages sent to stations
Total APRS Messages Delivered	Number of sent messages acked
Total APRS Messages Not Delivered	Number of sent messages not acked
Total Emails Sent	Total emails sent to SMTP server
Total Valid Emails Received	Total emails valid for APRS received via POP3
Total Invalid Emails Received	Total emails not valid for APRS received via POP3
Total Shortcuts	Total shortcuts in POP3OkFile
Total Registered Callsigns	Total callsigns in POP3OkFile