# HAWKEYE—ACTIVE NETWORK MONITORING PLATFORM

ixia

DATA SHEET

## 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, Wi-Fi issues, 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 on any site using wireline or wireless connections. 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. The agents provide remote site end users perspectives on network performance and empower network managers with proactive ways to detect, diagnose, and fix issues. Measurements range from network quality to user experience and Wi-Fi monitoring, 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

- Monitor your Wi-Fi network from consumer perspective with advanced Wi-Fi monitoring tools

- 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, WI-FI connectivity tests, 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 service with pre-launch assessments by emulating real application traffic up to line rate for any network scenario over wired and wireless devices to see how it performs

- Be a troubleshooting wonder by firing off quick validation tests with clear demarcation points and advanced WI-FI expert tools 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

- Verify, monitor, and diagnose your user experience on WI-FI networks with WI-FI inspect features

- 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
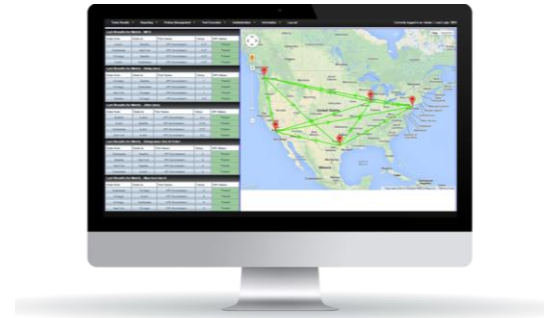
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|---|---|---|
| **Hawkeye Console** | | • Provided as a virtual appliance (Linux Operating System)<br>• Web-based, deployed in NOC, data center, or cloud<br>• North-bound interfaces, APIs for easy integration |
| **Hardware Endpoints** | XRPi<br>XR2000 | • Completely turn-key, light weight, transportable<br>• Autodiscovery & registration, automatic upgrade<br>• Dual-band Wi-Fi monitoring on XRPi with advanced Wi-Fi connectivity test and scanning capabilities |
| **Software Endpoints** | | • Low-footprint software, load into any device<br>• Fully compatible with virtual environments<br>• Ethernet or Wi-Fi and mobile |

*Hawkeye Solution Components*

## DEPLOY HAWKEYE SOLUTION

- Deploy Hawkeye web server in central location (NOC, data center, etc.)
- Strategically-deploy software and hardware endpoints to cost-effectively reach any network location:

  - Customer premises
  - Mobile devices – Wi-Fi or Cellular
  - Remote sites and head offices
  - Network aggregation points (PEs)
  - Core network, MPLS routers
  - Data centers
  - Virtual machines and servers
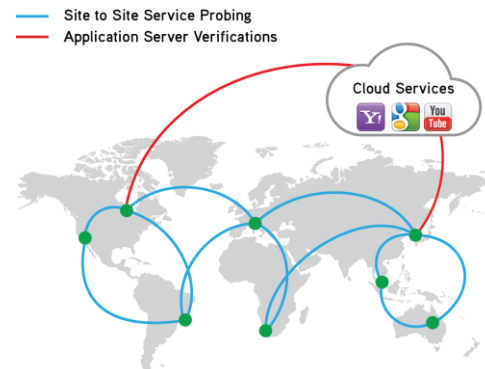


*Hawkeye Deployment*
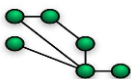
## PLAN AND DESIGN YOUR ACTIVE TEST SCENARIOS

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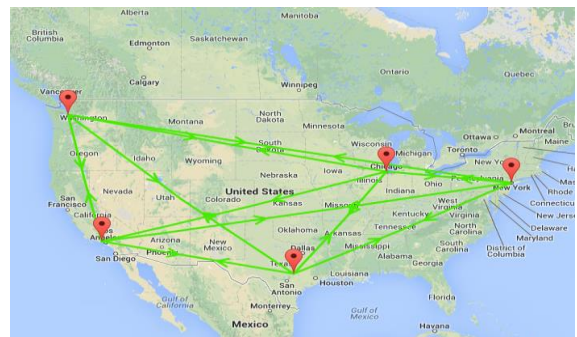- Build large topology test (full mesh) with one click

 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
- Netflix, YouTube, and any Dash/Adaptive streaming test
- Ping (ICMP, TCP, UDP) and traceroute to any interface on the web
- QoE for email, torrent, YouTube, Dropbox, etc.

## MONITOR DISTRIBUTED WI-FI NETWORKS FROM END-USER PERSPECTIVE

- Connect XRPi to Wi-Fi in key locations and software agents in smartphones for ad hoc verifications

- Collect Wi-Fi signal strength information while running Hawkeye tests

- Prove your Wi-Fi connectivity to different SSIDs with recurrent connectivity tests, diagnose any issues connecting to the Wi-Fi and quickly identify issues (authentication, DHCP, Layer 3 connectivity, etc.)
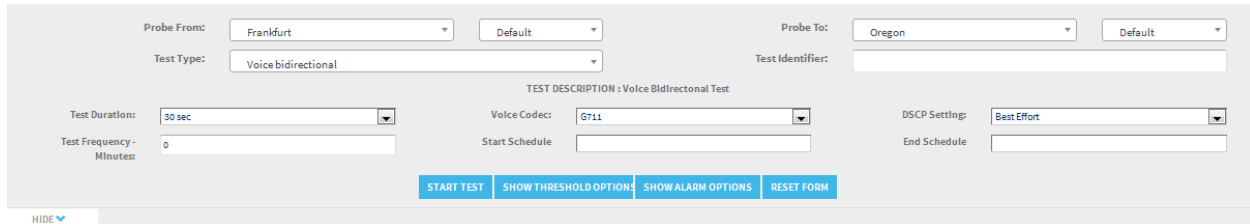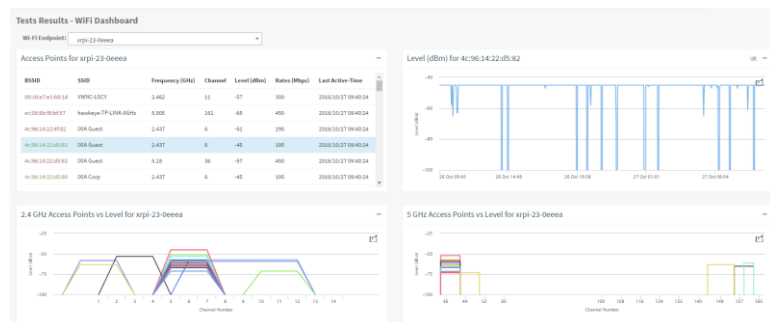


**Wi-Fi monitoring**

- Collect and display Wi-Fi coverage dashboards and understand Wi-Fi environment
- Build Floor Plans with real-time Wi-Fi coverage

## 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.



## 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



**Wi-Fi coverage dashboard**

- Run trend reports on historical data and analyze network behaviors

- Export and send reports via email to share results between teams
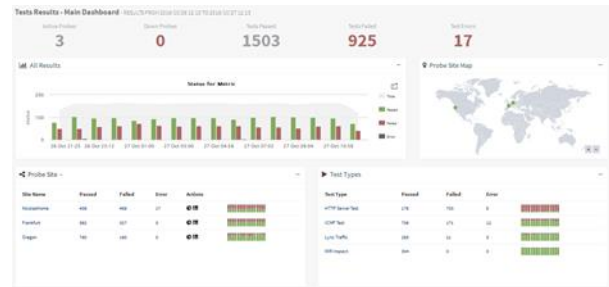
## MONITOR PASS/FAIL FOR TROUBLE SPOTS

- Activate alarms on critical paths

- Get notified by email, SNMP traps, customized notifications

## 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
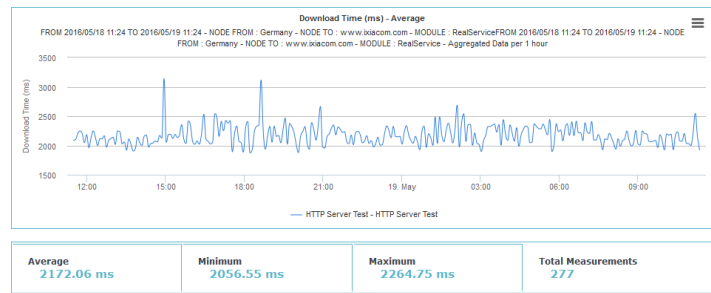


**Historical report**

# 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**

XRPi Active Hardware Endpoint; integrated hardware endpoint powered by Raspberry Pi (940-0040), for use with either IxChariot OR Hawkeye. Includes 10/100 LAN interface and Wifi Dongle with dual band (2,4/5Ghz). 5V AC unit. Requires adjunct or previous purchase of IxChariot OR Hawkeye software licenses.

### *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 XRPi) 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 XRPi) (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 XRPi) (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 XRPi) (920-2454) and 5 Concurrent user license (920-2413)

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