

Spectra TCAP Generator

From Inet Technologies, Inc.



SPECTRA TCAP GENERATOR

The Transaction Capabilities Application Part (TCAP) Generator mode is used to perform Signalling Control Point (SCP) benchmark tests to evaluate SCP node performance. It can also be used to test the loading capacities of Signalling Transfer Points (STPs) under various conditions with or without Global Title Translations (GTT) capabilities. The TCAP Generator mode generates user-specified TCAP messages to simulate up to ten different applications from up to four signalling points, STPs, or a combination of signalling points and STPs—even signalling points and STPs with different protocols. Messages are generated based on user-defined databases in which you specify loading percentages.

The TCAP Generator mode also supports Signalling Connection Control Part (SCCP) connection oriented messages. This feature allows testing of Mobile Application Part (MAP), BSSMAP, and Direct Transfer Application Part (DTAP) messages over BSC- MSC interface (or A interface).

SUPPORTED PROTOCOLS

The TCAP Generator mode can generate messages for the following protocols:

- ANSI
- BLUE
- CHINA
- WHITE

- JAPAN 4-BIT
- JAPAN 9-BIT

USING TCAP GENERATOR

The TCAP Generator mode can run and complete from 1 to 60 individually defined intervals or it can repeat intervals 1 to 60 continuously until you stop it. You can determine the interval duration and number of calls generated per second for each interval. Each interval can range from 1 second to 10,000 seconds. Maximum call load for incoming and outgoing calls combined is 1,000 calls per second. During the interval, calls are generated randomly from test scripts you create—up to ten for each SP/STP.

Numbers (for example, telephone, credit card, PINs) are also generated either randomly or sequentially from databases and substituted in outgoing messages as defined in the scripts. Incoming transactions are handled by a random selection from up to four terminating end scripts for each SP/STP.

The TCAP Generator mode's flexibility allows you to simulate sudden traffic surges, busy hour traffic, or induce dual seizures. The TCAP Generator supports Connectionless and Connection-oriented test scripts. The Spectra system is capable of generating 100 percent load on each of its 16 links. The combined octet size of an application determines the generation capacity.

TCAP GENERATOR STATISTICS

The TCAP statistics screens display results of communication transactions from TCAP Generator mode test scenarios.

The **TCAP Call Processing Statistics** screen displays information regarding TCAP call processing, including average transaction time, UDTs received, and unidirectional message counts. The statistics shown in this screen are accumulated according to user-specific assignments.

The **TCAP Traffic Mix Statistics** screen displays information regarding the number and types of TCAP transactions processed for selected point codes, including transmitted and received invokes and aborts.

The **TCAP Operation Codes Statistics** screen displays information regarding operation specifiers defined for operation codes contained in messages. SS7 operation codes and statistics can be viewed for ANSI, ITU-T BLUE, ITU-T WHITE, and CHINA protocols.

The **TCAP Response Time Statistics** screen provides a graph representation of average response times for each interval of a test, including the maximum, minimum, and average response times of all transactions in milliseconds.

The **TCAP Stopwatch Statistics** screen displays information regarding the number of timer pairs (assigned in the TCAP scripts) encountered when traffic models are executed. Stopwatch statistics are used to determine precisely how much time has elapsed between two points within a given script. This information is broken down into associated individual point code columns.

The **TCAP Timeout Counters Statistics** screen displays information regarding the number of trigger timeouts encountered when traffic models are executed. Timeout statistics can be used to determine precisely how often and at what rate Trigger messages are responding to certain Transmit messages. This information is broken down into associated individual point code columns, but the totals per script can be displayed if desired.



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