

Access all of PacketExpert™ Functionalities with API and CLI

TCL (Tool Command Language) and MAPS™ CLI Client/Server Architecture

Simple Scripting Languages

Configure and Control Test Systems Remotely

Test Automation and Remote Access

Event Driven MAPS™ CLI Server & TCL Scripts

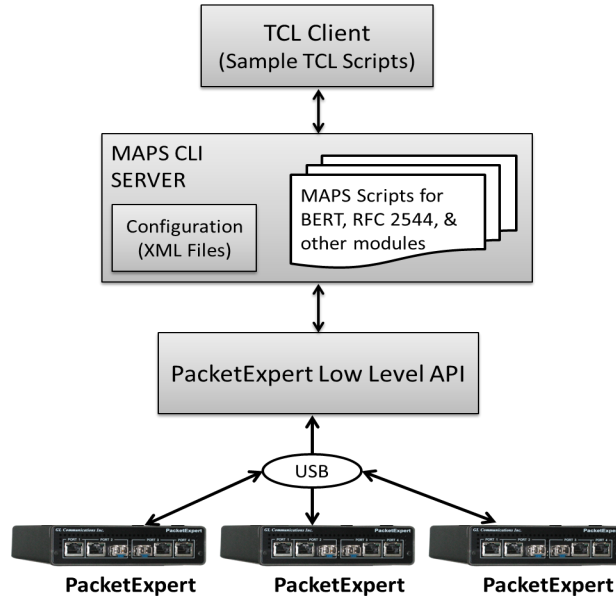
BERT, RFC 2544, Loopback, Record Playback, IPLinkSim™, PacketBroker, ExpertSAM, & Multi-Stream Traffic Generator and Analyzer

WAN Emulation - IPNetSim™

Wirespeed Record-Playback on GigE Lines

Test IP, UDP, MPLS, VLAN, Q-in-Q Systems

Automated GigE Network Testing using PacketExpert™ - MAPS™ CLI Architecture



Overview

Along with user friendly GUI, **PacketExpert™** provides **APIs** and through **CLI** (Command Line Interface) to remote control all the functionalities such as Bert, Loopback, RFC 2544, Record Playback, IPLinkSim™, ExpertSAM, and PacketBroker using TCL (Tool Command Language) and [MAPS™ CLI Client/Server](#) architecture.

PacketExpert™ has variety of clients built in, including .NET client and CLI text based client. The .NET Client calls the PacketExpert™ .NET APIs and controls various aspects of the test in detail. Similarly, the CLI client allows issuing text commands directly to the PacketExpert™ CLI application, thereby controlling the test.

PacketExpert™ also supports clients like TCL or Python using which users can control all functionalities of PacketExpert™. The TCL scripting interface is implemented as a client server model. The server is the MAPS™ CLI server, which interfaces with the PacketExpert™ hardware through the USB. The client consists of a TCL shell, extended by GL's proprietary dll, which allows user to control the MAPS™ CLI server, issue commands and get back results.

With support for variety of PacketExpert™ API and CLI interfaces, it is possible to achieve network wide automation for testing Ethernet and WAN networks.

For more information, visit <http://www.gl.com/packetexpert-cli-testing.html>.

Main Features

- Supports Bert, Loopback, RFC 2544, Record Playback, IPLinkSim™, ExpertSAM, PacketBroker, and Multi-Stream Traffic Generator and Analyzer functionalities.
- PacketExpert™ CLI offers complete Lab Management, Device Provisioning and Test Automation solutions.
- A unified solution for advanced testing with intuitive drag and drop user interface.
- Capability of remote operation, automation and multi-site connectivity using TCL client and MAPS™ CLI server.
- Multiple PacketExpert™ can be controlled remotely from single client application via MAPS™ CLI server.
- Support for a wide range of test setups, interfaces, protocols, and script languages.
- TCL or Python client access through MAPS™ CLI Server.
- Scripts for MAC, VLAN, MPLS, IP and UDP layers testing
- Remote monitoring capability.
- All script commands are simple and self-explanatory.



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Working Principle - MAPS™ CLI

This application consists of 3 functional modules.

- **TCL Client** – Acts as User Interface (Tclsh85.exe) which executes TCL Scripts. TCL script instructs the CLI-server to run the particular script to perform the specific test like BERT/RFC 2544.
- **MAPS™ TCL Interface (MAPS Client IFC)** – acts as an interface between MAPS™ CLI Server and its client TCL. The MAPS™ TCL Client application includes a MapsClientIfc.dll file, a packaged library that enables communication with the MAPS™ Server from a TCL environment.
- **MAPS™ CLI Server** – is an executable which inherits all features of MAPS™ GUI. MAPS™ CLI Server is a scripting based framework which controls the PacketExpert™ hardware using proprietary MAPS™ scripts.

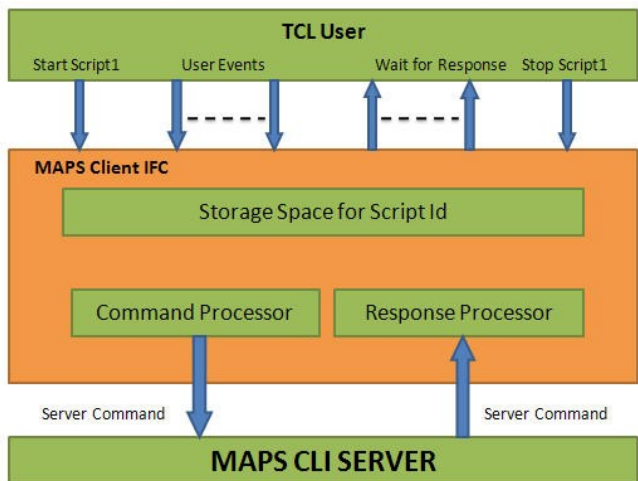


Figure: MAPS™ CLI Working Principle

Buyer's Guide

- [PX100](#) - PacketExpert™ 1G
- [PX104](#) - PacketExpert™ - SA (4 ports) 1G
- [PX112](#) - PacketExpert™ - SA (12 Ports) 1G
- [PX124](#) - PacketExpert™ - SA (24 Ports) 1G
- [IPN110](#) - IPLinkSim™ WAN Link Emulator (1 Gbps, 2 active ports)
- [PX105](#) - Wire-speed Record/Playback 1G
- [PX106](#) - ExpertSAM 1G
- [PX107](#) - PacketBroker 1G
- [PX108](#) - Multi-Stream Traffic Generator and Analyzer

For complete list, refer to <http://www.gl.com/optical-and-ethernet-testing-packetexpert.html> webpage.

TCL Client and Scripting

PacketExpert™ can be configured as server-side application using the GL's MAPS™ Client-Server architecture, to provide the capability of remote operation, automation, and multi-site connectivity, using any client-side scripting tools such as the Python, and TCL (Tool Command Language). On the client side, a TCL extension dll is provided. This dll enhances the standard TCL shell (tclsh85.exe) with PacketExpert™ specific functionalities that can be used to communicate with the MAPS™ CLI Server, execute scripts, read back responses etc.

The MAPS™ CLI server interfaces with the PacketExpert™ hardware through the USB. The MAPS™ CLI Server developed specifically for PacketExpert™ runs .gls scripts that can talk to PacketExpert™ hardware. It includes XML files which contain the configuration information required for the test such as MAC Addresses, IP Addresses, BERT parameters, RFC 2544 parameters, and others, which are created using a Profile Editor. The advantage of such communication enables user to control PacketExpert™ by sending commands and receiving responses in a scripting language such as TCL that is already familiar with many users.

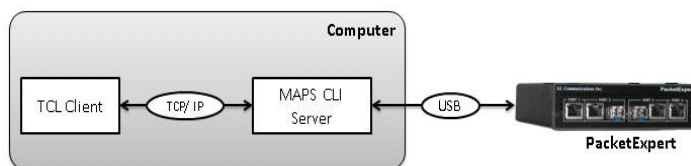


Figure: TCL Client Interface—Architecture

The following screens depicts the TCL script being executed and the MAPS CLI commands in the server window.

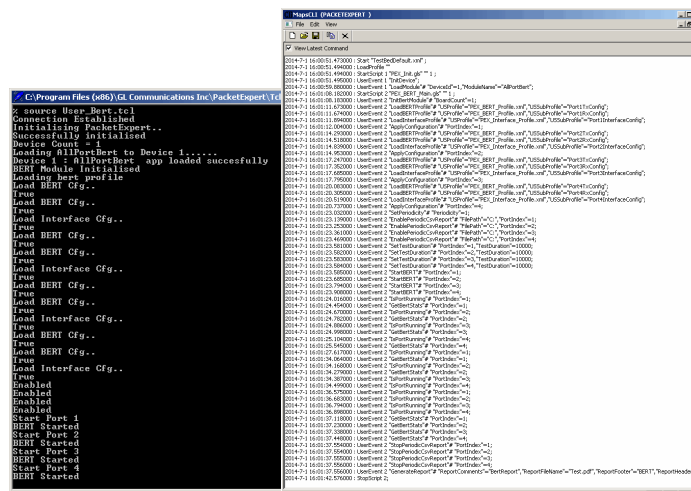


Figure: A sample CLI Server script (PEX_BERT_Main.gls) and TCL script (User_Bert.tcl)



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