Renix

Renix is L2-3 testing software developed by Xinertel. Together with Xinertel chassis and test modules, Renix can perform protocol simulation, traffic and performance test.

With the continuous evolution of the communication network, the software and hardware architecture of network equipment is increasingly complex, the protocols supported by network equipment are more abundant, and the scale of network traffic on the Internet is rapidly expanding. In addition to the characteristics of 5G, such as ultra-high bandwidth, massive connections, low latency, and ultra reliability, higher requirements are put forward for the network tester.

As a professional provider of L2–3 testing solutions, Xinertai has launched a new-generation testing software platform—Renix, designed to meet the complex testing requirements faced by major network equipment manufacturers, telecom operators, and data centers. The new Renix platform delivers significant improvements in usability, functionality, and scalability.

Key Features

- Unified L2-3 test platform
- Ease of use design
- Port speed ranges from 10M to 400GE
- Powerful traffic configuration function
- Efficient configuration wizard
- Built-inpacket capture and analysis capabilities
- Comprehensive and professional statistical views
- Convenient Smart scripter function
- Customized test report and result analysis system
- Support Tcl and Python API

Platform Advantages

- **Ease of use**

Renix deeply optimizes the test operation process, functional module settings, configuration item function settings, etc., provides a more professional configuration interface, and provides users with a configuration process that is more in line with their habits based on the ribbon menu operation method and more convenient multi-interface navigation. At the same time, the new protocol simulation configuration wizard effectively reduces the complexity of protocol simulation configuration and greatly improves configuration efficiency. In addition, detailed help documents and convenient log query functions provide new users with Hand use provides more convenience.

- **Functionality**

Renix offers offline configuration functionality for test items, allowing users to view test results and manipulate protocols during software operation, while also recording operation history. The platform's features, such as traffic capture, filtering, analysis, and protocol parameter validation, are highly powerful. For example, customizable flow templates, configurable queries and grouping based on settings and statistics, provide users with more advanced traffic generation and result analysis tools, meeting the needs of more complex testing scenarios.

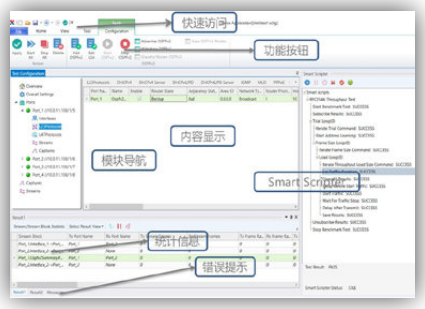
- **Extensibility**

Renix features a unified automation interface that allows for script-based parameter configuration, offering enhanced stability and compatibility. The refactored basic protocols and newly developed data center protocols provide a convenient foundation for the rapid addition of new protocols in the future.

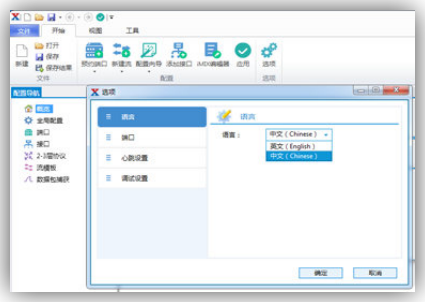
- **Provide API and customized services**

Based on the existing software and hardware platforms, we offer secondary development of APIs according to customer requirements, as well as testing services for proprietary technologies and protocols.

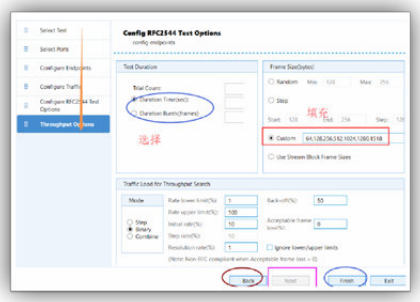
Software Features



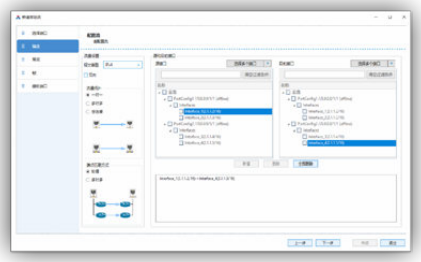
Modular design



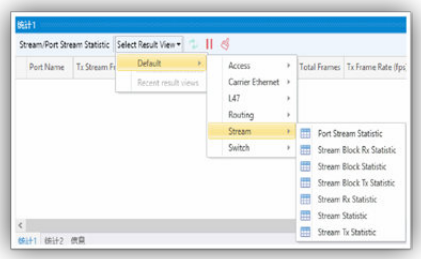
Usability design + bilingual



Efficient and convenient wizard



End-to-end business creation



Comprehensive and professional statistical views

Test report and result analysis system

Features

Chassis management	
Supported Chassis	BigTao 220, BigTao 6200, DarYu3000, DarYu12000
Chassis operating system	Linux CentOS 7.X
Chassis management	Add, delete, connect, disconnect the machine frame
Chassis operation	Restart, shutdown, upgrade the shelf, shelf status
Port management	
Port management	Port migration, online, offline, deletion
License management	
License management and operation	Install, clean, merge, delete, download licenses
Multi-user/multi-process	
multi-user	Support up to 32 users
multi-process	Support
Traffic	
Frame length control	Fixed, Increment(supporting step size setting), Decrement(supporting step size setting), Random(supporting random seed), iMIX
Transmission mode	• Port-based: Continuous, Burst, Time • Flow-based: Continuous, Burst • Transmission mode: synchronous, asynchronous
Bandwidth modification	Modify by port or flow
Flow template	Layer2, IPv4, IPv6, TCP, UDP, ARP, Pause, Goose, PPPoE, VLAN, MPLS, ICMP, IGMP, GRE, GTP, L2TPv2, L2TPv3, IPv6, OSPF, STP, MLD, ISIS and so on
Delay mode	LILO, FIFO, LIFO, FILO, supporting configuration of delay mode
Error frame	CRC error, under-size frame, oversize frame
Statistics	
Statistical form	Table statistics(paging statistics), chart statistics
statistical sampling	Real-time statistics
Filtering Statistics	Supported
Statistical items	Transmit/receive flow frame number, transmit/receive rate, receive bandwidth, error packet statistics, delay, jitter, real-time packet loss rate, filtering statistics, etc.
Capture	
Capture type	Transmission/reception capture at the control level; data and control level reception capture(line speed); received messages include CRC; cyclic capture
Capture filtering	• Customized capture mode: 8 stream templates/custom bytes • Error frame capture: FCS Error/PRBS Error/IPv4 Checksum Error/TCP Checksum Error/ UDP Checksum Error/ IGMP Checksum Error/ICMP Checksum Error • Length and ID capture: Under-size frame/ Over-size frame / Giant frame / Specific length frame / Signature Present ID • Frame type capture: IPv4/TCP/UDP/IPv6/IGMP • Event capture: Qualify Event/ Start Event/Stop Event
Real-time capture	Support real-time capture of control plane
Protocol emulation	
Routing	RIPv1/v2, RIPng, OSPFv2, OSPFv3, BGP4, BGP4+, ISISv4/v6
Access	PPPoE Client/Server, DHCPv4 Client/Server, DHCPv6 Client/Server, L2TPv2, 802.1X, SAA

Multicast	• IGMPv1/v2/v3 • IGMP/MLD querier • MLDv1/v2 • PIM-SMv4/v6 • PPPoE over Multicast • IPTV
Carrier Ethernet	• Link OAM 802.3ah • Service OAM 802.1ag
MPLS	• LDP • MPLS IP VPN • 6VPE/6PE • BGP VPLS • LDP VPLS • PWE • LSP Ping
SP-SDN	• BGP-LS • PCEP • SR for BGP/OSPF/ISIS • SRv6 for ISISv6/BGP • BGP SR TE Policy • SRv6 VPN • SRv6 EVPN • GSRv6 for ISIS
Data Center	• VXLAN • VXLAN EVPN • OVSDB • OpenFlow 1.3 Controller • BGP/EVPN for VxLAN • LACP
AI	• RoCEv2 • FC/ECN/DCQCN • CCL
High Availability	• BFD • OSPFv2 BFD • OSPFv4 BFD • ISIS BFD • BGP BFD
TSN protocol simulation (supported by BigTao platform)	• 802.1AS • 802.1Qav • 802.1Qat(SRP) • 802.1Qbv • 802.1Qcr • 802.1Qci • 802.1CB • 802.1Qbu
TSN consistency (supported by BigTao platform)	• 802.1AS • 802.1Qbv • 802.1CB • 802.1Qbu
Protocol Wizard And protocol binding flow support	• OSPFv2/v3 • BGP4/BGP4+ • ISISv4/v6 • PPPoE Client/Server • DHCPv4/v6 Client/Server • IGMPv1/v2/v3 • MLDv1/v2 • PCEP and IGP Topology/SR Anycast/SR TE Convergency/SRv6 VPN/SRv6 IP/SRv6 EVPN
Test suites	• RFC2544 • RFC2889 • RFC3918 • Asymmetric Performance • Y.1564
Automation	
API	Tcl, Python3.x, GUIToTcl, GUIToPython
Smart Scripter	Supported
GUI Language	English, Simple Chinese