



Voice Over Wireless LAN (VoWLAN) Troubleshooting Checklist

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Voice Over Wireless LAN (VoWLAN) Troubleshooting Checklist

The following is a checklist that is recommended when troubleshooting a Voice Over Wireless LAN (VoWLAN). It also defines best practices and additional options that may need to be taken into consideration.

Table 1-1 VoWLAN checklist

Recommendation	Best Practice	May Consider	Done
Verify an AP can be seen from the phone at -67 dBm or better in all areas to be covered. You also need to verify that the AP sees the phone at -67 dBm or better in all areas as well.	X		
Ensure that the SNR is always 25 dB or higher in all areas to provide coverage.	X		
Verify that channel utilization is under 50%.	X		
Configure voice WLAN to use the 802.11a band.		X	
If using EAP authentication, ensure that fast roaming is supported such as CCKM.	X		
WMM should be allowed or required for the voice WLAN.	X		
Voice WLAN should be marked with Platinum QoS.	X		
Platinum QoS profile should have the 802.1p bits set to 6.	X		



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Table 1-1 VoWLAN checklist (continued)

Recommendation	Best Practice	May Consider	Done
Verify the switch ports used to connect to the controller are set to trust CoS and ports to APs and uplinks are set to trust DSCP.	X		
Verify that Call Admission Control is enabled globally for the radios.	X		
Verify that Load-based CAC is enabled under Call Admission Control.	X		
Ensure that Load Based CAC (7920 AP CAC) under the WLAN is enabled for the voice WLAN if the network has a mix of 7920 and 792xG Series wireless IP phones.	X		
Ensure that Client Based CAC (7920 Client CAC) under the WLAN is disabled for the voice WLAN.	X		
Verify that the EDCA profile on the controller is set to Voice Optimized.	X		
Verify that Low Latency MAC is disabled.	X		
Verify that the 12 Mbps data rate is enabled (default PHY rate of the phone).	X		
If using 802.11b/g disable the 1, 2, 5.5, 6, and 9 Mbps data rates if possible.	X		
If using 802.11a disable the 6 and 9 Mbps data rates if possible.	X		
Verify coverage is designed for 24 Mbps to maximize throughput. Optionally disable 36-54 Mbps.		X	
Optionally disable 36-54Mbps			
Verify that Aggressive Load Balancing is disabled.		X	
Disabled ARP unicast if running a pre-4.2 image on the controller.	X		
Verify that DTPC is enabled so that the client and AP match tx power levels.	X		
Verify the Beacon interval is set to 100 ms.	X		
A DTIM of 2 is recommended.	X		
Ensure DHCP required is not enabled for the voice WLAN.		X	
Ensure that Aironet IE is enabled for the voice WLAN.	X		
Verify that Client MFP is set to Optional or Disabled.	X		
Session timeout for the WLAN should not be too short (300 seconds or more).	X		
Verify that peer-to-peer blocking is disabled.	X		
If using TKIP encryption, disable the hold down timer on the voice WLAN to prevent MIC errors from disrupting voice.	X		

Table 1-1 VoWLAN checklist (continued)


Recommendation	Best Practice	May Consider	Done
Verify that the radio of the AP has multiple antennas and that diversity is enabled.	X		
Ensure controllers are configured for Symmetric Mobility if phones will be roaming between controllers.		X	
Validate the virtual interface address is the same across all controllers in the same mobility group.	X		
Validate that the mobility status shows as UP between all controllers in the same mobility group.	X		
Enable Traffic Stream Metrics collection on the controller.	X		
DCA Channel Sensitivity set to High to reduce chance of channel changes during business hours.	X		

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