

Wireless Config Analyzer Express

Wireless Config Analyzer Express represents the next gen cloud-based evolution of the WLC Config Analyzer (WLCCA). It has support for both 9800 IOS-XE and AireOS Controllers and it has new improved checks for General Wireless LAN Controllers, Access Points (AP), Radio Frequency (RF), Mobility, Security, Mesh, and Flex Configurations. The tool also provides an RF summary, including stat summarization at the controller, AP group/site, and Flex group/profile level as well as RF health analysis.

Input Parameters

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Wireless Analyzer Results

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Total Unique Messages

Message Type	Count
Error	5
Warning	21
Info	10
Parsing Errors	0
Processing Errors	9

WLC Messages

PS-EWC

Level	Message
230125	Management: HTTP server does not have an IPV6 access class set, and controller has IPV6 management address. To improve security, it is advisable to set ACL explicitly allowing address that can configure the controller Action: For better WebUI security, set access class with ip http access-class command. For more info, check https://www.cisco.com/c/en/us/support/docs/ios-nx-os-software/ios-xe-17/221107-filter-traffic-destined-to-cisco-ios-xe.html
10025	WCAE: Parsing: missing configuration file section(s), checks may not be executed properly:Interface Config,RF Profile Conversion,Policy Profiles Action: One or more configuration sections were not found, this is indication of corrupted file, or very old software version. If the file is believed to be correct, please contact wcae@cisco.com, otherwise try to capture it again: https://developer.cisco.com/docs/wireless-troubleshooting-tools/#how-to-collect-sh-run-config
230059	mDNS: WLAN is using mDNS gateway functionality, but not corresponding SVI Interface detected. WLANs/Policies: Action: Add: Define a Interface vlan (SVI) for all vlans where mDNS gateway functionality is required. This check may not apply on AAA override scenarios
250003	Authentication: Profile(s) with AAA Policy pointing to non-existing value. Profile: Action: Check the configuration item, and change/replace it with an existing value
230034	High Availability: Redundancy mac address is not set. This is mandatory configuration value if using redundancy feature Action: Set the command 'wireless mobility mac-address' to the management interface mac address
230038	Management: To prevent WebUI issues while using some large GUI options (VLANs for example), it is advisable to increase the VTY count to 50 Action: Use the command 'line vty 0 50' to increase the VTY count
230043	Install: Installation mode is BUNDLE, it is advisable to use INSTALL mode for several disk, memory and feature benefits Action: Check 9800 Best practices guide for more information
230046	RRM: ED-RRM is not in use. It is recommended to enable for enterprise environments. Band(s): 2.4 GHz 5 GHz Action: This is purely a general recommendation, please validate if applicable in your environment. ED-RRM could provide fast reaction to severe RF issues
230051	AP Tag: Default site tag is detected as in use, for proper CPU load balancing, it is advisable to use custom tags, and only use default site tag for initial network bringing up Action: Check 9800 best practices document. it is recommended to use custom site tags, and avoid default site, except for initial deployment scenarios
230079	High Availability: Redundancy is in use, but RMI feature is not enabled. For best high availability scenarios, it is recommended to use it Action: Redundancy Manager Interface feature provides significant advantage for HA scenarios. Per best practices, it is advisable to enable it. For more information: https://www.cisco.com/c/en/us/td/docs/wireless/controller/9800/17-3/config-guide/b_wl_17_3_cg/m_vewlc_high_availability.html#id_109551
230083	Tags: For versions 17.6 and higher, it is advisable to use AP tag persistency command, to ensure tags are preserved if AP is temporarily moved to another controller Action: Configure ap tag persistency enable, this is specially important for N+1 redundancy scenarios
60018	RF: WLC has 20.0% of APs with high channel utilization for 2.4GHz Band Action: None
60020	RF: WLC has 30.0% of APs with failed Interference Profile for 2.4GHz Band Action: None
60024	RF: WLC has 50.0% of APs with failed Noise Profile for 2.4GHz Band Action: None
250025	mDNS: mDNS service policy in use, without location filtering. Policy Profile/mDNS Policy: Action: To avoid high CPU load scenarios, it is advisable to always set a location filter on all mDNS policies, to restrict the total number of services replied to clients. This is very important is using latest Mac OS versions.
240020	11k: 11k Neighbor List is in use, but dual band is disabled. if not using single-band devices, enable both for best results. WLAN(s): Action: For best results, it is better to enable dual band support for 11k. This should only be avoided, if single band devices are present on the network. This is part of the WLAN profile
240010	Webauth: Webauth is in use, but no pre-auth ACL is set, this is required for external webauth, it may not apply depending on your configuration WLAN(s): Guest Action: This is configuration error that will potentially lead to feature not working. Command: config wlan security web-auth acl
240011	Webauth: Webauth is in use, but no pre-auth ACL IPv6 is set, this is required for external webauth, and IPv6 fw is enabled. WLAN(s): Guest Action: This is configuration error that will potentially lead to feature not working. Command: config wlan security web-auth acl
240021	Webauth: WLAN with Webauth policy, without sleeping client feature. For best clients experience, it is recommended to enable it. WLAN(s): Guest Action: Sleeping client feature can enhance significantly the end-client experience of a webauth WLAN. For best practices, enable it on the webauth policy map
250015	Security: Profile with wlan set to default or 1. This is not recommended, even for AAA override scenarios. Profiles: default-policy-profile Action: Go to the policy profile configure a VLAN. Default should only be used on small network, with low security requirements
290004	Syslog: Syslog host is not set (using default broadcast value). For best practices, it is recommended to use a syslog server. AP Profiles: default-ap-profile Action: To ensure data is available for future troubleshooting in case of problems, it is best practices to define a syslog server for all APs on the Join profile
230026	11b: Legacy rate enabled in Global Config. Disabling low data rates/11b can help to optimise the channel utilisation on the 2.4 band. Depending on RF coverage, or if using legacy clients, this may cause problems. Please validate before enforcing the changes, as this may have important RF dependencies. Action: In most scenarios, it is good idea to disable 11b data rates (1,2,5,5,11), as they would use more RF time, and be more sensible to interference, it is advisable to only enable 11g rates, unless you need to support legacy devices. Command:config 802.11b rate disabled X
230066	Webauth: HTTPS webauth redirection is enabled. This may lead to certificate errors and possible errors. Use with care Action: HTTPS redirection feature success depends largely on the client type, and webauth certificates installed. On some scenarios it can lead to failures. This is just preventive message to ensure all implications of using this feature are understood
230091	AAA: It is recommended to use either radius or tacacs+ as part of the default login method Action: The command aaa authentication login default, was detected as using only local, for better security, it is recommended to use an external AAA system as well

	6	3.00	3.00	0.00	0.00	6.00	50.00
	9	0.00	0.00	0.00	0.00	0.00	0.00
5GHz Channel Stats	108	1.00	3.00	0.00	0.00	7.00	4.00
	136	2.00	3.00	0.00	0.00	5.00	4.00
	36	2.00	1.00	0.00	1.00	8.00	42.00
	44	0.00	0.00	0.00	0.00	0.00	0.00
	52	0.00	0.00	0.00	0.00	0.00	0.00
	56	1.00	1.00	1.00	1.00	8.00	1.00
	64	4.00	1.00	0.00	3.00	6.00	7.00

RF Stats AP Site Summary

default-site-tag

		2.4GHz Band	5GHz Band
Radio States	Total Radios	10	10
	Total Enabled	10	10
	Total Disabled	0	0
	Total Missing Config	0	0
	Total Client Servicing	10	10
Radio Types	Legacy	0	0
	11n	0	0
	11ac	0	0
	Unknown	0	0
Radio RRM State	TPC Auto Power	10	10
	Manual Power	0	0
	DCA Auto Channel	10	10
	Manual Channel	0	0
RF State	Radios High CoChannel	0	0
	Radios High Utilization	2	0
	Isolated Radios	0	0
	Poor Coverage Radios	1	1
	High Channel Change	5	0
	Radios Interference Profile Failed	3	0
	Radios Noise Profile Failed	5	0
	Radios Load Profile Failed	0	0
DFS	Radios DFS Channel	0	8
	Radios Non DFS Channel	10	2
Client Stats	Radios with Low SNR Clients	0	1
	Total High SNR Clients	1	4
	Total Low SNR Clients	0	1
	Total High RSSI Clients	1	4
	Total Low RSSI Clients	0	1
	Total Associated Clients	1	5
Clean Air	Total Clean Air Detected Devices	0	0

Band	Channel	Total APs	Avg AP Power	Avg Client Count/AP	Total Client Count	Avg Neigh Count/AP	Avg Utilization/AP
2.4GHz Channel Stats	1	4.00	2.00	0.00	1.00	6.00	50.00
	11	3.00	3.00	0.00	0.00	5.00	37.00
	13	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00
	6	3.00	3.00	0.00	0.00	6.00	50.00
5GHz Channel Stats	9	0.00	0.00	0.00	0.00	0.00	0.00
	108	1.00	3.00	0.00	0.00	7.00	4.00
	136	2.00	3.00	0.00	0.00	5.00	4.00
	36	2.00	1.00	0.00	1.00	8.00	42.00
	44	0.00	0.00	0.00	0.00	0.00	0.00
	52	0.00	0.00	0.00	0.00	0.00	0.00
	56	1.00	1.00	1.00	1.00	8.00	1.00
	64	4.00	1.00	0.00	3.00	6.00	7.00

RF Stats Flex Profile Summary

default-flex-profile

		2.4GHz Band	5GHz Band
Radio States	Total Radios	10	10
	Total Enabled	10	10
	Total Disabled	0	0

	Total Missing Config	0	0
	Total Client Servicing	10	10
Radio Types	Legacy	0	0
	11n	0	0
	11ac	0	0
	Unknown	0	0
Radio RRM State	TPC Auto Power	10	10
	Manual Power	0	0
	DCA Auto Channel	10	10
	Manual Channel	0	0
RF State	Radios High CoChannel	0	0
	Radios High Utilization	2	0
	Isolated Radios	0	0
	Poor Coverage Radios	1	1
	High Channel Change	5	0
	Radios Interference Profile Failed	3	0
	Radios Noise Profile Failed	5	0
	Radios Load Profile Failed	0	0
DFS	Radios DFS Channel	0	8
	Radios Non DFS Channel	10	2
Client Stats	Radios with Low SNR Clients	0	1
	Total High SNR Clients	1	4
	Total Low SNR Clients	0	1
	Total High RSSI Clients	1	4
	Total Low RSSI Clients	0	1
	Total Associated Clients	1	5
Clean Air	Total Clean Air Detected Devices	0	0

Band	Channel	Total APs	Avg AP Power	Avg Client Count/AP	Total Client Count	Avg Neigh Count/AP	Avg Utilization/AP
2.4GHz Channel Stats	1	4.00	2.00	0.00	1.00	6.00	50.00
	11	3.00	3.00	0.00	0.00	5.00	37.00
	13	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00
	6	3.00	3.00	0.00	0.00	6.00	50.00
	9	0.00	0.00	0.00	0.00	0.00	0.00
5GHz Channel Stats	108	1.00	3.00	0.00	0.00	7.00	4.00
	136	2.00	3.00	0.00	0.00	5.00	4.00
	36	2.00	1.00	0.00	1.00	8.00	42.00
	44	0.00	0.00	0.00	0.00	0.00	0.00
	52	0.00	0.00	0.00	0.00	0.00	0.00
	56	1.00	1.00	1.00	1.00	8.00	1.00
	64	4.00	1.00	0.00	3.00	6.00	7.00

RF Health WLC Level Summary

Stats		2.4GHz Band			5GHz Band			
		Total Radios	10			10		
		Health Assessment						
	Lowest Metric Average	0			0			
AP Radio Count per RF Health Metrics		Low	Medium	High	Low	Medium	High	
	Co-Channel Neighbor Utilization	0	4	6	0	0	10	
	Co-Channel Overlapping	0	4	6	0	0	10	
	Side Channel Overlapping	0	0	10	0	0	10	
	Noise Same Channel	2	3	5	0	0	10	
	Noise Side Channel	4	3	3	0	0	10	
	Interference Same Channel	0	0	10	0	0	10	
	Interference Side Channel	0	0	10	0	0	10	
	Low SNR Clients	0	0	10	0	0	10	
	Radio Utilization	1	1	8	0	0	10	
Clean Air Interferers	0	0	10	0	0	10		

RF Health AP Site Summary

default-site-tag

Stats		2.4GHz Band		5GHz Band		
		Total Radios	10		10	
		Health Assessment				
	Lowest Metric Average	0		0		

Lowest Metric Average		Low	Medium	High	Low	Medium	High
AP Radio Count per RF Health Metrics	Co-Channel Neighbor Utilization	0	4	6	0	0	10
	Co-Channel Overlapping	0	4	6	0	0	10
	Side Channel Overlapping	0	0	10	0	0	10
	Noise Same Channel	2	3	5	0	0	10
	Noise Side Channel	4	3	3	0	0	10
	Interference Same Channel	0	0	10	0	0	10
	Interference Side Channel	0	0	10	0	0	10
	Low SNR Clients	0	0	10	0	0	10
	Radio Utilization	1	1	8	0	0	10
	Clean Air Interferers	0	0	10	0	0	10

RF Health Flex Profile Summary

default-flex-profile

		2.4GHz Band			5GHz Band		
Stats	Total Radios				10		
	Health Assessment						
	Lowest Metric Average				0		
		Low	Medium	High	Low	Medium	High
AP Radio Count per RF Health Metrics	Co-Channel Neighbor Utilization	0	4	6	0	0	10
	Co-Channel Overlapping	0	4	6	0	0	10
	Side Channel Overlapping	0	0	10	0	0	10
	Noise Same Channel	2	3	5	0	0	10
	Noise Side Channel	4	3	3	0	0	10
	Interference Same Channel	0	0	10	0	0	10
	Interference Side Channel	0	0	10	0	0	10
	Low SNR Clients	0	0	10	0	0	10
	Radio Utilization	1	1	8	0	0	10
	Clean Air Interferers	0	0	10	0	0	10

AP Models Summary

C9120AXI-E	10
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AP Modes Summary

Bridge	0
Flex+Bridge	0
FlexConnect	10
FlexConnect in OfficeExtend mode	0
H-Reap	0
Local	0
Monitor	0
Reap	0
Rogue Detector	0
SE-Connect	0
Sensor	0
Sniffer	0
Unknown	0

WLC Logs Summary

WLC Logs: PS-EWC

SESSION_MGR-5-FAIL	Times Seen	8
	First Seen	Mar 5 13:47:09 CET:
	Last Seen	Mar 5 14:21:48 CET:
	Text	Chassis 1 R0/0: wncd: Authorization failed or unapplied for client () on Interface capwap_9000...
CRYPTO_ENGINE-5-CSDL_COMPLIANCE_EXCEPTION_ADDED	Times Seen	1
	First Seen	Mar 5 14:40:19 CET:
	Last Seen	Mar 5 14:40:19 CET:
	Text	Cisco PSB security compliance exception has been added by SSH Process for use of MD5
SEC_LOGIN-5-LOGIN_SUCCESS	Times Seen	1
	First Seen	Mar 5 14:40:31 CET:
	Last Seen	Mar 5 14:40:31 CET:
	Text	Login Success [user: ' '] [Source: ' '] [localport: 22] at 14:40:31 CET Tue Mar 5 2024
SEC_LOGIN-5-WEBLOGIN_SUCCESS	Times Seen	2
	First Seen	Mar 5 14:45:44 CET:
	Last Seen	Mar 5 14:45:49 CET:

	Text	Login Success [user:] [Source:] at 14:45:44 CET Tue Mar 5 2024
WEBSERVER-5-LOGIN_PASSED	Times Seen	1
	First Seen	Mar 5 14:45:44 CET:
	Last Seen	Mar 5 14:45:44 CET:
	Text	Chassis 1 Login Successful from host by user ' ' using crypto cipher TLS_AES_256_G...
SYS-5-CONFIG_P	Times Seen	6
	First Seen	Mar 5 14:46:38 CET:
	Last Seen	Mar 5 14:46:39 CET:
	Text	Configured programmatically by process SEP_webui_wsma_http from console as psadmin on vty1
CLIENT_ORCH_LOG-6-CLIENT_ADDED_TO_RUN_STATE	Times Seen	1
	First Seen	Mar 5 14:31:35 CET:
	Last Seen	Mar 5 14:31:35 CET:
	Text	Chassis 1 R0/0: wncd: Username entry () joined with ssid (Guest) for device with MAC: /