DATA SHEET
ArubaOS Voice Services Module

ARUBAOS VOICE SERVICES MODULE

Aruba Networks' Voice Services Module (VSM) allows enterprises to offer mobile voice services that are reliable and easy to implement and manage. The VSM delivers standards-based voice over Wi-Fi with unique innovations that enable large-scale voice deployments. The Aruba architecture is an overlay to an existing network and voice mobility is simply added as a new service, either as a replacement for or in conjunction with a fixed TDM or VoIP based phone network. The Voice Services Module makes mobile voice a reality for the enterprise today, and provides an architecture to support fixed mobile convergence (FMC) applications.

COMPREHENSIVE VOICE MANAGEMENT

- Extensive voice management capabilities with graphical displays, statistical analysis, historical tracking, and powerful troubleshooting tools.

ENFORCEMENT OF QUALITY OF SERVICE SETTINGS

- WMM Content Queue Enforcement for policing established QoS policies.
- Prevents users from transmitting non-voice traffic using voice WMM queues.

VOICE SCALABILITY

- Voice Call Admission Control limits the number of active voice calls per AP by load-balancing or ignoring excess call requests.
- Dynamic WMM Queue Management provides flexible QoS management with customization of WMM queue profiles.

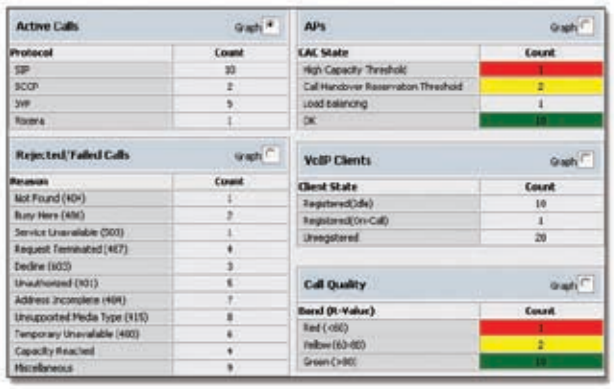
AUTOMATIC VOICE PRIORITIZATION

- Maintains voice quality in networks with a heavy mix of voice and data.
- Automatically identifies voice protocols and assigns the highest priority queue.
- Supports QoS of traffic streams even when the client device does not support WMM.

COMPREHENSIVE VOICE MANAGEMENT

The VSM adds extensive voice management functionality, providing detailed reporting and troubleshooting capabilities. Information is available at a glance via well-organized tables and graphs. Some of the capabilities include:

- Phone number association – SIP devices can be tracked and displayed by their associated phone number.
- Call quality tracking – Automatically calculates, displays and tracks the R-value for each SIP call being processed through the Aruba mobility controller.
- SIP authentication tracking – Tracks the registration of SIP devices with a IP PBX to determine if they are authenticated devices.
- Call detail records (CDRs) – Displays the calls made to or from Wi-Fi clients, including originator, terminator, termination reason, rejected and failed calls, duration, call quality, etc.
- CAC-based real-time information – Quickly determine call density, CAC state, and active calls.



Voice Statistics

ENFORCEMENT OF QUALITY OF SERVICE SETTINGS

A well-known weakness of WMM is that it will allow any client to request and use any priority level for any type of traffic. Because the standard lacks a method of enforcement, a badly-behaved client can break established QoS policies by sending lower priority traffic (such as data file transfers) at higher priority (such as that reserved for voice).

WMM Voice Queue Content Enforcement utilizes Aruba's integrated application-aware firewall to ensure that the correct priority level maps to the correct associated protocol – for instance, that voice priority is always assigned to voice traffic. If traffic to or from the user is inconsistent with the associated QoS setting for voice, the traffic is reclassified to a lower priority and data path counters incremented.

DYNAMIC WMM QUEUE MANAGEMENT

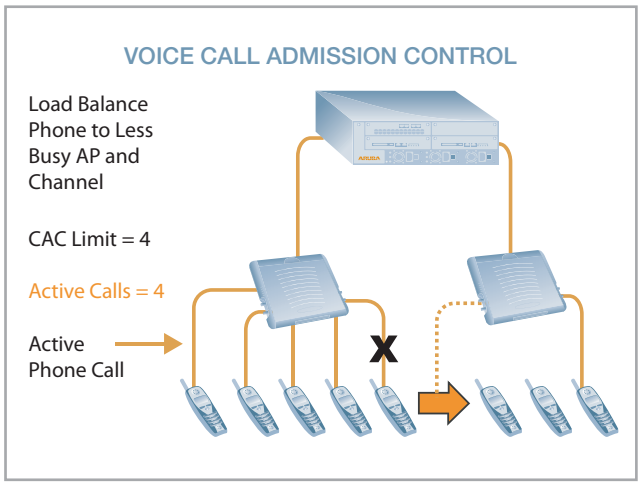
Voice and video applications need higher traffic priority relative to other traffic types to support strict latency and throughput requirements. The Wi-Fi Alliance defined the Wi-Fi Multimedia (WMM) certification in response to industry requirements for Quality of Service (QoS) support for multimedia applications for wireless networks.

Dynamic WMM Queue Management provides the ability to customize WMM queue profiles for different QoS levels. A user can specify how different traffic types should be prioritized as well as fine tune how AP and station parameters will affect traffic between the client and AP.

ARUBAOS VOICE SERVICES MODULE

VOICE CALL ADMISSION CONTROL

Voice Call Admission Control (CAC) uses Aruba's voice-aware infrastructure to prevent any single AP from becoming congested with voice calls. This is accomplished by limiting the number of active voice calls allowed on a radio or by setting bandwidth thresholds. The system monitors the number of active voice calls or bandwidth utilization, and if the defined threshold is reached, any new calls are load-balanced or disconnected. The AP notifies the SIP client that the AP is unavailable.



Voice awareness also improves voice quality and reliability by optimizing other functions in the network that may adversely affect call quality. For networks using Aruba's Adaptive Radio Management (ARM) feature, Call Admission Control ensures that dynamic power and channel optimization activities are limited when voice calls are active on a radio.

Authentication activities can be optimized as well by minimizing authentication transactions that can affect call quality. With the Aruba solution, 802.1x is voice aware, so that when a client is on a call, 802.1x reauthentication and rekeying are disabled until the call is completed.

AUTOMATIC VOICE PRIORITIZATION

Automatic Voice Prioritization will maintain traffic prioritization policies automatically, even when the client or application does not support WMM. The Aruba solution identifies voice protocols such as SIP, H.323, SVP, Alcatel NOE, SCCP, and Vocera and automatically places this traffic in a high-priority queue. Often there are clients that are not WMM aware and send both voice and data using the same SSID. This is true of many converged devices such as the RIM Blackberry or PCs that use softphones.

FEATURE	BENEFIT
WMM Queue Enforcement	Ensures that QoS policies are properly enforced by preventing users from transmitting non-voice traffic using voice WMM queues.
Voice Call Admission Control	Optimizes call reliability and voice quality by limiting the number of active voice calls that an AP will support and load-balancing or ignoring excess calls.
Automatic Voice Prioritization	Maintains voice quality in networks with a heavy mix of voice and data by automatically identifying voice protocols and assigning the highest priority queue to the associated traffic stream.
Voice Aware 802.1x Authentication	Optimizes 802.1x activity whenever a call is active so that extraneous authentication messages will not affect call quality.
Dynamic WMM Queue Management	Provides flexible QoS management by allowing customization of WMM queue profiles for different QoS levels.
SIP Authentication Tracking	Stateful tracking of the registration of SIP devices with a call manager to ensure that all devices on the network are authenticated.
Call Detail Records (CDRs)	Displays the calls made to or from Wi-Fi clients, including originator, terminator, termination reason, rejected and failed calls, duration, call quality, etc.

ARUBA networks

WWW.ARUBANETWORKS.COM

1322 Crossman Avenue. Sunnyvale, CA 94089 | Tel. +1 408.227.4500 | Fax. +1 408.227.4550