

# E(z)RF Service Assurance Manager

## Intelligent Wireless Wellness Monitoring System



### KEY PRODUCT BENEFITS:

- Configurable and always available end-to-end system tests, enable IT administrators to proactively detect network issues, minimizing network downtime.
- Remote control of diagnostic tests saves on-site visits.
- Leverages the existing Meru wireless infrastructure, with no need for extra sensors, resulting in optimal use of investment.
- Automation for a variety of wireless profiles, saves the operational expense of setup->test->analyze->rectify cycles.
- Inject real traffic into the live network while not disrupting service
- End-to-end performance tests enable rapid detection of wired-side mis-configurations such as VLAN or RADIUS.
- Customizable notifications enable administrators the ability to provide 24x7 support with minimal effort.

The Meru Networks® E(z)RF™ Service Assurance Manager is the industry's only proactive diagnostic application for remotely diagnosing the health of business-critical 802.11 wireless networks without requiring any overlay sensors. This application runs end-to-end network diagnostic tests to determine the link quality and capacity of the wireless network without human intervention.

As part of the E(z)RF Application Suite, E(z)RF Service Assurance Manager runs on Meru Service Appliance (SA1000) and is fully integrated with E(z)RF Network Manager.

### DETECT INFRASTRUCTURE ISSUES BEFORE END-USER SEES IT

Traditional approaches to wireless troubleshooting include after-the-fact on-site visits, packet-captures or completing labor intensive site surveys. With Meru E(z)RF Service Assurance Manager, the network automatically performs proactive health checks and reports any issues before end-users are impacted, including VLAN and RADIUS mis-configurations.

### NO OVERLAY SENSORS ARE REQUIRED

Customers can leverage their existing Meru Networks wireless network to perform diagnostic tests due to the Meru Virtual Client that gets instantiated on the Meru Access Points. Virtual Client does not impact servicing or performance of real clients.

### OPTIMIZE IT STAFF TIME BY SAVING ON TRUCK-ROLLS FOR ON-SITE TROUBLE-SHOOTING

Service Assurance Manager eliminates the need to send IT staff on site to setup a test network, run diagnostic tests and analyze results on a variety of wireless security profiles. Service Assurance Manager facilitates all the tasks remotely, without human intervention, increasing IT productivity.

### CUSTOMIZABLE NETWORK BASELINE AND NOTIFICATIONS ENABLE 24X7 SUPPORT

Create network baselines and run diagnostic connectivity, latency and throughput tests at configured intervals or on demand, with results automatically notified to specified administrators. This enables 24x7 support of business-critical wireless networks with minimal effort.

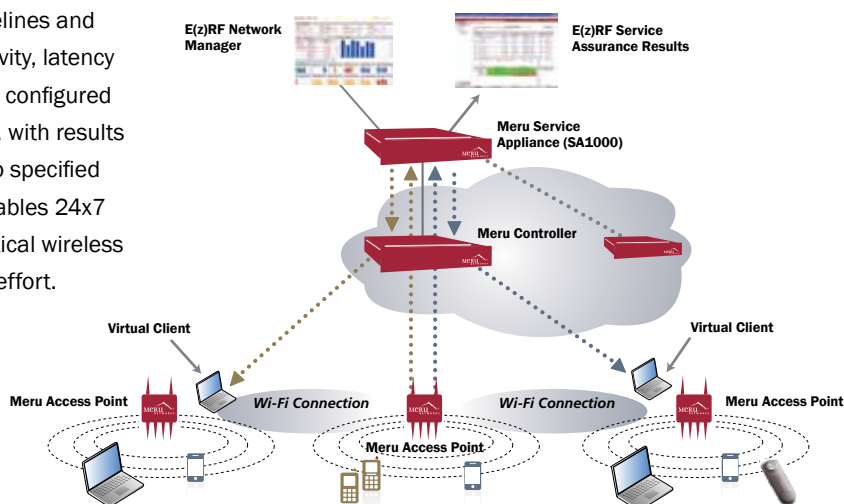


Figure 1: E(z)RF Service Assurance Manager Solution

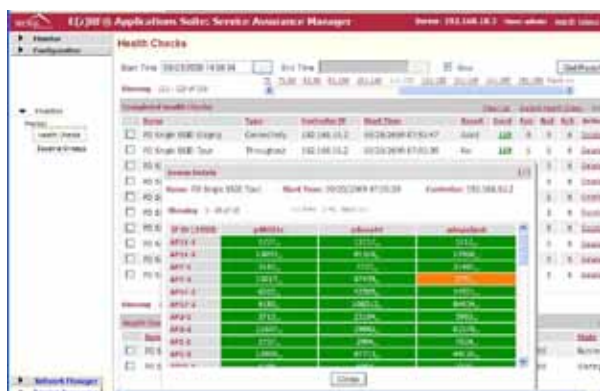


Figure 2: E(z)RF Service Assurance Manager Health Check Results

## FEATURES & SPECIFICATIONS

### GRAPHICAL USER INTERFACE

FEATURE	DESCRIPTION
Configure Health Check Profile	<ul style="list-style-type: none"> <li>• Test types – connectivity including loss, latency and throughput.</li> <li>• Run tests instantly OR schedule continuously, hourly, daily, weekly</li> <li>• User configurable 'good', 'bad' latency and loss thresholds</li> </ul>
Notification Filters	<ul style="list-style-type: none"> <li>• Customize Notification filters including: <ul style="list-style-type: none"> <li>- Start time</li> </ul> </li> <li>• Severities (critical, major, Info)</li> <li>• Messages with health check profiles</li> </ul>
Radius Configuration	<ul style="list-style-type: none"> <li>• Configure RADIUS info for 802.1x based authentication including: <ul style="list-style-type: none"> <li>- ESSID</li> <li>- Shared Secret</li> </ul> </li> </ul>
Captive Portal Configuration	<ul style="list-style-type: none"> <li>• Configuration for testing captive portal connectivity including: <ul style="list-style-type: none"> <li>- URL</li> <li>- Login ID</li> <li>- Success ID</li> <li>- Failure ID</li> </ul> </li> </ul>

### MONITOR HEALTH CHECK DASHBOARDS

FEATURE	DESCRIPTION
Completed Health Checks	<ul style="list-style-type: none"> <li>• Table of completed health check summary with: <ul style="list-style-type: none"> <li>- Overall result</li> <li>- Number of good/fair/bad runs</li> <li>- Start Time</li> <li>- Type of test</li> </ul> </li> </ul>
In progress Health Checks	<ul style="list-style-type: none"> <li>• Table of health checks in progress with: <ul style="list-style-type: none"> <li>- Test name</li> <li>- Test type</li> <li>- Start time</li> <li>- State of execution</li> </ul> </li> </ul>
Drill down Health Check runs	<ul style="list-style-type: none"> <li>• Details shows test results for each of the ESS on every radio in the controller with start time using a Virtual Client.</li> <li>• Next level of drill-down to specific Virtual Client or Station.</li> </ul>
E(z)RF Network Manager Integration	<ul style="list-style-type: none"> <li>• Virtual Client or Station details integrated with Network Manager's <ul style="list-style-type: none"> <li>- Station Trend Dashboard</li> <li>- Visualize heat-maps</li> <li>- AP Locator with flashing icons</li> <li>- Notification profiles</li> </ul> </li> </ul>
Virtual Client/ Station Details	<ul style="list-style-type: none"> <li>• Show short and long term transmit/receive statistics. <ul style="list-style-type: none"> <li>- Throughput overall</li> <li>- Total frames count</li> <li>- Frames success</li> <li>- Frames failure</li> <li>- Bytes success</li> <li>- Failure bytes</li> </ul> </li> </ul>

### REPORTS

FEATURE	DESCRIPTION
Summary Reports	<ul style="list-style-type: none"> <li>• Mailed to configured recipients</li> </ul>
Detailed Reports	<ul style="list-style-type: none"> <li>• Available by drilling down from summary reports</li> </ul>

### PLATFORM SPECIFICATIONS

ITEM	SPECIFICATION
The following table lists the product specifications for the Meru E(z)RF Service Assurance Manager running on Service Appliance (SA1000). Note that E(z)RF Service Assurance Manager is integrated with E(z)RF Network Manager on the same SA1000.	
SA1000 with	<ul style="list-style-type: none"> <li>• Dual power supply</li> <li>• RAID sub-system with replaceable hard-disks (each 250 GB)</li> <li>• Core 2 Duo Processor</li> </ul>
Package Content	<ul style="list-style-type: none"> <li>• 2 Ethernet cables (one spare)</li> <li>• DB9 serial cable</li> <li>• 2 power cables</li> <li>• Documentation disk with E(z)RF Network Manager 2.0 <ul style="list-style-type: none"> <li>- Getting Started Guide</li> <li>- Release Notes</li> <li>- User Guide</li> </ul> </li> </ul>
Supported Browsers	<ul style="list-style-type: none"> <li>• Firefox 3.x</li> <li>• Internet Explorer 7.x</li> </ul>
Supported Controllers	<ul style="list-style-type: none"> <li>• MC1000 and higher</li> </ul>
System Director Support	<ul style="list-style-type: none"> <li>• 3.6.1-SR1</li> </ul>