

# HAWKEYE—ACTIVE NETWORK MONITORING PLATFORM

## PROBLEM: THE REAL DEAL ON NETWORK DIAGNOSTICS

Delivering innovative services such as Voice over IP (VoIP), unified communications (e.g. Skype for Business), cloud migration of business services, and streaming video is critical to an organization's survival in today's highly competitive environment. However, bottlenecks, latency, and other hard-to-pinpoint network snafus can seriously compromise a company's network performance and brand reputation. Network managers and operators need a simple, reliable way to verify continuously the performance of their networks and ensure hassle-free application delivery.

## SOLUTION: IMPROVE APPLICATION RELIABILITY ON FIRST DELIVERY AND ONGOING ACTIVE MONITORING

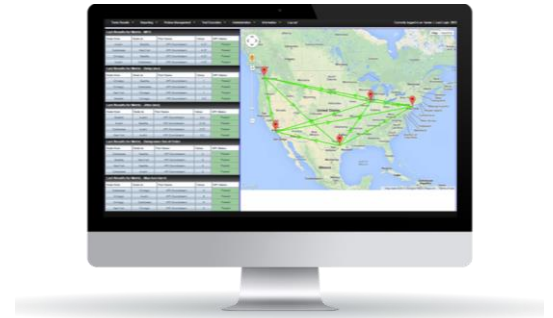
Hawkeye quickly and effectively validates network performance, isolates problems, and proactively detects issues by running scheduled verification tests. Using a combination of hardware and software agents called Performance Endpoints, Hawkeye simulates application traffic and sends key performance metrics to a central console for fast action. Active traffic does not wait for user traffic to find issues. Measurements range from network quality to user experience, enabling administrators to improve overall network uptime and detect network performance issues before they impact end users. Easy to deploy and simple to use, Hawkeye lets IT get straight to assessing networks and applications.

## HIGHLIGHTS

- Get superior visibility into your live networks with Hawkeye's advanced network and application testing technology
- Save IT staff time by leveraging industry-leading library with 100's of application tests that enable assessment of network throughput, class of service, unified communications, and much more
- Understand the performance of your entire network and services with cost-effective endpoint probe distribution that delivers expansive network coverage
- Green-light your services with pre-launch assessments by emulating real application traffic up to line rate for any network scenario to see how it performs
- Be a troubleshooting wonder by firing off quick validation tests with clear demarcation points to almost instantly find network and application issues
- Proactively detect problems with continuous monitoring of QoE and QoS, so you always know that your network is meeting SLA and quality standards

### KEY FEATURES

- Web-based platform for multi-user access, test scheduling, data storage, and real-time analysis
- Deploy endpoints with turnkey hardware or software endpoints
- Verify your virtual infrastructure with software and VM endpoints
- Automatically install endpoints within complex network topologies that include network address translation (NAT) and firewalls
- Inject real traffic into the network continuously based on schedules, between nodes or in a mesh
- Conduct distributed tests with on-premises or off-premises (i.e., cloud servers)
- Verify fixes put in place in your network in real-time with Pass/Fail
- Find network or application faults quicker with interval testing throughout the day, the week, the month
- Track services and network trends proactively based on time-of-day, day-of-week of services



**Central Console**  
Web-Based Management

This block contains two screenshots of the Central Console web-based management interface. The left screenshot shows a detailed data table with multiple columns and rows, likely representing test results or network configurations. The right screenshot shows a dashboard with a circular gauge chart at the top, followed by a data table and a bar chart below it.

**Software Endpoints**

This block features three icons representing software endpoints: a stack of server racks, a smartphone, and a Raspberry Pi. The text "Software Endpoints" is centered above the icons.

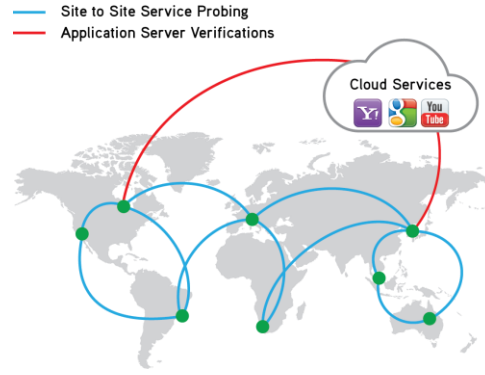
**Hardware Endpoints**

This block features two photographs of Ixia hardware endpoints. On the left is a rack-mounted device with a fan and various ports, labeled "ixia 192000". On the right is a small, black, form-factor device labeled "ixia XR12". The text "Hardware Endpoints" is centered above the images.

### Hawkeye Solution Components

### DEPLOY HAWKEYE SOLUTION

- Deploy Hawkeye web server in central location (NOC, data center...)
- Strategically-deploy software and hardware endpoints to cost-effectively reach any network location:
  - Customer premises
  - Mobile devices – WIFI or Cellular
  - Remote sites and head offices
  - Network aggregation points (PEs)
  - Core network, MPLS routers
  - Data centers
  - Virtual machines and servers



*Hawkeye Deployment*

### PLAN AND DESIGN YOUR ACTIVE TEST SCENARIOS

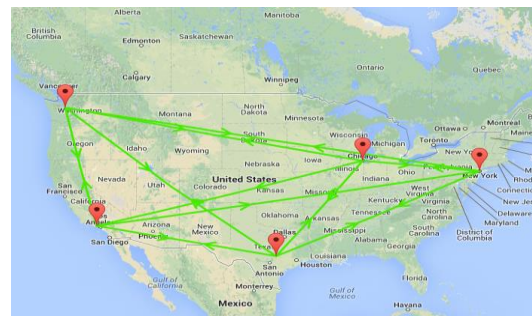
- Define test topology with node-to-node or mesh with hub and spoke
- Build large topology test (full mesh) with one click



Hub and Spokes

Full Mesh Topology

Custom Topology



### SELECT TEST TYPES AMONG DEFAULT PRE-CALIBRATED TESTS IN HAWKEYE LIBRARY

Hawkeye supports a variety of service level agreement (SLA) and quality of experience (QoE) objectives, that include:

- Bandwidth availability or verification with bit blasting or TCP-based testing
- Speed test from site to site with advanced configuration on traffic profiling
- Class of service (COS) implementation validation

- IP network SLA verification (one-way delay, jitter, loss)
- Real-time streaming verification
  - Mean opinion score (MOS) for voice
  - Media delivery index (MDI) for video streaming
- Server response time for transactional applications emulating user profile
- Unified communications tests (Skype for Business)
- Access to any HTTP/HTTPS servers using one arm test to any URL
- Experience downloading web pages
- Ping (ICMP, TCP, UDP) and traceroute to any interface on the web
- QoE for email, torrent, YouTube, Dropbox, etc.

### CREATE TARGET THRESHOLDS FOR DIFFERENT TESTS

- Adjust applications, test variables, and thresholds based on trial data to match expectations of the network and its performance
- Thresholds are the baseline to decide if tests are passing or failing
- Setting up correct thresholds is essential for understanding the test results and making sure that the right level of information is in the database
- Default test thresholds are pre-configured in the system

### DEFINE YOUR ACTIVE TEST SCHEDULES

- Schedule new tests over time to continuously inject instrumented traffic in the network. Verify continuous 24/7 lines or full topology.
- Define on-demand or scheduled tests. Define time to start your test, interval between tests, tests duration, and time to stop test. Allows running continuous proactive monitoring of tests.

Probe from: 
 Probe to: 
 Test type: 
 Test identifier:

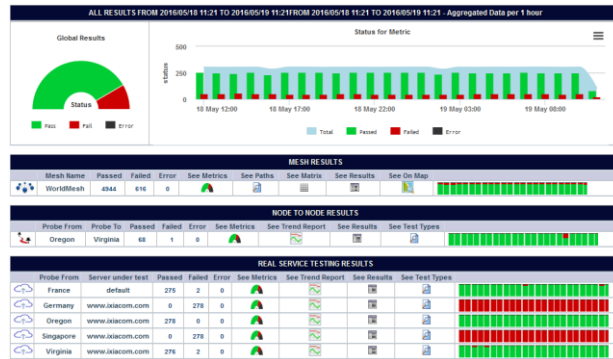
TEST DESCRIPTION : Unidirectional Network Flow measuring Loss, Jitter, Delay

Test Duration: 
 DSCP Setting:

Test Frequency - Minutes : 
 Start schedule 
 End Schedule

### ANALYZE RESULTS

- Use different result levels and granularity to get quick and efficient results and understanding
- Ensure every team member can get to the data required with simple Pass/Fail or detailed test reports
- See results in real time in geographic dashboard
- Run your test and look at single instance results or group of tests results
- Quickly identify problematic links
- Look at specific tests and get understanding of results
- Run trend reports on historical data and analyze network behaviors
- Export and send reports via email to share results between teams



Global dashboard

### MONITOR PASS/FAIL FOR TROUBLE SPOTS

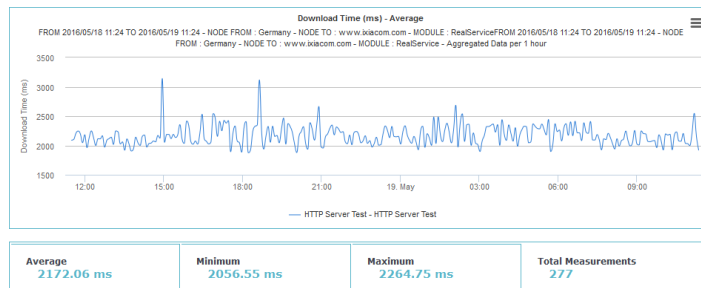
- Activate alarms on critical paths
- Get notified by email, SNMP traps, customized notifications

Probe From	France	Germany	Oregon	Singapore	Virginia
France		✓	⚠	⚠	✓
Germany	✓		✓	✗	✓
Oregon	✓	✓		✓	✓
Singapore	✓	✗	✓		✓
Virginia	✓	✓	✓	✓	

Performance matrix

### RUN REPORTS

- Reporting engine allows creation of reports and dashboards based on the results stored in the database
- Schedule daily automatic reports to follow critical networks
- Receive automatic emails with comprehensive reports



Historical report

## ORDERING INFORMATION

### HARDWARE

#### 940-0008

XR2000 Active Hardware Endpoint; integrated hardware endpoint for IxChariot OR Hawkeye; Licensed for 2 active test ports; AC unit. requires adjunct or previous purchase of IxChariot Floating Bundle (920-0055 through 920-0064) OR Hawkeye Bundle (920-2401 through 920-2406)

#### 940-0040

XRPI2 Active Hardware Endpoint; integrated hardware endpoint powered by Raspberry Pi 2 Model B (940-0040), for use with either IxChariot OR Hawkeye. Licensed for one active test port; 5V AC unit. Requires adjunct or previous purchase of IxChariot Floating Bundle (920-0055 through 920-0064) OR Hawkeye Bundle (920-2401 through 920-2406)

### SOFTWARE LICENSES

#### 920-2401

Hawkeye, 10 Endpoint Solution Bundle Includes: Hawkeye central management system (920-2410), 10 endpoint (sw or hw) registration & use (920-2421), 30 pairs node to node test license (920-2429), and 1 user seat license (920-2411)

#### 920-2402

Hawkeye, 25 Endpoint Solution Bundle Includes: Hawkeye central management system (920-2410), 25 endpoint (sw or hw) registration & use (920-2422), 75 pairs node to node tests license (920-2430), 5 real services tests (requires XR2000 or XRPI2) 920-2451, and 2 concurrent user seat license (920-2412)

#### 920-2403

Hawkeye, 50 Endpoint Solution Bundle Includes: Hawkeye central management system (920-2410), 50 endpoint (sw or hw) registration and use (2x 920-2422) 150 pairs node to node test license (2x 920-2430) 10 real services tests (requires XR2000 or XRPI2) (2x 920-2451), and 2 concurrent user license (920-2412)

#### 920-2404

Hawkeye, 100 Endpoint Solution Bundle Includes: Hawkeye central management system (920-2410), 100 endpoint (sw or hw) registration & use (920-2423), 300 pairs node to node tests license (920-2431), 25 real services tests (requires XR2000 or XRPI2) (920-2453) and 5 concurrent user license (920-2413)

#### 920-2405

Hawkeye, 200 Endpoint Solution Bundle Includes: Hawkeye central management system (2x 920-2410), 200 endpoint (sw or hw) registration & use (920-2424), 1200 pairs node to node tests license (2x 920-2431), 50 real services tests (requires XR2000 or XRPI2) (920-2454) and 5 Concurrent user license (920-2413)

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