

# Effnet HC-SIM™

Tests and simulates ensuring quality

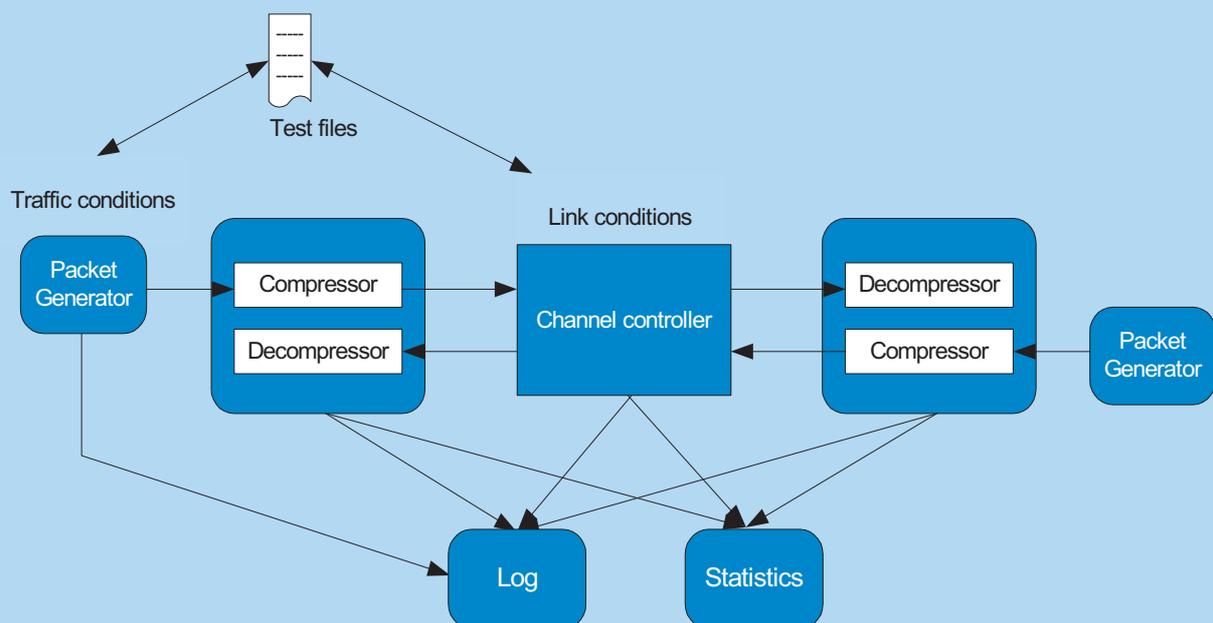
- ◆ Unique test specification language
- ◆ Comprehensive test suite with a wide range of test cases
- ◆ Internal packet generator which can handle up to 100 different flows at a time
- ◆ Support for external packet source and delivery to external destination
- ◆ Extensive logging of packets, events and statistics
- ◆ Simulating various link layer conditions such as delays, bit errors and losses etc
- ◆ Playback of test cases for debugging purposes
- ◆ Runs in one- or two-machine modes
- ◆ Modular architecture with easy plug-in of header compression schemes
- ◆ Multi-platform support including FreeBSD, Solaris, Linux and Windows (XP and 2000)

Header compression is an effective technology to improve performance and link efficiency of IP based networks. Header compression schemes are designed for compressing a range of protocol headers such as TCP, UDP, RTP, ESP, IP etc over a variety of network links such as satellite, cellular, dial-up etc. All the header compression schemes include a protocol for communication between the compressor and the decompressor, the two most important entities of the header compression scheme. It is extremely important to be able to simulate various operating conditions to test the protocol, features and functionality of the header compression scheme during the development and testing phase, which also includes interoperability and field tests.

The two most important sets of conditions are traffic patterns and link conditions between the compressor and the decompressor. The traffic patterns include packet headers whose information varies depending on source and destination, application behaviour, operating system features and reordering of the packets, because of the different network paths taken before reaching the compressor. The traffic patterns are also affected by packet arrival time variations, bit errors and losses before the compressor. The link conditions include bit error rate, round trip times, bandwidth and channels etc. that influence the header compression scheme workings as well as protocol design.

Effnet HC-Sim™ (Effnet Header Compression Simulator) is a tool for testing header compression schemes. Effnet HC-Sim™ is a multi-platform highly modular tool, which can not only simulate traffic and link conditions but also provide an extensive logging and statistics generation capability.

## The modular architecture of Effnet HC-Sim™ :



Effnet HC-Sim™ is available in the following three customized versions:

- Effnet HC-Sim™ for ROHC
- Effnet HC-Sim™ for IPHC
- Effnet HC-Sim™ for CRTP

#### An example of header compression by Effnet ROHC™ :



#### An example of header compression by Effnet IPHC™ :



#### An example of header compression by Effnet CRTP™ :



These customized versions have been specially tailored to suit the header compression scheme they support. The major differences are in channel architecture and the compressor and decompressor modules of the supported header compression scheme. A graphical user interface will also be available shortly for all three versions. The interface will present graphs with real-time events and statistical information.

## Support

Effnet products are offered with a full range of support services, including problem reporting, bug fixes, updates, training, consulting and integration services.

For more information about header compression and Effnet HC-Sim™, see our library of white papers and data sheets at [www.effnet.com](http://www.effnet.com)

### About Effnet AB

Since its beginnings in 1997, Effnet has been involved in research and development of technologies that improve the performance and efficiency of IP based networks. The Effnet Header Compression product family saves bandwidth and improves quality of service. Effnet is the leading independent provider of header compression products and is committed to continue to provide leading edge IP technology.

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