ValkyrieManager™

Layer 2-3 Management Software

Xena ValkyrieManager is a free Windows-based application used for managing Xena's Layer 2-3 Gigabit Ethernet test solutions. The user-friendly interface makes it an effective tool for performing a wide range of core test scenarios for network equipment manufacturers (NEMs), network service providers, research organizations, enterprise, government and conformance testers.

Core functions

ValkyrieManager is used to configure and generate streams of Ethernet traffic between Xena test equipment and devices under test (DUTs) at all speeds up 400Gbps, and analyze the results.
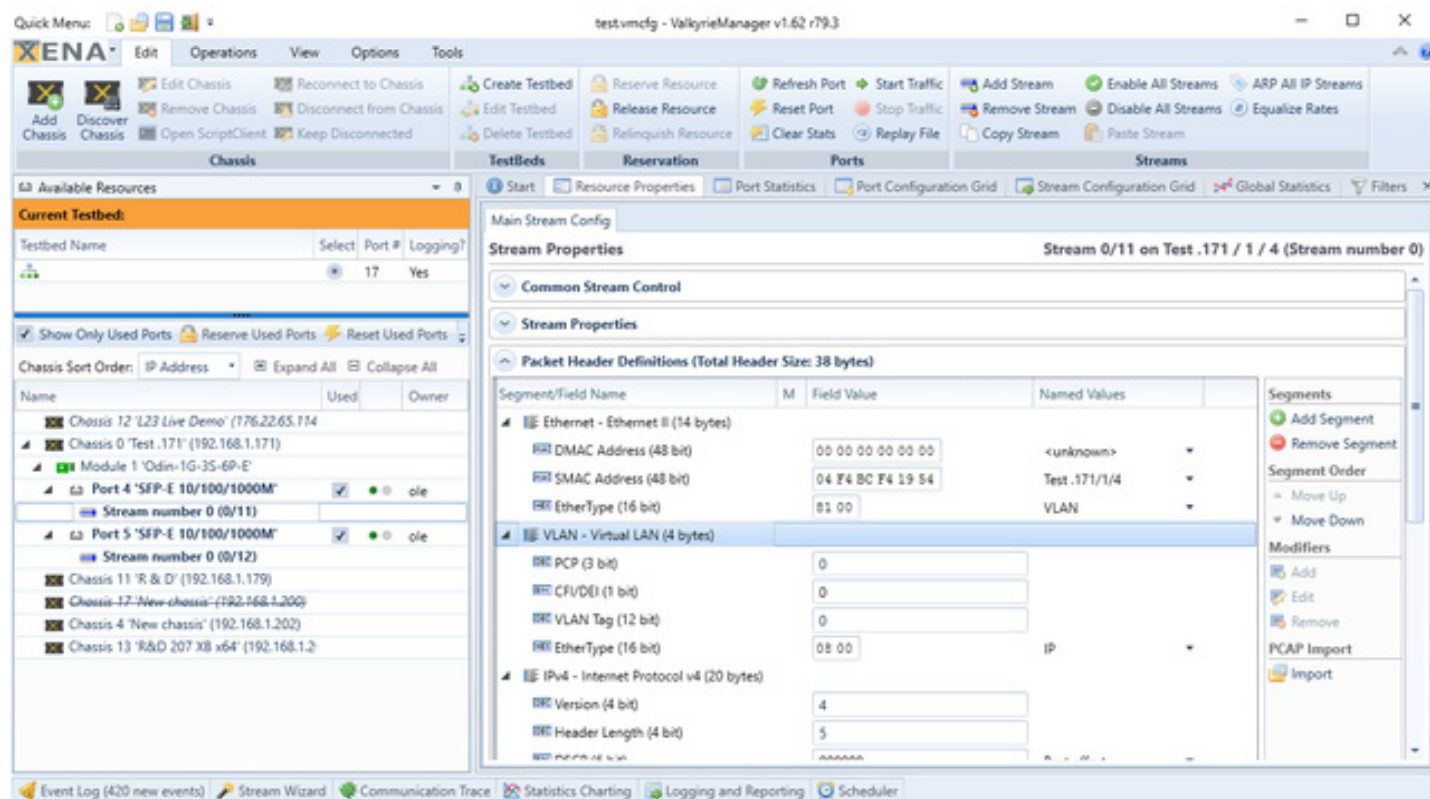
The port and stream configuration grids let test engineers quickly view and work with a numerous ports and streams simultaneously. The traffic streams can be shaped to match very specific real-world scenarios using a wide range of variables. The packet editor function supports both protocol (IP, VLAN, UDP, etc.) and byte-level packet definitions, and the packet capture function can also automatically decode the packet content at the protocol level.

ValkyrieManager also makes it easy to quickly view and analyze traffic statistics, payload errors, latency and jitter. set up specific filters for incoming traffic, and perform real-time capture of packets.

ValkyrieManager offers many ways to streamline testing. These range from being able to copy and paste stream definitions across ports quickly customizing the GUI to match the test engineers' needs by e.g. letting them hide irrelevant controls etc so they can better focus on the task they are currently performing.

Once test-beds and test cases have been configured, they can be saved and shared with other users. ValkyrieManager can be used by multiple users in different locations to manage multiple Xena chassis simultaneously.
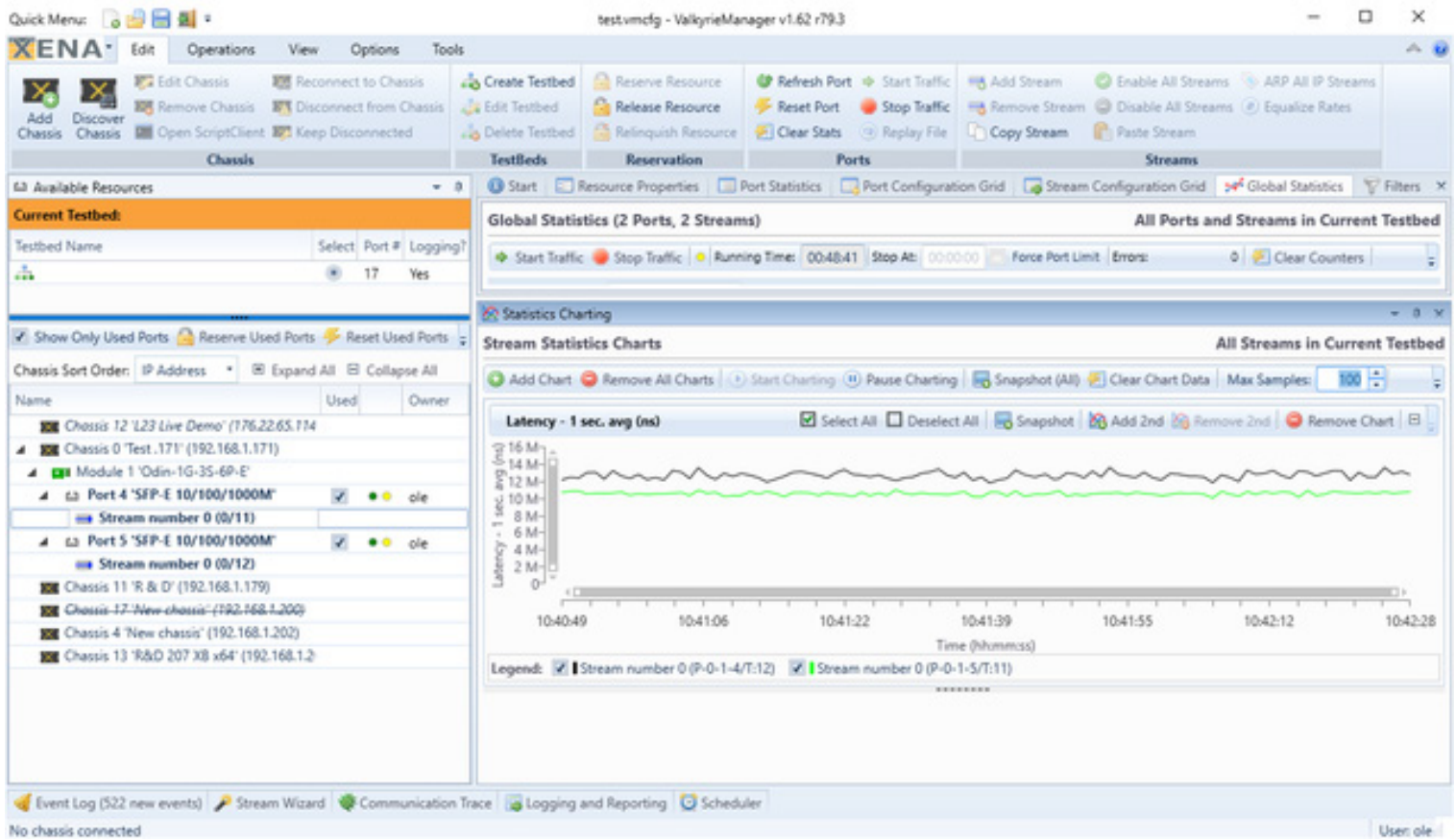
TOP FEATURES

- Stateless Layer 2-3 traffic generation and analysis
- Ideal for functional and performance testing of 1/2.5/5/10/25/40/50/100/200/400 GigE
- Easy management of ports and traffic streams shaped to match any real-world scenario
- Packet editor with support for both protocol and byte-level packet definitions
- Automatic protocol decoding of incoming packets
- Supports multiple Xena chassis shared by multiple users in different locations down to the port level via TCP/IP
- Supplied free with every Xena chassis, together with 3 years' free SW upgrades
- Comes bundled with a growing range of value-add test apps including ValkyrieCLI, Valkyrie2544, Valkyrie1564, Valkyrie2889, and Valkyrie3918

Below: This screen shows the stream properties layout and packet header editor.

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Above: This screen shows a stream statistics chart where the latencies of two streams are displayed in realtime.

Designed to make testing easier

Xena ValkyrieManager optimizes testing work flow:

- Docking function lets you quickly customize your work area
- You can create, define and change testbeds very quickly
- A condensed grid view makes it easy to configure ports and streams
- Streams are part of the resource treeview under each port
- Option for copying and pasting stream definitions across ports
- Option for previewing packets which will be transmitted by a stream
- Select and activate multiple resources e.g. reserve/release, start/stop traffic, etc.
- Graphically plot various stream statistics values in realtime

Wide range of applications

- Evaluate the stability of switches, routers and edge devices under static or dynamic load conditions for minutes, hours and days
- Identify and troubleshoot functional behavior (including negative testing) of new network functionality in the development lab or before deployment into the operational network
- Evaluate key performance parameters such as per-flow QoS, fail-over time or Access Control Lists (ACL); filtering performance
- Perform comparative analysis of devices or services with deterministic traffic during product development cycles or vendor comparisons
- Can be used with ValkyrieCLI for fast, effective test automation
- Can be supplemented with Veryx ATTEST(*) for effective conformance testing

*(* must be purchased separately)*

Bundled Software

More advanced test scenarios can be conducted using other free applications that come bundled with ValkyrieManager.

Valkyrie2544, Valkyrie3918, Valkyrie2889 and Valkyrie1564 are free applications developed by Xena Networks for performing RFC2544, RFC3918, RFC2889 and Y.1564 testing.

Also included is ValkyrieCLI – a powerful and easy-to-use command-line-interface (CLI) scripting API that makes test automation easier for test engineers. Script examples of Tcl, Perl, Java, Ruby, BASH and Python are available on our website.

ValkyrieManager also makes it easy to upgrade software and firmware on Xena test chassis without a direct physical connection.

Detailed documentation of all functionalities is available online and Xena offers web-based training for customers as part of our free technical support service.
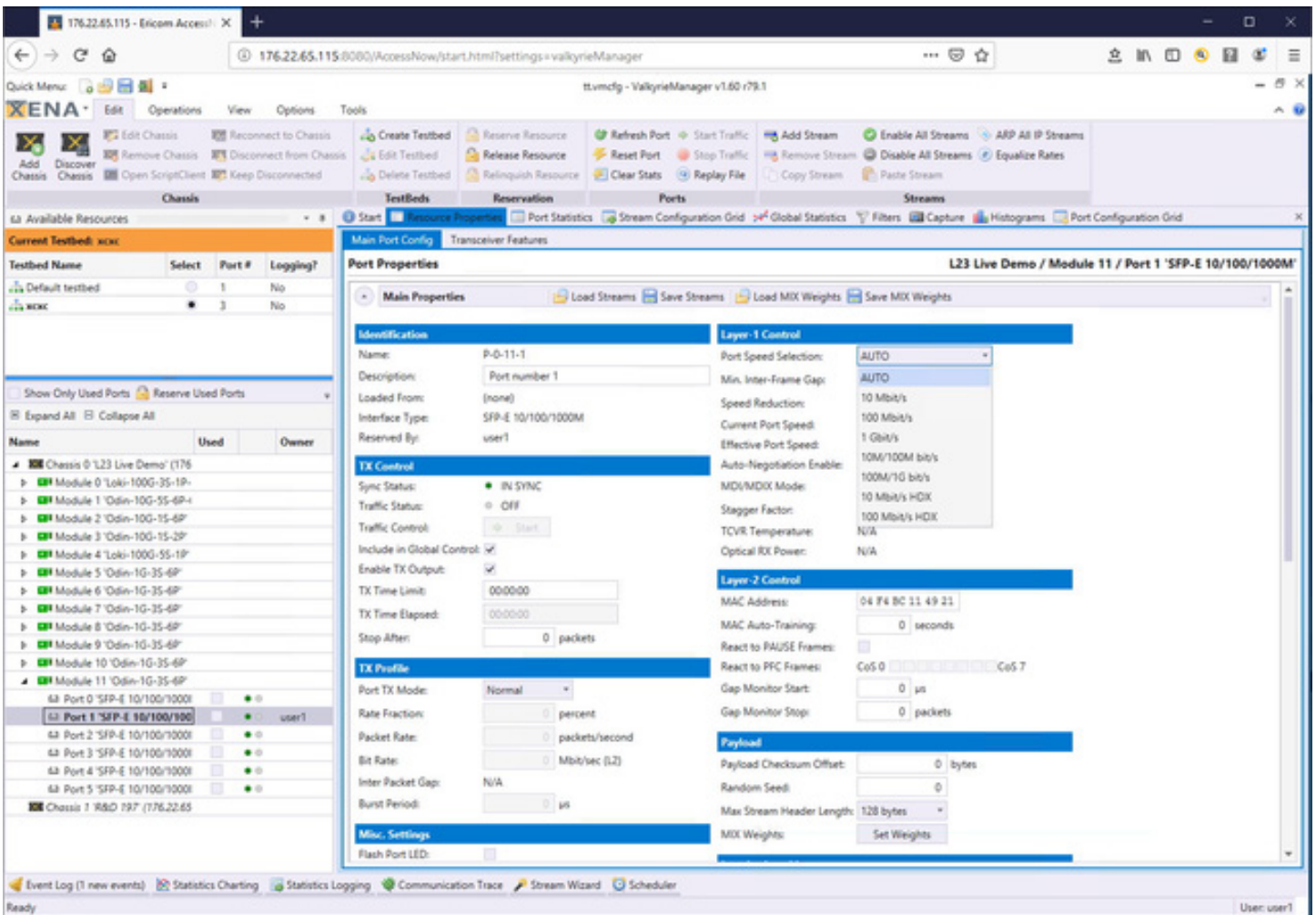
You can also access ValkyrieManager via any HTML5-enabled browser using Phantom. This effectively makes the application OS- and device-independent. (Phantom is a small standalone "mini" server - see website for details.)

BASIC WORK FLOW

1. Launch ValkyrieManager
2. Connect to one or more Xena chassis via IP address.
3. Reserve the ports on the test modules you want to use.
4. Configure the ports (e.g. minimum IFG, MAC Address, Mac training, enable flow control, gap monitoring, payload checksum, max. stream header, loopback mode, latency offset, configure IPv4 address for ARP and PING requests)
5. Add and configure the traffic streams. This can include a unique stream ID for identifying latency, jitter and packet loss; when to start, stop and register the stream; the burst rate, error injection, frame checksums, types of packet length, and the payload type.
6. Define flows of traffic based on e.g. source and destination MAC and VLANs (ValkyrieManager can support **over 4 billion** flows).

7. Define filters to get statistics on specific types of packets, content or packet sizes, or to trigger the capture mechanism or focus Histogram results.
8. Create triggers for when the capture function should start/stop and what should be captured e.g. FCS or payload error frames etc. You can also save the capture buffer as a PCAP file for analysis in e.g. Wireshark.
9. Once the traffic is started view the results in the capture graph or use histograms to plot distributions of values over time.
10. View detailed summaries of all this data via the Global Statistics or analyze port, packet and service issues in the Event Log lists.

Xena Networks is an award-winning manufacturer of advanced Gigabit Ethernet test and measurement solutions.

Miniumum System Requirements:
- ValkyrieManager (approx. 30MB) can be installed on PCs running MS Windows XP or newer (no licenses req'd)
- Microsoft .NET version 4.0 is required

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