

Catalyst 9800 > Security > Layer 2 Features

IOS-XE release: 16.2.1s
Intel 8265 driver release: 20.70.13.2 (Intel PROSet/Wireless 21.50.1)
Windows 10 release: 10.0.18362 Build 18362
Android version: Android 9 PKQ1.180729.001; Security Patch 2019-10-01 (MIUI 11.0.6.0)

dot1w	Key management: (DOT1X+SHA1) + (DOT1X+SHA256)
dot1r	Over DS
CCKM	Disabled

Intel 8265 wNIC										
	basic	dot11r adaptive	dot11r enabled + dot1X	dot11r enabled + FT+dot1X	dot11w optional	dot11w required	dot11r(a) + dot11w(o)	dot11r(a) + dot11w(r)	dot11r(e) + dot11w(r)	dot11r(e) + dot11w(o)
AP3700	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (FT+dot1X)	yes (dot1X) (1)	yes (SHA256)	yes (dot1X) (1)	yes (SHA256)	yes (SHA256) (2)	yes (FT+802.1X) (3)
AP3800	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (FT+dot1X)	yes (SHA256)	yes (SHA256)	yes (SHA256)	yes (SHA256)	yes (SHA256) (2)	yes (FT+802.1X) (3)
AP4800	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (FT+dot1X)	yes (SHA256)	yes (SHA256)	yes (SHA256)	yes (SHA256)	yes (SHA256) (2)	yes (FT+802.1X) (3)

Qualcomm Snapdragon 845 SDM845 (Xiaomi Mi8)										
	basic	dot11r adaptive	dot11r enabled + dot1X	dot11r enabled + FT+dot1X	dot11w optional	dot11w required	dot11r(a) + dot11w(o)	dot11r(a) + dot11w(r)	dot11r(e) + dot11w(r)	dot11r(e) + dot11w(o)
AP3700	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (dot1X) (4)	yes (dot1X)	no	yes (dot1X)	no	no	yes (dot1X) (5)
AP3800	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (dot1X) (4)	yes (dot1X)	no	yes (dot1X)	no	no	yes (dot1X) (5)
AP4800	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (dot1X) (4)	yes (dot1X)	no	yes (dot1X)	no	no	yes (dot1X) (5)

dot1w	Key management: (DOT1X+SHA1) + (DOT1X+SHA256)
dot1r	Over DS
CCKM	Enabled

Intel 8265 wNIC										
	basic	dot11r adaptive	dot11r enabled + dot1X	dot11r enabled + FT+dot1X	dot11w optional	dot11w required	dot11r(a) + dot11w(o)	dot11r(a) + dot11w(r)	dot11r(e) + dot11w(r)	dot11r(e) + dot11w(o)
AP3700	no	no	no	no	no	no	no	no	no	no
AP3800	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (FT+dot1X)	yes (SHA256)	yes (SHA256)	yes (SHA256)	yes (SHA256)	yes (SHA256) (6)	yes (FT+802.1X) (7)
AP4800	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (FT+dot1X)	yes (SHA256)	yes (SHA256)	yes (SHA256)	yes (SHA256)	yes (SHA256) (6)	yes (FT+802.1X) (7)

Qualcomm Snapdragon 845 SDM845 (Xiaomi Mi8)										
	basic	dot11r adaptive	dot11r enabled + dot1X	dot11r enabled + FT+dot1X	dot11w optional	dot11w required	dot11r(a) + dot11w(o)	dot11r(a) + dot11w(r)	dot11r(e) + dot11w(r)	dot11r(e) + dot11w(o)
AP3700	no	no	no	no	no	no	no	no	no	no
AP3800	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (dot1X) (4)	yes (dot1X)	no	yes (dot1X)	no	no	yes (dot1X) (8)
AP4800	yes (dot1X)	yes (dot1X)	yes (dot1X)	yes (dot1X) (4)	yes (dot1X)	no	yes (dot1X)	no	no	yes (dot1X) (8)

NOTE: Parenthesis values is the Auth key management suite in use after associating the client.

- Not associating when enabling at the same time both (dot1X)+(SHA256+dot1X).
Need to disable (SHA256-dot1X) to work 100% of the times.
- Not associating when enabling (dot1X-only) Auth key management suite alone, nor plus (FT+dot1X)+(SHA256+dot1X) Auth key management suites at the same time.
With all of the key management suites works only for the first time the device associates.
Need to disable (FT-dot1X) only to work 100% of the times. Dot1X-only enabled/disabled does not affect association.
- Not associating when enabling (dot1X)+(FT+dot1X)+(SHA256+dot1X) Auth key management suites at the same time.
Need to disable only (SHA256+dot1X) to work 100% of the times.
- dot1X-only enabled/disabled.
- FT+dot1X enabled/disabled. SHA256 disabled.
- Not associating when enabling (dot1X-only) Auth key management suite alone, nor plus (FT+dot1X)+(SHA256+dot1X) Auth key management suites at the same time.
Need to disable only (FT+dot1X) to work 100% of the times. Dot1X-only enabled/disabled does not affect association.
- Not associating when enabling (dot1X)+(FT+dot1X)+(SHA256+dot1X) Auth key management suites at the same time.
Need to disable only (SHA256+dot1X) to work 100% of the times.
- FT+dot1X enabled/disabled. SHA256 enabled/disabled.