NETSCOUT

OptiView XG Network Analysis Tablet - Key Use Case: Wireless Deployment and Analysis

OptiView XG enables Wi-Fi and wired network infrastructure troubleshooting by local technicians and engineers, giving them the portability to go anywhere – and the visibility they need – to solve problems down to the desktop. With automated discovery, mapping of the local network and multiple functions to isolate the root cause of infrastructure-related problems, OptiView XG helps distribute problem solving throughout your organization, making everyone more effective.

Core capabilities

- **Wireless Analysis** – Integrated tools for deploying, troubleshooting, and securing of 802.11a/b/g/n/ac WLANs
- **Network Infrastructure Analysis** – Automated discovery, mapping, analysis and guided troubleshooting of your network infrastructure
- **Traffic and Packet Analysis** – The ONLY tablet with 10 Gbps "On the wire" analysis
- **Performance Testing** – Conduct network assessments, validate new infrastructure and devices, test service provider SLAs and QoS, and troubleshoot problems from end to end, at up to a full line-rate of 10 Gbps

For Overview and General Information about the OptiView XG, see additional key use cases.

The wireless companion to nGeniusONE for full WLAN lifecycle management and troubleshooting network infrastructures

OptiView XG combines multiple functions and technologies in a unique tablet form factor providing engineers the mobility needed to connect, analyze and troubleshoot anywhere in the network – from the access layer to the data center and remote sites. Headquarters or data center engineers can access the analyzer remotely for collaborative troubleshooting or for direct analysis of the problem area when there is no on-site IT staff or instrumentation. Field engineers appreciate OptiView XG as their "one tool" – ideal for traveling to and troubleshooting remote locations.

- Used with nGeniusONE, OptiView XG provides infrastructure diagnostics from the access layer to WAN to data center.
- Integrates the latest wired and wireless technologies with powerful dedicated hardware in a unique tablet form factor providing mobility to connect, analyze and solve network infrastructure problems anywhere on the network
- Displays your network exactly the way you want to see it through intuitive, customizable dashboards
- Provides performance testing, 'on-the-wire' and 'in-the-air' automated analysis up to 10 Gbps
- Enables proactive analysis by analyzing the information you need before problems arise
- Out-of-the-box and customizable reports

Wireless Analysis - Highlights

- Enables analysis of 802.11a/b/g/n/ac WLAN environments using the award-winning AirMagnet WiFi Analyzer, Spectrum XT, Survey and Planning tools
- Find rogue clients and access points that could be jeopardizing the security of your network

NETSCOUT

Integrated WLAN Deployment and Analysis

Wireless Infrastructure Analysis

Through its wired-side network discovery and analysis, OptiView XG discovers and categorizes wireless LAN controllers, lightweight access points (AP), intelligent access points and wireless clients. Detailed device information is provided from Cisco, Aruba, and Meru Wireless LAN controllers (WLCs) and LWAPs, including the wireless networks associated with the controller, the SSIDs, security and QoS parameters, the light-weight APs being controlled and the 802.11 protocol in use.


Wireless Infrastructure Discovery

OptiView XG uses data from wireless LAN controllers (WLCs) to create wireless connectivity maps. The content of the map can be filtered by selecting one or more SSIDs, desired WLAN frequency bands, device and security types. Map details are user configurable, including link rates, channels used, AP mode and capacity, client count by AP, and more wired infrastructure connections show the entire network – from end-to-end – so you are never without updated documentation of your wired and wireless network. Note: Wired-side wireless network discovery and mapping is not available in the "wireless only" versions of OptiView XG, "WL" models.
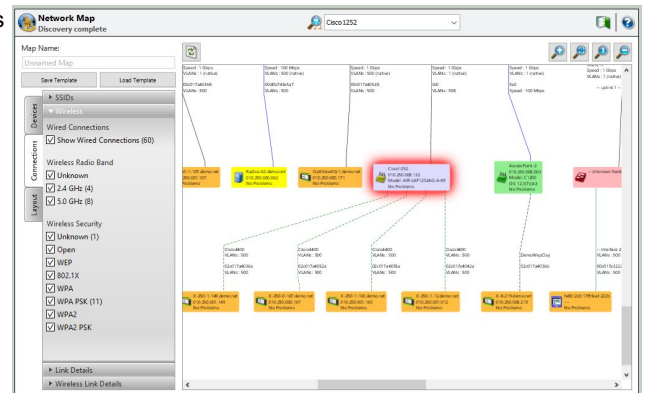

Wireless Network Mapping

NETSCOUT

Expand Your Wireless Analysis Power with These Optional Capabilities

Wi-Fi Analysis

AirMagnet WiFi Analyzer is the industry standard tool for mobile auditing and troubleshooting enterprise Wi-Fi networks. AirMagnet WiFi Analyzer helps IT staff quickly solve end-user issues while automatically detecting security threats and wireless network vulnerabilities. The solution enables network managers to easily test and diagnose dozens of common wireless performance issues including throughput issues, connectivity issues, device conflicts and signal multipath problems. AirMagnet WiFi Analyzer includes a full compliance reporting engine, which automatically maps collected network information to requirements for compliance with policy and industry regulations. It's a solution that simplifies key wireless network tasks such as:

- Provides "root-cause" for reported Wi-Fi problems
- Wi-Fi based discovery of wireless access points and clients
- Maximize 802.11 efficiencies and investment
- Complete visibility of all Wi-Fi traffic
- Detection and location of rogue devices or security threats
- Independent ROI analysis of WLAN infrastructure options
- Audit-ready compliance status
- Active client-based connectivity testing
- Instantly troubleshoot BYOD induced security and performance issues
- Packet captures and decode for complete analysis of 802.11a/b/g/n/ac WLAN's
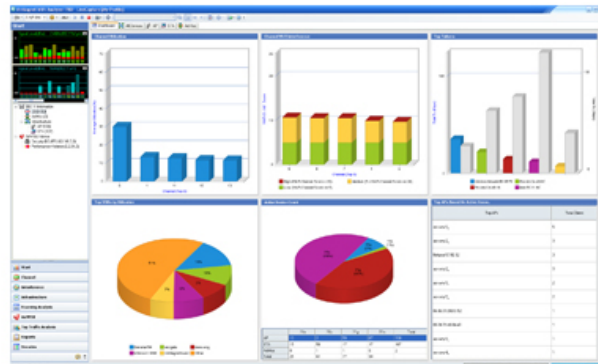
AirMagnet WiFi Analyzer

802.11 Spectrum Analysis

The AirMagnet Spectrum XT option provides in-depth RF analysis combined with real-time WLAN information for quicker and more accurate troubleshooting of performance problems. Spectrum Analysis offers real-time detection, identification and location of a number of non-WLAN sources that interfere with WLAN networks and their performance.

- Industry's largest RF interferer classification database to obtain automated answers to performance problems
- Prioritize issues/interferers with Wi-Fi impact analysis capability
- Custom signatures allow an instant response to interference problems and provide independence on classification updates
- Spectrum analyzer will troubleshoot WLAN issues caused by RF interference at remote locations faster by avoiding costly 'truck rolls'
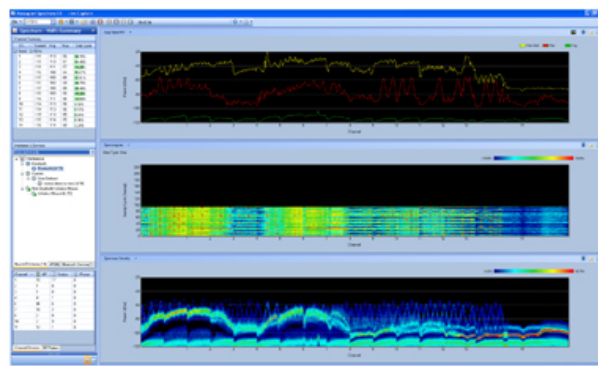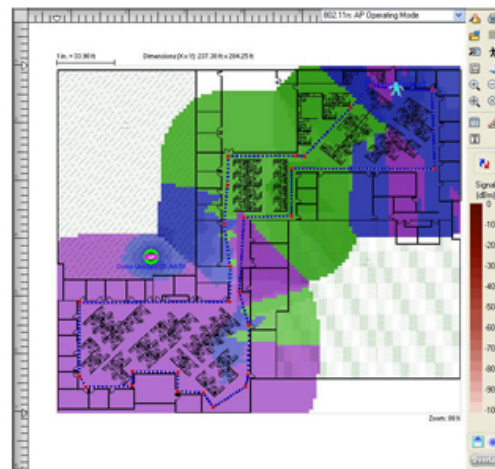

AirMagnet Spectrum XT

In-Building Spectrum Analysis

AirMagnet Spectrum ES (AM/A6001) is an affordable, professional-grade RF spectrum analyzer that can be added to OptiView XG to speed in-building cellular deployments. Rich spectrum graphs with next generation visualization and enhanced in-field productivity features provide intuitive network visibility needed to validate and troubleshoot at every project stage. Scans frequencies between 698 MHz & 2690 MHz (supports 2G/3G/4G). AirMagnet Spectrum ES includes the industry's first automated classification and location of RF interference sources, automated location-specific carrier and technology spectrum scan setup which is needed to verify and troubleshoot at every stage of the project lifecycle. These features help ensure offload deployment and troubleshooting are done quickly and correctly.

NETSCOUT.

Survey and Planning

The AirMagnet Survey and Planner option on the OptiView XG platform ensures optimal wireless network performance, security and compliance using the Survey capabilities in the OptiView XG to collect "live and real-world" signal, performance, and spectrum data during wireless network site surveys, allowing the IT staff to measure wireless network performance and RF coverage in the most scientific way possible to design the WLAN network for an optimal AP count, placement and configuration.

AirMagnet WiFi Planner

- Design and deploy the most accurate indoor & outdoor wireless LAN network (802.11a/b/g/n/ac) correctly the first time and prevent costly rework & IT complaints
- Collect real-world data by performing unique true end-user experience (WLAN throughput, data rates, retries, losses) measurements
- Minimize expensive wireless LAN performance impact due to RF interference sources by performing simultaneous spectrum analysis in a single walk through. Simulate "What-if" scenarios to prevent or minimize costly repeat survey walks
- Single-click WLAN network readiness verification for Voice over WiFi and Location Services
- Confidently certify the network for any design/application requirements using customer-ready pass/fail assessment reports
- Customize reports enabling efficient hand over of results based on WLAN design/application requirements

Note: For additional information, see the detailed datasheets for AirMagnet Spectrum XT, AirMagnet WiFi Analyzer and AirMagnet Survey and Planner.

Multiple Radios

Multiple internal radios on the OptiView XG eliminate the use of external WLAN adapters. Two 802.11a/b/g/n/ac radios and one spectrum radio enable you to run AirMagnet WiFi Analyzer and Spectrum XT together to view non-WLAN interference for every channel in the RF spectrum. The multiple radios also let you run Spectrum Analyzer along with Survey Pro to detect interference during surveying, thereby eliminating a second walkthrough for interference sources. A 3x3 internal antenna array enables 3x3 MIMO use in 802.11n and 11ac networks.

External Antennas

Wireless models of OptiView XG also feature one external directional antenna and one external omnidirectional antenna. The directional antenna can be used to speed locating rogue devices (with Wi-Fi Analyzer) or interference sources (with Spectrum XT).

External Directional Antenna

Hot-Swappable Batteries Provide Hours of Mobile Use

OptiView XG features two lithium-ion battery packs, which provide approximately two hours of wired and wireless use. Battery time can be doubled by powering down XG's wired Network Under Test (NUT) ports and analysis hardware via the Power Control settings. Purchasing an additional set of batteries and external charger (OPVXG-BATT-KIT) would provide the user with eight hours of wireless use – enough for a full day of surveying and troubleshooting.

NETSCOUT

Wireless Network Connection Specifications

Wireless Antennas	
Internal Wireless Antennas	Seven internal 2.4 GHz, 1.1 dBi peak, 5 GHz
	3.2 dBi peak antennas
External Omni-directional Antenna	Antenna, WLAN, omnidirectional, 2.4 & 5 GHz
	802.11 a/b/g, 50 Ω. Gain: 2.1 dBi (2.45 GHz)
	2.4 dBi (4.9 GHz), 2.6 dBi (5.25 GHz), 2.5 dBi (5.875 GHz)
External Directional Antenna	Antenna, frequency range 2.4 - 2.5 and 4.9 - 5.9 GHz
	Minimum gain 5.0 dBi peak in the 2.4 GHz band, and 7.0 dBi peak in the 5 GHz band
External Antenna Connector	Reverse SMA

NETSCOUT.

Wi-Fi Adapters	
Data Rate	802.11a: 6/9/12/24/36/48/54 Mbps
	802.11b: 1/2/5.5/11 Mbps
	802.11g: 6/9/12/24/36/48/54 Mbps
	802.11n (20 MHz): MCS0-23, up to 216 Mbps
	802.11n (40 MHz): MCS0-23, up to 450 Mbps
	802.11ac (80 MHz): MCS0NSS1-MCS9NSS3, MAX PHY rate 1.3 Gbps Operational throughput rate: up to ~400 Mbps
Operating Frequency	2.412 – 2.484 GHz
	5.170 – 5.825 GHz
Security	64/128-Bit WEP Key, WPA, WPA2, 802.1X
Transmit output power (Tolerance: ± 2 dBm)	802.11a: 16 dBm @ 54 Mbps
	802.11b: 20 dBm @ 11 Mbps
	802.11g: 17 dBm @ 54 Mbps
	802.11gn HT20: 17 dBm @ MCS23
	802.11gn HT40: 16 dBm @ MCS23
	802.11an HT20: 15 dBm @ MCS23
	802.11an HT40: 15 dBm @ MCS23
	802.11ac VHT20: 13 dBm @ MCS8NSS3
	802.11ac VHT40: 13 dBm @ MCS9NSS3
	802.11ac VHT80: 11 dBm @ MCS9NSS3
Receive Sensitivity (Tolerance: ±2 dBm)	802.11b: -88 dBm @ 11 Mbps
	802.11g: -74 dBm @ 54 Mbps
	802.11gn: -69 dBm @ HT20, MCS23
	802.11gn: -67 dBm @ HT40, MCS23
	802.11a: -73 dBm @ 54 Mbps
	802.11an: -68 dBm @ HT20, MCS23
	802.11an: -66 dBm @ HT40, MCS23
	802.11ac: -64 dBm @ VHT20, MCS8NSS3
	802.11ac: -63 dBm @ VHT40, MCS9NSS3
	802.11ac: -60 dBm @ VHT80, MCS9NSS30

NETSCOUT.

Our support plans give you exclusive services and 24/7 technical assistance. Sign up for MasterCare Support and enjoy outstanding privileges to protect and add value to your investment in NETSCOUT equipment. They include unlimited technical assistance seven days a week, 24 hours a day via phone or at our web support center. Repairs on covered items and "next day" dispatched loaner units (where available) for uninterrupted service. Free software upgrades. Web-based training. Access to our extensive Knowledge Base library of operation and application related technical articles. Some benefits are not available in all countries.

See **enterprise.netscout.com/gold** for more information.

For more information about OptiView XG, visit **enterprise.netscout.com.xg**