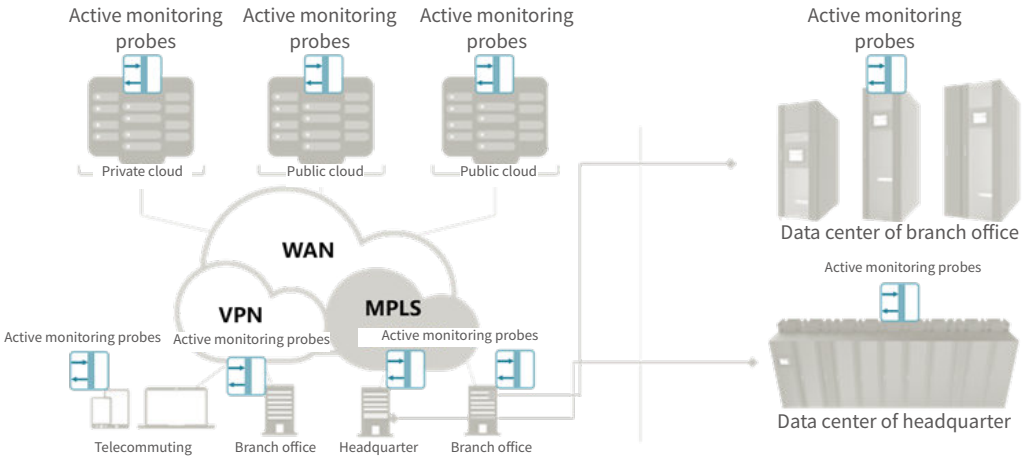
IP Network Active Monitoring System(X-Vision)

Introduction

The X-Vision IP network active monitoring system generates network traffic to measure end-to-end network and application quality, providing 24/7 real-time testing data. It reports real-time critical network metrics for all links, such as packet loss, latency, jitter, and out-of-order packets, and supports real-time alerts via email, SMS, and WeChat. This enables enterprise or telecom IT team to perform IP network performance test and evaluation, network quality SLA analysis and alerts, network optimization, equipment selection evaluation, and network troubleshooting and resolution.

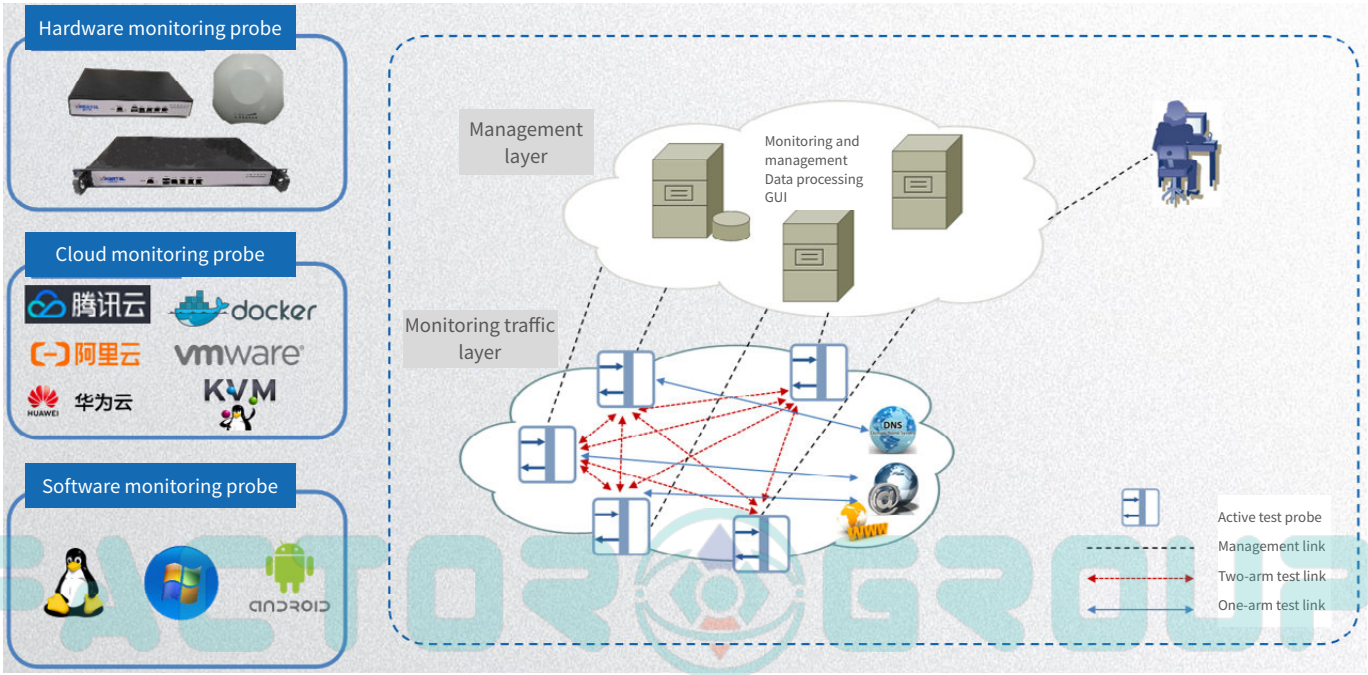
The X-Vision monitoring system Features a software architecture based on a distributed design with a layered functional structure, consisting of a presentation layer, a business logic layer, and a data processing layer. Each layer can be scaled through server expansion to meet the demands of large-scale monitoring.



System

X-Vision consists of console and active monitoring probe:

- The X-Vision console can be deployed on a Cloud VPC, ESXi Linux, or a physical Linux host, which is accessible via a browser.
- Active monitoring probes: hardware probes, software probes, or cloud probes.



Active monitoring test type

The X-Vision network active monitoring system supports two-arm monitoring and one-arm monitoring.

Two-arm test

The active monitoring probes at both ends of the link generate traffic(such as UDP, HTTP, FTP, or audio and video streams) to evaluate the network quality. The test scenarios are as follows:
(1)Network forwarding performance test: latency, jitter, out-of-order, packet loss ratio, etc., and support customized network test topology and test cases;
(2)Throughput test: supports UDP/TCP throughput test;
(3)Voice and video bearing quality test: support voice and video stream simulation, and test latency, jitter, out-of-order, packet loss ratio.

One-arm test

Through an active monitoring probe at one side of the link, real application traffic such as HTTP and DNS is simulated to conduct real-time network quality assessments of real services in the network, such as WEB and DNS servers. The test scenarios are as follows:
(1)HTTP/HTTPS application test: support DNS resolution, TCP connection/s, first byte and last byte time, and download rate test;
(2)Internet VPN access test: access quality of different types of websites;
(3)Server performance test: DNS server, mail server, DHCP server test;
(4)Network node accessibilityn: Traceroute