XproTel

XproTel Replay 5G Core Network Simulator

The XproTel Replay 4G/5G Testing Solution is a scalable, comprehensive, and advanced test platform designed to validate and replicate 4G/5G mobile networks. It generates both control and user plane traffic of 4G/5G core networks and simulates millions of mobile users. This powerful solution is widely applicable in various scenarios, including 4G/5G product research and development, commercial selection, and existing network testing.

XproTel Replay offers control plane capabilities, providing simulation interfaces for core networks that comply with the 3GPP standards. This allows for realistic and standardized simulation of interface interoperability processes and functional characteristics, accurately representing network behavior. Furthermore, XproTel Replay can generate complex traffic models based on signaling messages and user behavior for the media plane. It supports the correlation between media traffic and user actions such as online/offline status, switching, and roaming. It also enables the insertion of multiple different service traffic per single user, ensuring the construction of highly representative traffic models that mirror real-world network conditions. XproTel Replay is capable of handling hundreds of thousands of users coming online per second, support concurrent user counts in the hundreds of millions, and achieve throughput rates of up to 200 Gbps.
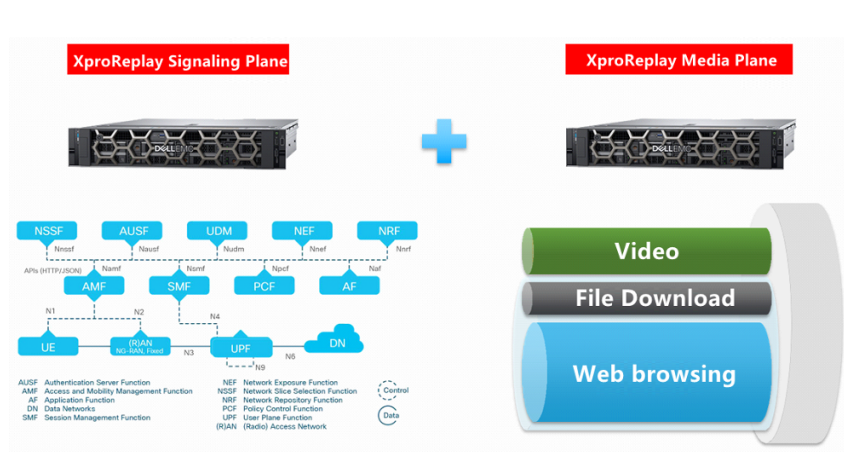
Features

- Simulate complete 4G/5G network elements

- A single dual-CPU server supports millions of concurrent users with user planes performance up to 400Gbps.

- Support 1G/10G/25G/40G/ 50G/100G/400G network interfaces

- Based on x86 platform and support for visualized environment

- Support 5G R16 LAN/N19 Simulation, Ethernet Session, SCP Network Simulation, and NGAP UE-TNLA

- Detailed test reports and logs for troubleshooting

- Cost-effective, significantly reduce test equipment investment

At XproTel, we understand the dynamic and evolving landscape of mobile network technology. Our commitment is to deliver solutions that not only meet but exceed industry standards. With XproTel Replay, you benefit from an all-inclusive platform that caters to your 4G/5G testing needs, ensuring your network's optimal performance, reliability, and cost-effectiveness. XproTel Replay is designed to interface and collaborate seamlessly with other mobile core network simulation testing instruments offering users the flexibility and adaptability necessary for today's fast-paced telecom environment.

XproTel Replay leverages a flexible x86 architecture, providing unparalleled agility and the ability to rapidly upgrade to support the latest 3GPP requirements without delays associated with dedicated hardware limitations.

Hardware Configuration and Performance Specifications

Signaling Simulation Component (Single Node)

CPU	CPU	Intel® Xeon® Processor Gold 5218	• Supports up to 25,000 UE online per second • Supports up to 1,000,000 UE concurrent online/every 80G of memory • The signaling simulation testing component hardware comes with 4 * 10GbE ports, supports users to purchase and install standard PCIe network cards, and supports 1GbE/10GbE/25GbE/40GbE/50GbE/100GbE ports • On board 1GbE management port
	Quantity	2	
Memory	Memory parameters	DDR4 2666 MHz, 16GB	
	Quantity	8	
Network card	Network card parameters	Intel® 82599 PCI-Express Gen3 x8 Dual Port 10 GbE Ethernet NIC	
	Quantity	2, Total 4*10GbE	
Storage	Hard Dick	2*1TB, Raid 1	

Media Simulation Component (Single Node)

CPU	CPU	Intel® Xeon® Processor Gold 5218	• Supports maximum 80Gbps throughput • The media simulation testing component hardware comes with 8 * 10GbE ports, supports users to purchase and install standard PCIe network cards, and supports 1GbE/10GbE/25GbE/40GbE/50GbE/100GbE ports • On board 1GbE management port
	Quantity	2	
Memory	Memory parameters	DDR4 2666 MHz, 16GB	
	Quantity	8	
Network card	Network card parameters	Intel® 82599/X710 PCI-Express Gen3 x8 4 Port 10 GbE Ethernet NIC	
	Quantity	Total 8*10GbE	
Storage	Hard Dick	2*1TB, RAID 1	