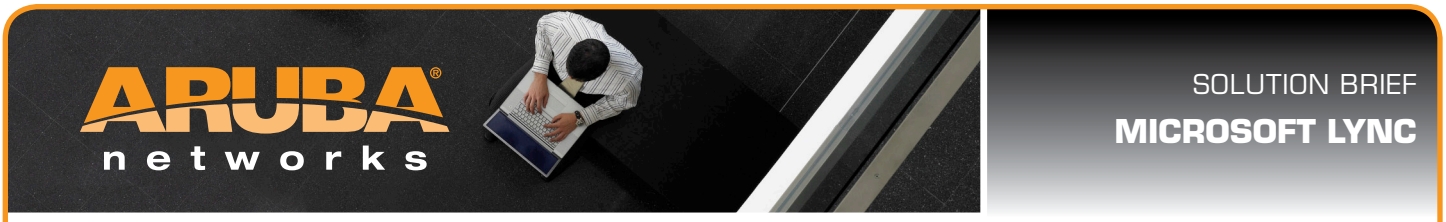

SOLUTION BRIEF

MICROSOFT LYNC

ARUBA IMPROVES MICROSOFT LYNC CALL QUALITY BY 74% COMPARED TO OTHER WI-FI VENDORS

Wi-Fi-enabled mobile devices like laptops, smartphones and tablets are on track to outnumber desktops, and enterprise networks are moving rapidly from wired to wireless as the preferred way to connect.

The enterprise workforce expects unified voice, video, instant messaging (IM) and other applications that run on platforms like Microsoft® Lync™ to work on these personal mobile devices. However, the voice and video experience on enterprise wireless LANs (WLANs) has been historically unreliable.

Aruba WLANs, based on the Mobile Virtual Enterprise (MOVE™) architecture, deliver secure, application-aware network access, regardless of location, device, wired or wireless. This ensures a reliable, high-quality unified communications experience.

Certified by Microsoft, Aruba identifies and prioritizes encrypted Microsoft Lync traffic when there is congestion and RF interference. The result with Aruba is an astonishing 74% improvement in communication quality compared to the competition, according to Microsoft Lync Server.

MICROSOFT LYNC SERVER	CISCO	ARUBA	ARUBA IMPROVEMENT
Mean Opinion Score	2.245	3.9025	**74%**

MOVE™

- Only Aruba automatically identifies and prioritizes encrypted Lync traffic.
- Consistent user experience, even in the presence of network congestion and RF interference.
- Applying quality of service to Microsoft Lync Server traffic eliminates network and system engineering tasks.
- Rapid problem resolution with detailed voice metrics for troubleshooting.

Microsoft® Lync™ Server 2010

Microsoft Lync Server provides a single interface that unites real-time voice, instant messaging, audio, video and web conferencing into a richer, more contextual offering.

With Microsoft Lync Server, users have access to a variety of communications tools that make their work easier and available anywhere, anytime by unifying conferencing with applications like Microsoft Outlook.

Legacy vs. Mobility Infrastructures

Port-based legacy networks were designed for application-specific devices – not multi-functioning mobile devices that support voice, video and IM. For example, to segregate and prioritize voice traffic on legacy networks, each device is mapped to an SSID and voice VLAN.

This practice not only reduces wireless capacity due to the increased number of SSIDs, but also forces IT administrators to designate one quality of service (QoS) level to an entire device, regardless of how it is used.

Offering a more efficient alternative, Aruba's application-aware approach to network access can leverage a single SSID and allow QoS to be applied to devices that support voice, video and IM.

With Aruba, QoS is based on the application that runs on devices, not the SSID or VLAN. Even with encrypted Microsoft Lync traffic, Aruba pinpoints the voice and video communications and applies the right network settings and policies.

Reporting and inventory

The Outdoor RF Planner produces detailed reports that can be used for planning and ordering Aruba mesh routers and antennas. The reports show the mesh network model, including country, design margin, location details, access points (APs) and antennas selected, antenna heading, and mesh roles. The report also details the mesh links, which are color-coded for associations according to date rate.

Application and RF Intelligence

Most WLANs today, including those based on 802.11n, lack the application and RF intelligence to deliver latency-sensitive voice and video traffic in RF environments with high client-densities.

Application-Based Quality of Service

Traditionally, QoS segregates real-time voice and video devices as well as non-real-time data devices into separate VLANs. However, Microsoft Lync Server runs real-time and non-real-time applications on the same device. These devices can only connect to one VLAN – such as a voice-only VLAN – and have one priority profile, which makes it challenging to isolate and prioritize real-time traffic.

The application-aware Aruba MOVE architecture uses deep packet-inspection to identify, isolate and prioritize real-time traffic. It also assigns wired DiffServ code-point (DSCP) tags or Wi-Fi Multimedia (WMM) tags to ensure end-to-end QoS over wired and wireless. This eliminates the need for separate VLANs, simplifies network operations and reduces IT tasks.

Application Fingerprinting

Microsoft Lync Server employs an encrypted version of the session initiation protocol (SIP) with transport layer security, called SIP-TLS, to secure communications between users. This encryption poses a major network challenge when trying to identify and prioritize traffic using traditional methods.

An industry first, Aruba Application Fingerprinting technology is a unique solution to this problem. Instead of snooping on the signaling exchange, Aruba Application Fingerprinting observes packets as they flow through the network while detecting and identifying voice and video traffic based on real-time traffic analysis.

Call Admission Control (CAC)

Load-balancing Wi-Fi clients across access points (APs) does not consider the unique requirements of active voice and video sessions. Voice and video-aware call admission control addresses this challenge by preventing oversubscription. Compared to legacy CAC solutions that only look at a threshold of predesignated, voice-capable clients, Aruba can actually determine the number of active voice and video sessions on a radio.

If number of calls on an AP reaches a configured threshold, the Aruba mobility infrastructure automatically load balances Microsoft Lync clients to adjacent APs. This provides a very effective way to maintain call quality for all users, even in congested Wi-Fi environments.

RF Spectrum Management

The quality of real-time applications like voice and video can suffer under poor RF conditions. To mitigate this problem, Adaptive Radio Management (ARM) technology from Aruba continually optimizes Wi-Fi client behavior and ensures that APs stay clear of interference.

Without disconnecting clients or disrupting applications, ARM automatically adjusts power and channel assignments on Aruba APs, making sure that Microsoft Lync clients associate with the best channel, best frequency and best AP. It will even fairly distribute clients across available wireless airtime using a traffic-shaping feature called Airtime Fairness.

Another ARM feature known as Band Steering is particularly useful with Microsoft Lync. When ARM detects that a Wi-Fi client can operate in both the 2.4-GHz and 5-GHz radio bands, it frees up the 2.4-GHz band – which is more susceptible to interference and has fewer channels – by steering Microsoft Lync clients to the 5-GHz band.

By allocating wireless capacity efficiently to Microsoft Lync clients, ARM ensures that real-time applications have sufficient network resources at all times.

Application-Specific Visibility and Control

Because the Aruba MOVE architecture is application-aware, it can gather extensive call quality metrics to monitor the characteristics of Microsoft Lync calls over Wi-Fi and troubleshoot problems. Application-specific troubleshooting metrics speed up resolution when errors occur.

With Aruba, it's all about visibility and control. Visibility identifies which real-time application is in session, while control ensures that traffic from that application is assigned the right priority and can adapt to challenging RF environments. Together, they ensure the reliable, high-quality delivery of voice and video services.

Conclusion

The Aruba MOVE architecture employs application-awareness to deliver a 74% improvement in Microsoft Lync performance over other WLAN vendors. By fingerprinting and prioritizing encrypted sessions without tagging clients, Microsoft Lync Server can be deployed anywhere in the enterprise with the utmost service assurance.

The combination of Microsoft Lync Server with Aruba lets the enterprise mobile workforce communicate wirelessly with co-workers and customers while ensuring higher productivity than ever before, whether using IM, federated IM servers, voice or video.

ARUBA networks

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The scale may vary depending upon the deployment scenario and features enabled. SB_MICROSOFTLYNC_110608