NGWC – Central Webauth (CWA) using ISE 3850 and 5760

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CCIE # 37808
May 15, 2012
Agenda

- Configure SSID for Central Web Authentication using ISE
CWA – Parameter-Map Configuration

• Using GUI

• Defining Global Parameter Map (this is where virtual ip address is defined)

• Configuration > Security > Web Auth > Webauth Parameter Map
CWA – Parameter-Map Configuration

• Using GUI

• Click on the ‘global’ parameter map and define the virtual ipv4 address
CWA – Parameter-Map Configuration

• Using GUI

• Click on the ‘global’ parameter map and define the virtual ipv4 address
CWA – AAA Configuration

• Using GUI
  • Adding ISE as an Radius server and creating RADIUS server group
  • Adding RADIUS server
    • Define RADIUS server(s)
    • Create RADIUS group(s)
    • Create Method list to call under the SSID
CWA – AAA Configuration

- Define RADIUS Server(s)
- Click on Configuration > Security
CWA – AAA Configuration

• Define RADIUS Server(s)
• Click on RADIUS > Servers > New
CWA – AAA Configuration

- Define RADIUS Server(s)
- Add details for the RADIUS server and hit apply
CWA – AAA Configuration

• Define RADIUS Group(s)

• Under the SECURITY tab, click on Server Groups > Radius > New
Define RADIUS Group(s)

Name the Server Group and you will see a list of available RADIUS servers. In this example RADIUS server ‘ISE’ is the only server which was added. Select the RADIUS server(s) which need to be the part of this server group and add them as assigned servers.
CWA – AAA Configuration

• Authentication Method list

• Create an authentication method list (Ex: viten_cwa) with type ‘dot1x’ and group type as ‘group’. Select the RADIUS server group defined earlier.
CWA – AAA Configuration

• Authorization Method list
  • Create an authorization method list (Ex: cwa_macfilter), set type to ‘network’ and group type to ‘group’. Add the ISE server group.
  • The idea here is that for Wireless MAB, authorization needs to go to the ISE server for unknown mac addresses.

* Method List Name can be 'default' or any User defined Name.
CWA – WLAN Configuration

• Using GUI

• WLAN Config
CWA – WLAN Configuration

• Using GUI

• Enable the SSID and set the Interface to be used
CWA – WLAN Configuration

• Using GUI

• Enter the name of the mac filter to be used (example: cwa_macfilter) and disable Layer 2 and Layer 3 security.
CWA – WLAN Configuration

• Using GUI

• Under the AAA Server tab select the Authentication method list (ex: viten_cwa) which uses the radius server group pointing to the ISE server
CWA – WLAN Configuration

- Using GUI
  - On the Advanced tab make sure ‘Allow AAA Override’ and ‘NAC State’ is enabled
CWA – Additional Requirements

• Using CLI
  
  • radius-server attribute 31 send nas-port-detail mac-only
    # Send Client MACs
  
  • radius-server attribute 6 on-for-login-auth
    # send service type
  
  • radius-server vsa send accounting
  
  • radius-server vsa send authentication
    # Exchange VSA info
  
  • aaa server radius dynamic-author
    client 192.168.154.119 server-key ww-wireless
    auth-type any
    # Allow CoA from RADIUS
CWA – Additional Requirements

• URL Redirect ACL which is sent from ISE

• Extended IP access list ACL-REDIRECT

  deny udp any eq bootps any
  deny udp any any eq bootpc
  deny udp any eq bootpc any

  # above 3 rules block DHCP
  deny udp any any eq domain
  deny tcp any any eq domain

  # block DNS
  deny ip any host 192.168.154.119  # block access to ISE server
  deny ip any host 192.168.150.25   # block access to DHCP/DNS servers

  permit tcp any any eq www      # permit www and/or 443
CWA – Using CLI

• AAA configuration

• aaa authorization network cwa_macfilter group ISE_Group
  # Authorization Method list for mac filtering which points to ISE for Wireless MAB

• aaa authentication login viten_cwa group ISE_Group
  # Authentication method list which calls the RADIUS server group

• radius server ISE
  address ipv4 192.168.154.119 auth-port 1812 acct-port 1813
  key ww-wireless
  # Define RADIUS server

• aaa group server radius ISE_Group
  server name ISE
  # Define RADIUS server group
CWA – Using CLI

• WLAN configuration

wlan Central_Webauth 7 viten_cwa

  aaa-override    # enable AAA override

client vlan Viten

mac-filtering cwa_macfilter  # mac filter list pointing to radius server group

nac                        # enable radius nac

no security wpa

no security wpa akm dot1x

no security wpa wpa2

no security wpa wpa2 ciphers aes

security dot1x authentication-list viten_cwa  # authentication method list

session-timeout 1800

no shutdown
Debug and Show commands

- Debug aaa authentication
- Debug radius authentication
- Debug client mac-address <mac>
- Debug ip admissions [command family]
- Show run aaa
- Show run | section parameter
- Show wireless client mac-address <mac> detail
ISE Configuration Example

• Please see this doc for more details

Central Web Authentication on the WLC and ISE Configuration Example
Thank You

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