

# Common Protocol module elements for TTCN-3 Toolset with TITAN

Eduárd Czimbalmos

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# Functionality

The COMMON Protocol module elements contains definitions in a formalized way, using the standard specification language TTCN-3. This allows to use these definitions in testports, protocol modules, libraries and applications.

The protocol module uses Titan's RAW encoding attributes [\[3\]](#) and hence is usable with the Titan test toolset only.

## Implemented Protocols

None.

## Modified and Non-Implemented Protocol Elements

None.

## Ericsson-Specific Changes

None.

## Backward Incompatibilities

None.

## System Requirements

Protocol modules are a set of TTCN-3 source code files that can be used as part of TTCN-3 test suites only. Hence, protocol modules alone do not put specific requirements on the system used. However, in order to compile and execute a TTCN-3 test suite using the set of protocol modules the following system requirements must be satisfied:

- Titan TTCN-3 Test Executor version CRL 113 200 R7A (1.7.pl0) or higher installed. For Installation Guide see [\[2\]](#).

### NOTE

This version of the test port is not compatible with Titan releases earlier than CRL 113 200 R7A.

## Usage

# Installation

The set of protocol modules can be used in developing TTCN-3 test suites using any text editor; however, to make the work more efficient a TTCN3enabled text editor is recommended (for example `nedit`, `xemacs`). Since the GTPv2 PrivateExtensions protocol is used as a part of a TTCN-3 test suite, this requires TTCN-3 Test Executor be installed before the module can be compiled and executed together with other parts of the test suite. For more details on the installation of TTCN-3 Test Executor see the relevant section of [\[2\]](#).

# Configuration

None.

# Examples

None.

# Interface description

None.

# Change information

## R7A

`record of` and `set of` type definitions have been added to the `General_Types` module in order to give type compatibility within TTCN-3 source codes.

# Terminology

None.

# Abbreviations

## TTCN-3

Testing and Test Control Notation version 3

# References

[1] ETSI ES 201 873-1 v4.5.1 (2013-04)

The Testing and Test Control Notation version 3. Part 1: Core Language

[2] User Guide for TITAN TTCN-3 Test Executor

[3] Programmer's Technical Reference for Titan TTCN-3 Test Executor