

SpeedFlex™



SpeedFlex is a unique wireless performance tool integrated within the ZoneFlex™ family of centralized controllers. SpeedFlex measures the Wi-Fi throughput of associated wireless LAN (WLAN) clients.

With SpeedFlex, administrators can better plan, troubleshoot, monitor and measure WLAN performance, eliminating the need to use Internet-based speed tools that often provide inaccurate results of the local Wi-Fi environment.

From any centralized ZoneDirector™ WLAN management console, administrators remotely invoke a speed test for a specific client, focusing on wireless layer-2 throughput measuring performance for that client.

An intuitive speedometer delivers instant at-a-glance feedback of the actual connection speed of each wireless client, allowing administrators to quickly isolate client issues. The same test also can be performed by the user from any location.

HOW SPEEDFLEX WORKS

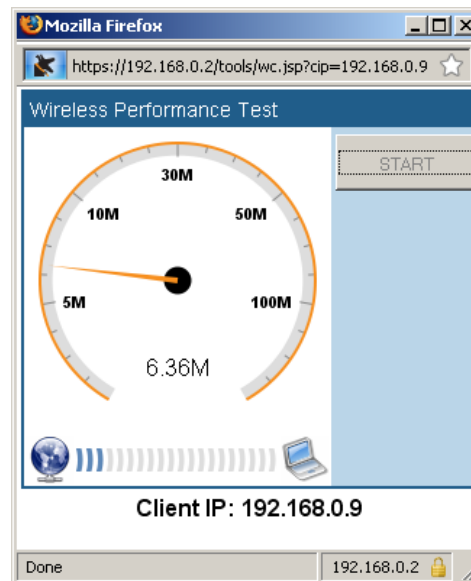
SpeedFlex sends fixed-duration bursts of full-length UDP packets. The packet loss and inter-arrival times are closely monitored and reported.

SpeedFlex differs from existing test tools such as iperf, IXIA Chariot, ttcp, and others because it focuses on characterizing performance at the wireless link layer.

Wi-Fi performance requires a specialized tool for accurate performance characterization for two reasons: asymmetric links and statistical variation.

THE SPEEDFLEX SPEEDOMETER

The SpeedFlex Speedometer downloads a thin agent from the ZoneDirector controller to each client. Real-time Wi-Fi performance tests can then be initiated locally by the client or remotely by the administrator for a given client.



With most wireless systems, the uplink and downlink are asymmetric due to different transmit powers, receive sensitivity, localized noise, and WMM parameters. In practice this leads to dramatically different uplink and downlink performance, resulting in 'smearing' of test results.

This effect is particularly evident with TCP-based tests, due to the importance of the TCP acknowledgment flowing in the opposite direction as the primary data flow.

The most important reason for a dedicated wireless performance test tool is the statistical nature of Wi-Fi performance.

FEATURES

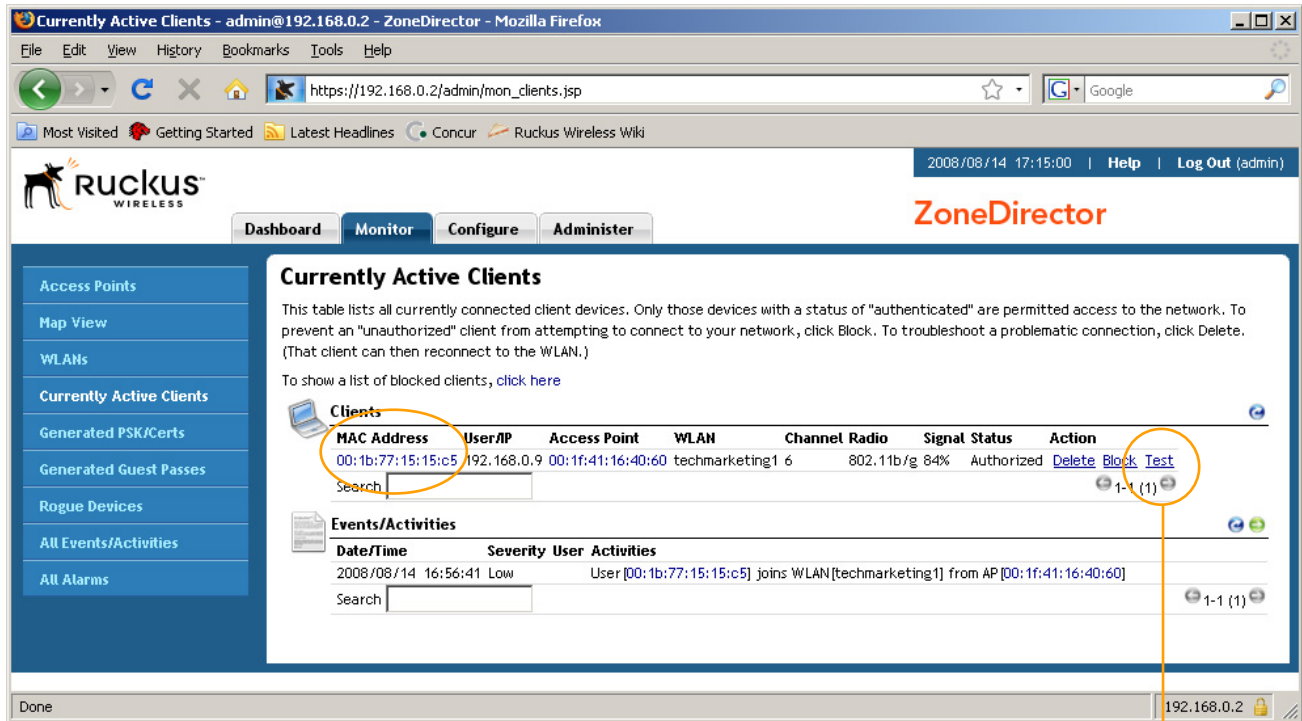
- Remote and local testing of Wi-Fi client performance
- At-a-glance speedometer relays Wi-Fi link performance to any given client

BENEFITS

- Easy troubleshooting and monitoring of Wi-Fi client performance
- Increased IT productivity from the ability to centrally test remote Wi-Fi client performance
- More accurate characterization of Wi-Fi performance and capacity
- Enhanced user satisfaction
- Better planning capabilities for Wi-Fi coverage and performance



ZoneDirector™ WLAN Management Console



Unlike Ethernet and fiber-optic technologies, which typically offer the same constant throughput, wireless link performance continuously varies as a function of link distance, propagation environment (including motion in the environment), and interference.

As such, 'average throughput' does not accurately characterize Wi-Fi performance, especially for demanding applications. A statistically-blind tool reports misleading results, which typically over-estimate the true available wireless capacity.

The Ruckus SpeedFlex utility was specifically developed to overcome these limitations, providing a more accurate assessment of actual client performance of the Wi-Fi link.

For network administrators, this translates into easier and faster resolution of Wi-Fi performance problems, increased productivity from eliminating the need to physically visit client locations to ascertain link layer performance, enhanced end user satisfaction, and the ability to better plan for Wi-Fi coverage and performance.

By logging into any ZoneDirector management console, network administrators can invoke SpeedFlex to test the actual performance of a Wi-Fi link for any given client.

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