

TOP TEN CONSIDERATIONS FOR DEPLOYING LYNC ON SMARTPHONES AND TABLETS

Microsoft Lync is not only changing the cost structure of enterprise telephony, but also ushering in a new user experience in which every communication is transformed into a more collaborative, engaging interaction.

But it's impossible to achieve the promises of Lync if you haven't fully considered the underlying infrastructure. And with laptops, smartphones and tablets on track to outnumber desktops, that means wireless infrastructure.

Fortunately, with a little upfront planning, you can dramatically increase the quality and reliability of multimedia over enterprise Wi-Fi. Here are 10 tips for ensuring that Lync runs well on mobile devices in your network:

- 1 Identify Lync traffic** – Lync uses an encrypted signaling protocol making it difficult for the network to identify. Traditional snooping mechanisms that fingerprint real-time traffic through the popular SIP signaling protocol won't work here.

And if you can't see the Lync traffic, you can't take any actions to optimize it and you'll spend more time troubleshooting problems. The network needs to be able to identify Lync streams in session and map that traffic to a user and device. This information will be critical for other deployment and operational functions.
- 2 Prioritize Lync over less latency-sensitive traffic** – Once the network identifies and classifies Lync traffic, it can then be dynamically conditioned to deliver quality of service (QoS) – on an application-by-application and device-by-device basis. The network should be configured to tag Lync traffic with appropriate class of service (CoS) and type of service (ToS) tags ensuring proper QoS over the air and over the wire.
- 3 Push Wi-Fi everywhere** – As Lync is increasingly used on mobile smartphones and tablets, IT needs to ensure that WLAN coverage extends pervasively to all parts of a campus, with uniformly good signal levels. RF management techniques should be employed to maximize coverage and network capacity, while avoiding interference. A few good rules of thumb for Wi-Fi coverage include:
 - 100% coverage in all areas of Lync use
 - Minimum RF signal (RSSI) levels of -67 dBm
 - Minimum signal-to-noise ration (SNR) of 25 dB
 - Co-channel separation of 20 dB
- 4 Get your RF house in order** – Coverage is only one piece of the RF puzzle. To ensure reliable voice and video in the unpredictable world of Wi-Fi, adaptive RF technology should:
 - Force client devices to shift away from the noisy 2.4-GHz band to the quieter 5-GHz band.
 - Adjust radio power-levels to blanket coverage areas.
 - Load balance by shifting clients between access points (APs).
 - Prevent sticky clients from attaching to sub-optimal APs
 - Allocate airtime based on the capabilities of each client device.

These techniques will ensure that the user experience is optimized even as the RF environment changes.

- 5 Improve your visibility into the air** – The network needs to open a window of visibility into the RF environment, without the expense of a truck roll, to help network engineers understand what's happening. Wi-Fi access points should incorporate spectrum analyzers that provide on-demand monitoring, logging, and characterization of the RF environment.

The great thing about integrated spectrum analyzers is that they can be enabled remotely so that distantly located network engineers can assess how best to mitigate issues like continuous high level fixed frequency transmitters that can't otherwise be addressed automatically by adaptive RF techniques.

- 6 Consider 802.11ac** – 802.11ac, the next generation high-speed Wi-Fi network, is now available and will turbocharge Lync video by expanding both the available bandwidth, and number of users served, from an individual AP.
- 7 Secure the network to unlock performance** – While the primary role of network security is to protect confidential data, there are also significant benefits to network integrity and performance when you identify and remove security threats.

Rogue detection, wireless intrusion and prevention, access control, content security scanning, and other services should be used to protect the network and free up bandwidth. Ensure that your Wi-Fi network uses enforcement techniques that don't burn valuable wireless resources to remove suspect traffic and/or violating clients and devices.
- 8 Implement call admission control (CAC) for Lync** – Implement bandwidth-based and call-count-based CAC. It minimizes voice traffic congestion by ensuring that there is sufficient bandwidth for each new call. The result is higher available throughput, fewer dropped calls, less bandwidth oversubscription, lower traffic congestion, and a better overall user experience.
- 9 Make sure your wireless vendor is Wi-Fi Lync qualified by Microsoft** – The [Microsoft Unified Communications Open Interoperability Program \(UCOIP\)](#) qualifies network infrastructures for Lync Server 2010 and 2013. These are the only networking vendors that Microsoft has tested and verified for use with Lync; and these are the only vendors you should trust for your Lync deployment.
- 10 Ensure your network monitoring tools integrate with the Lync diagnostics API** – While many network infrastructure vendors provide RF visibility and diagnostics, it is critical to find a vendor that ties together network, device, user and Lync call statistics into one pane of glass. This gives end-to-end visibility of the Lync call chain, allowing for faster root-cause analysis and a more streamlined approach to managing your Lync deployment.

SUMMARY

As the migration continues towards mobile computing and smartphones, and away from wired desk connections, the wireless network will become increasingly important for keeping users connected with the enterprise and one another.

Aruba wireless LANs (WLANs), based on the Mobile Virtual Enterprise (MOVE™) architecture, are uniquely designed to address all these requirements, ensuring that mobile employees can communicate reliably, securely, and effectively over voice, video, IM or conferencing.

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

For a more detailed analysis of deploying Aruba with Microsoft Lync, please reference the Aruba Solution Guide for [Deploying Microsoft Lync Server 2010](#).

For more information, please contact Aruba Networks at info@arubanetworks.com.



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