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Approved	Checked	Date	Rev	Reference
ETH/XZRC (Roland Gecse)		2010-12-09	PA2	GASK2

SMTP Protocol Modules for TTCN-3 Toolset with TITAN, Function Specification

Contents

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1 Introduction

1.1 Revision history

Date	Rev	Characteristics	Prepared
2008-07-01	PA1	First draft version	ETHGASZ
2010-12-09	PA2	utf8 support added	ETHGASZ

1.2 How to Read this Document

This is the Function Specification for the SMTP protocol module. SMTP protocol module is developed for the TTCN-3 Toolset with TITAN. This document should be read together with Product Revision Information [4].

1.3 Scope

The purpose of this document is to specify the content of the SMTP protocol modules.

1.4 References

[1]   RFC 821 - Simple Mail Transfer Protocol

[2]   RFC 822 - Standard for the Format of ARPA Internet Text Messages

[3]   ETSI ES 201 873-1 v.2.2.1 (02/2003)
      The Testing and Test Control Notation version 3. Part 1: Core
      Language

[4]   109 21-CNL 113 598-1 Uen
      SMTP Protocol Modules for TTCN-3 Toolset with TITAN, Product
      Revision Information

[5]   1/1553-CRL 113 200 Uen
      User Documentation for the TITAN TTCN-3 Test Executor

[6]   RFC 2821 - Simple Mail Transfer Protocol

[7]   RFC 2822 - Internet Message Format

1.5 Abbreviations

SMTP   Simple Mail Transfer Protocol

TTCN-3   Testing and Test Control Notation version 3

1.6 Terminology

No specific terminology is used.

2 General

Protocol modules implement the message structures of the related protocol in a formalized way, using the standard specification language TTCN-3. This allows defining of test data (templates) in the TTCN-3 language [3] and correctly encoding/decoding messages when executing test suites using the Titan TTCN-3 test environment.

Protocol module is using Titan's TEXT encoding attributes [5] and hence is usable with the Titan test toolset only.

3 Functional specification

3.1 Protocol version implemented

This set of protocol modules implements protocol messages and constants of the SMTP protocol (see [1]) and the ARPA Internet Text Messages (see [2]) with the modifications specified in 3.2.

3.2 Modifications/deviations related to the protocol specification

3.2.1 Implemented Messages

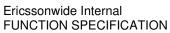All of the SMTP commands, replies and message headers defined in [1] are implemented.

Only the following message header fields implemented from [2]:

- Date
- From
- To
- Cc
- Bcc
- Sender
- Subject

Any other header fields are treated as Unknown_Header.

3.2.2 Protocol Modifications/Deviations

The type structure has been based on [2] and [1], but the protocol module is able to handle the messages which are coded according to the newest version of the standards. See [6] and [7]

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3.3 Encoding/Decoding Functions

This product also contains encoding/decoding functions which assure correct encoding of messages when sent from Titan and correct decoding of messages when received by Titan. Implemented encoding/decoding functions:

Name Type of formal parameters	Type of return value
enc_SMTP_PDU(in SMTP_PDU pdu)	return charstring
dec_SMTP_PDU(in charstring stream)	return SMTP_PDU
enc_Mail_PDU(in Mail_PDU pdu)	return charstring
dec_Mail_PDU(in charstring stream)	return Mail_PDU
enc_Mail_PDU_utf8(in Mail_PDU_utf8 pdu)	return octetstring
dec_Mail_PDU_utf8 (in octetstring stream)	return Mail_PDU_utf8

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