



SNPP Implementation

User Guide

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The SNPP protocol is a sequence of commands and replies that is based on the philosophy of many other Internet protocols currently in use. SNPP has several input commands (the first 4 characters of each are significant) that solicit various server responses falling into the following categories:

- 2xx - Successful, continue
- 3xx - Begin DATA input
- 4xx - Failed, with connection terminated
- 5xx - Failed, but continue session

The first character of every server response code is a digit indicating the category of response. The text portion of the response following the code may be altered to suit individual applications.

The session interaction, especially at SNPP level one, is actually quite simple (hence the name). The client initiates the connection with the listening server. Upon opening the connection, the server issues a "220" level message (indicating the willingness of the server to accept SNPP commands).

Level 1 Commands

Level one commands are designed as a minimum implementation of the protocol.

PAGEr <Pager ID>

The PAGEr command submits a pager ID (PID) number, for inclusion in the next messaging transaction and will be validated by the paging terminal. The terminal responds favourably or negatively.

Possible responses from the SNPP server, with suggested text, in response to a PAGEr command are:

- 250 Pager ID Accepted
- 421 Too Many Errors, Goodbye (terminate connection)
- 421 Gateway Service Unavailable (terminate connection)
- 550 Error, Invalid Pager ID
- 554 Error, failed (technical reason)

MESSage <Alpha or Numeric Message>

The MESSage command specifies a single-line message, into the gateway. Limited validation of the message will be done on the SNPP server (such as length). Duplicating the MESSage command before SENDing the message will produce a "503 ERROR, Message Already Entered" message, and allow the user to continue.

Possible responses from the SNPP server, with suggested text, in response to a MESSage command are:

250 Message OK

421 Too Many Errors, Goodbye (terminate connection)
421 Gateway Service Unavailable (terminate connection)
503 ERROR, Message Already Entered
550 ERROR, Invalid Message
554 Error, failed (technical reason)

RESEt

The RESEt command clears already entered information from the server session, resetting it to the state of a freshly opened connection. This is provided, primarily, as a means to reset accidentally entered information during a manual session.

Possible responses from the SNPP server, with suggested text, in response to a RESEt command are:

250 RESET OK

421 Too Many Errors, Goodbye (terminate connection)
421 Gateway Service Unavailable (terminate connection)

SEND

The SEND command finalizes the current message transaction, and processes the page to the paging terminal. Possible responses from the SNPP server, with suggested text, in response to a SEND command are:

250 Message Sent Successfully
421 Too Many Errors, Goodbye (terminate connection)
421 Gateway Service Unavailable (terminate connection)
503 Error, Pager ID or Message Incomplete
554 Message Failed [non-administrative reason]

Or, in the case of an illegal or non-existent pager ID, or some other administrative reason for rejecting the page, the server should respond:

550 Failed, Illegal Pager ID (or other explanation)

After processing a SEND command, the server will remain on line to allow the client to submit another transaction.

QUIT

The QUIT command terminates the current session. The server will simply respond:

221 OK, Goodbye

The connection will then be closed.

HELP (optional)

The optional HELP command displays a screen of information about commands that are valid on the SNPP server. This is primarily to assist manual users of the gateway. Each line of the HELP screen responses) are preceded by a code "214". At the end of the HELP sequence, a "250" series message is issued.

Possible responses from the SNPP server, with suggested text, in response to a HELP command are:

214 [Help Text] (repeated for each line of information)
250 End of Help Information
421 Too Many Errors, Goodbye (terminate connection)
421 Gateway Service Unavailable (terminate connection)
500 Command Not Implemented

Level 2 - Optional Extensions

The LOGIN command is the only optional command used.

LOGIN <loginid> [password]

This command allows for a session login ID to be specified. It is used to validate the person/system sending the message. Possible responses from the SNPP server, with suggested text, in response to a LOGIN command are

250 Login Accepted
421 Too Many Errors, Goodbye (terminate connection)
421 Gateway Service Unavailable (terminate connection)
421 Illegal Access Attempt
550 Error, Invalid LoginID or Password
554 Error, failed (technical reason)

Example Session

Client		Server
Open connection	→	
		← 220 cage3 v8.06 SNPP server ready at Fri Sep 24 08:57:57 2004
LOGI mantap	→	
PAGE 929457	→	← 250 Login Accepted
		← 250 Pager ID Accepted
MESS test message	→	
		← 250 Login Accepted
SEND	→	
		← 250 Message sent successfully
QUIT	→	
		← 221 OK, goodbye

Further SNPP responses

SNPP response:

[250 Message sent successfully](#)

Explanation:

Message sent successfully.

SNPP response:

[250 Message sent, but truncated](#)

Explanation:

Message exceeding maximum character limit

SNPP response:

[250 Last message sent successfully, goodbye](#)

Explanation:

Upon reaching the maximum messages per connection

SNPP response:

[554 Message Limit Exceeded](#)

Explanation:

Upon attempting to send to a unit, which has exceeded its messages in a defined time (default 1 hour) or exceeding messages from a specified source address

SNPP response:

[550 Error, Inactive Subscriber](#)

Explanation:

Sending to an inactive unit

SNPP response:

[554 Invalid Subscriber](#)

Explanation:

Sending to an unknown unit (not present on Critico database)

SNPP response:

[550 Error, Invalid login](#)

Explanation:

Sending an invalid password

SNPP response:

[421 Timeout, goodbye](#)

Explanation:

Session timed out

SNPP response:

[554 Blacklisted Subscriber](#)

Explanation:

Upon sending a message to a unit which has exceeded specified character limits

SNPP response:

[550 Message failed, soft grouping](#)

Explanation:

Sending too many repeated messages