Category: Secure Communication

# **Short Message Protocol – SMP**

## Abstract

The Short Message Protocol (SMP) is a protocol to facilitate the secure saving and retrieval of short messages on a server, accessed via secure log-on based on a set of whitelisted user credentials.

## 1. Introduction

### 1.1 Purpose

Asdf

### 1.2 Terminology

## 2. Functionality

### 2.1 Log-on

System log-on should be facilitated by verifying username and password combinations, transferred to the server for authentication using SSL. Usernames and passwords should be a maximum of 256 bytes each. Only valid ASCII characters should be permitted. The following is an example log-on request in plain text. The maximum size of a LOGON request message is 519 bytes. 5 bytes are allocated to the LOGON prefix, 1 byte allocated to the following space, 256 bytes maximum for the username, 1 byte allocated to the following space, and finally 256 bytes maximum for the password.

LOGON UsernameDemonstration PasswordDemonstration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **5 Bytes** | **1 Byte** | **256 Bytes** | **1 Byte** | **256 Bytes** |
| LOGON | Blank space (ASCII 255) | Username | Blank space (ASCII 255) | Password |

After the LOGON bytes have been read, the server should recognize that it is a log-on message, if the messages total number of bytes exceeds 519 the message should be discarded without authentication being performed and the response “ERR01 – INVALID MESSAGE FORMAT” should be sent.

#### 2.1.1 Error Table

|  |  |  |
| --- | --- | --- |
| **Code** | **Error Message** | **Description** |
| 01 | ERR01 – INVALID AUTH FORMAT | Returned when a request is detected as being of type LOGON, but the message contains a greater number of bytes (>519) than is permitted. |
| 02 | ERR02 – WRONG USERNAME/PASSWORD | Returned when user authentication fails due to an invalid username/password combination. |

### 2.2 Short Message Upload

Messages upload via SMP are facilitated by the MSGUP command. A message upload packet should not exceed 1024 bytes, 6 of which are reserved for MSGUP and a following space.

|  |  |  |
| --- | --- | --- |
| **5 Bytes** | **1 Byte** | **1018 Bytes** |
| MSGUP | Blank space (ASCII 255) | Message Content |

#### 2.2.1 Error Table

|  |  |  |
| --- | --- | --- |
| **Code** | **Error Message** | **Description** |
| 03 | ERR03 – INVALID MESSAGE FORMAT | Returned when a request is detected as being of type MSGUP, but the request is greater than 1024 bytes in size. |
| 04 | ERR04 – NO MESSAGE | Returned when an MSGUP request does not contain message content. |

### 2.3 Message Download

Message download is facilitated by the MSGDL command. The MSGDL command is not accompanied by any other arguments and is 5 bytes in length.

|  |
| --- |
| **5 Bytes** |
| MSGDL |

#### 2.3.1 Error Table

|  |  |  |
| --- | --- | --- |
| **Code** | **Error Message** | **Description** |
| 05 | ERR05 – NO MESSAGES STORED | Returned when the logged-in user has no messages saved to the server. |

### 2.4 Log-off

System log-off is facilitated through the LGOFF command. The MSGDL command is not accompanied by any other arguments and is 5 bytes is length.

|  |
| --- |
| **5 Bytes** |
| MSGDL |

#### 2.3.1 Error Table

SMP does not have any Log-off specific errors, failure to log-off due to not being signed in is facilitated by protocol-wide error handling.

### 2.5 Protocol-Wide Error Handling

|  |  |  |
| --- | --- | --- |
| **Code** | **Error Message** | **Description** |
| 07 | ERR07 – INVALID COMMAND LENGTH | Returned when the first 6 bytes of a message are not 5 characters of any type plus a blank space. |