iProbe

The Powerful Tool That Makes Network Monitoring and Troubleshooting Easier

Connection Technology Systems Inc. (CTS) is proud to present iProbe, an advanced monitoring tool crafted for network owners to streamline troubleshooting and enhance network management. Maintaining a fully functional network with uninterrupted services is a significant challenge for operators. iProbe addresses this by offering robust monitoring and diagnostic features, making it easier to identify and resolve issues efficiently.

Supporting Web, CLI, and SNMP interfaces, iProbe includes scheduling controls for automated diagnostics, enabling seamless collection and analysis of network health data. Below is an in-depth look at iProbe's core capabilities, designed to elevate service quality and boost customer satisfaction:

IPTV Performance Monitoring – Ensuring Flawless Streaming Service Quality

iProbe delivers detailed IPTV performance monitoring to ensure the stability and quality of video, audio, and multicast streams. Its key features include:

- **MPEG-Loss (Packet Loss Monitoring)**
  iProbe tracks packet loss in real time across video, audio, or multicast streams. By analyzing loss rates, it helps maintain stream stability, preventing disruptions like frozen video or dropped audio for a seamless user experience.
- **PCR-Jitter (Program Clock Reference Jitter Analysis)**
  iProbe monitors timing variations in PCR packets, essential for syncing video and audio. It detects jitter issues swiftly, offering actionable insights to preserve stream quality.
- **Throughput (Data Transfer Rate Evaluation)**
  iProbe assesses multicast stream data rates, ensuring your network supports high-quality IPTV. Continuous monitoring aids in bandwidth optimization and performance enhancement.
- **General Query Interval (Multicast Query Interval Check)**
  iProbe verifies multicast query intervals to optimize traffic management, reducing congestion and ensuring service reliability.
- **General Query Response (Multicast Query Response Time Measurement)**
  iProbe measures multicast query response times, providing insights into network responsiveness and helping identify performance bottlenecks instantly.
- **Zapping Time (Channel Switching Delay Monitoring)**
  iProbe tracks channel-switching delays, a key factor in user satisfaction. By minimizing zapping time, it ensures a fast, smooth IPTV experience.

*Note: 2-port switches and converters do not support IPTV performance monitoring.

Device Emulation – Simulating Real-World Scenarios to Verify Network Reliability

With its device emulation feature, iProbe mimics real-world network device behaviors to test and validate network performance:

- **DHCP Client (DHCP Client Simulation)**
  iProbe simulates DHCP clients to confirm proper IP address allocation and connection stability, quickly resolving connectivity issues.
- **DNS (Domain Name Service Testing)**
  iProbe tests DNS server accessibility and response times, ensuring reliable and swift domain resolution for an optimal browsing experience.
- **Ping (Connectivity and Latency Testing)**
  iProbe uses ICMP echo requests to assess connectivity and latency, enabling rapid identification and correction of network issues.
- **Throughput Test (Data Transfer Rate Evaluation)**
  Leveraging tools by iPerf3 or Nuttcp, iProbe measures data transfer rates, offering a clear picture of network performance for optimization.

Cable Test – Quickly Diagnosing Physical Layer Issues

iProbe simplifies physical layer troubleshooting with its robust cable testing feature:

- **Cable Test**
  iProbe conducts Ethernet cable tests, checking length and pair status on selected interfaces. This efficient fault detection reduces downtime by pinpointing cable-related problems fast.

iProbe is a versatile solution for network monitoring and troubleshooting. From IPTV performance analysis to device emulation and cable testing, it delivers precise data and actionable solutions. Its automated diagnostics and real-time insights empower operators to enhance service quality, cut maintenance costs, and build customer confidence. For those seeking an effective way to simplify network management and improve user satisfaction, iProbe stands out as the ideal choice.

IPTV Server   **DNS Server**   **DHCP Server**

iProbe

IPTV Monitoring
- MPEG Loss
- PCR Jitter
- Throughput
- General Query Interval / Response
- Zapping Time

Device Emulation
- DHCP Client
- DNS Query
- Ping
- Throughput

Cable Test
- Ethernet Cable
- Length / Pair Status