

RBAC Configuration Guide

Configuration for APC System

Disclaimer

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RBAC Configuration

- Role Based Access Control is can different service for users
- Service define for below items
 - Acl (IP Acl)
 - User QoS (Bandwidth Contract)
 - Vlan interface
 - Redirect Url
- Step 0-1) ACL config
 - Refer to IP Acl configuration
- Step 0-2) QoS config
 - Refer to User QoS configuration
- Step 1) Make Role Profile
- Step 2) Make Derivation Profile
- Step 3) Configuration for derivation - 802.1x user

Step 1) Make Role Profile - WEC

- Configuration > Security > Role Based Access Control > Role Profile
 - Role Profile Configuration

Security > Role Based Access Control > Role Profile

Total Entry : 1

<input type="checkbox"/>	PROFILE NAME	ACL RULE	USER QOS	VLAN ID
<input type="checkbox"/>	role_01	acl1	1 (qos1)	10

1

- Role Profile Add Configuration

Security > Role Based Access Control > Role Profile > Add

PROFILE NAME	<input type="text" value="role_01"/>
ACL RULE	<input type="text" value="acl1"/>
USER QOS	<input type="text" value="1 (qos1)"/>
VLAN ID	<input type="text" value="10"/>
URL	<input type="text" value="http://www.role1"/>

Step 1) Make Role Profile - CLI

- Role profile config

```
WEC8500# configure terminal
WEC8500/configure# rbac
WEC8500/configure/rbac# role-profile role_01
WEC8500/configure/rbac/role-profile role_01# acl acl1
WEC8500/configure/rbac/role-profile role_01# qos 1
WEC8500/configure/rbac/role-profile role_01# vlan 10
WEC8500/configure/rbac/role-profile role_01# url http://www.role1
WEC8500/configure/rbac/role-profile role_01#
```

- Role profile show

```
WEC8500# show rbac role-profile summary

===== Role Profile Summary =====

Id ProfileName Acl      Qos Vlan Url
== =====
1 role_01    acl1    1 10 http://www.role1
```

Step 2) Make Derivation Profile - WEC

- Configuration > Security > Role Based Access Control > Derivation Profile
 - Derivation Profile Configuration

Security > Role Based Access Control > Derivation Profile

Add Delete

Total Entry : 1

<input type="checkbox"/>	PROFILE NAME
<input type="checkbox"/>	derivation_1

1

- Derivation Profile Add Configuration
 - Ex) config to condition for user , "start-with" , "samsung", and "role_samsung"
samsung1, samsung2, samsung2 user assign to "role_samsung"

Security > Role Based Access Control > Derivation Profile > Controls > Add

Back Apply

PROFILE NAME	derivation_1
PRIORITY	1
CONDITION	User Equals derivationUser
ROLE PROFILE	role_01

Step 3) Make Derivation Profile - CLI

- Derivation profile config

```
WEC8500# configure terminal
WEC8500/configure# rbac
WEC8500/configure/rbac# derivation-profile derivation_1
WEC8500/configure/rbac/derivation-profile derivation_1# condition priority 11 user equal derivationUser role role_1
WEC8500/configure/rbac/derivation-profile derivation_1# condition priority 12 user start-with derivation role role_2
WEC8500/configure/rbac/derivation-profile derivation_1# condition priority 13 user contain vation role role_3
WEC8500/configure/rbac/derivation-profile derivation_1# condition priority 14 user end-with User role role_4
WEC8500/configure/rbac/derivation-profile derivation_1# condition priority 15 user not-equal samsung role role_5
WEC8500/configure/rbac/derivation-profile derivation_1# exit
```

- Derivation profile show

```
WEC8500# show rbac derivation-profile summary

derivation-profile derivation_1
condition priority 11 user equal derivationUser role role_1
condition priority 12 user start-with derivation role role_2
condition priority 13 user contain vation role role_3
condition priority 14 user end-with User role role_4
condition priority 15 user not-equal samsung role role_5
```

Step 3) Config for derivation (802.1x user) – WEC

- Configuration > WLANs > Security > Radius
 - Wlan Derivation Profile configuration

WLANs > WLANs > Security > Radius

L2 | L3 **Radius**

[Back](#) [Apply](#)

PROFILE NAME	wlan1
AUTHENTICATION SERVER	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
RADIUS SERVER 1	<input type="text"/>
RADIUS SERVER 2	<input type="text"/>
RADIUS SERVER 3	<input type="text"/>
ACCOUNTING SERVER	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
RADIUS SERVER 1	<input type="text"/>
RADIUS SERVER 2	<input type="text"/>
RADIUS SERVER 3	<input type="text"/>
FALLBACK TEST INTERVAL (SECONDS)	<input type="text" value="0"/>
ACCOUNTING INTERVAL (SECONDS)	<input type="text" value="600"/>
DERIVATION PROFILE NAME	<input type="text" value="derivation_1"/>

Foot Notes :

1. If L2 Security Type in 'Security > AAA > L2' is one of the following conditions,
 - 802.1x
 - Static WEP + 802.1x
 - WPA+WPA2 and 802.1x is enabled

At least one Radius server should be configured in 'Security > AAA > Radius'. Also, Radius must be enabled in 'WLANs > Security > Radius'

Step 3) Config for derivation (802.1x user) - CLI

- Derivation config for Wlan

```
WEC8500# configure terminal
WEC8500/configure# wlan 1
WEC8500/configure/wlan 1# derivation-profile ieee8021x derivation_1
WEC8500/configure/wlan 1# end
```

- Derivation show for Wlan

```
WEC8500# show rbac wlan-derivation-config

===== RbacDerivationConfigForWlan =====

WlanId Owner          DerivationProfileId
=====
1      Global           0
1      Open              0
1      Radius            1
1      CaptivePotal     0
```

RBAC for Remote AP

- Acl Profile define using ACL in Remote AP
- If Wlan tunnel mode is Local bridging, should be config ACL profile for RBAC ACL service.
- Step 0) RBAC configuration
 - Refer to RBAC configuration
- Step 1) Make Acl Profile
- Step 2) Config Acl Profile
- Step 3) Apply to remote APs

Step 1) Make Acl Profile - WEC

- Configuration > Security > Role Based Access Control > Acl Profile
 - Acl Profile Configuration

Security > Role Based Access Control > ACL Profile

Add Delete Send To APs

Total Entry : 1

<input type="checkbox"/>	PROFILE NAME	ACL COUNT	TOTAL RULE COUNT
<input type="checkbox"/>	aclPro_1	2	2

Foot Notes :

1. Can't be deleted if the access list is used in an Access Group.

- Acl Profile Add Acl

Security > Role Based Access Control > ACL Profile > Edit

Back Apply

PROFILE NAME	aclPro_1
ACL COUNT	2

Selected

ad1 ad2

All

>>

<<

Step 1) Make Acl Profile - CLI

- Acl profile config

```
WEC8500# configure terminal
WEC8500/configure# rbac
WEC8500/configure/rbac# acl-profile aclPro_1
WEC8500/configure/rbac/acl-profile aclPro_1# add-acl acl1
WEC8500/configure/rbac/acl-profile aclPro_1# add-acl acl2
WEC8500/configure/rbac/acl-profile aclPro_1# exit
WEC8500/configure/rbac# acl-profile aclPro_2
WEC8500/configure/rbac/acl-profile aclPro_2# end
```

- Acl profile show

```
WEC8500# show rbac acl-profile summary

===== LocalSwAclProfile =====

Id ProfileName TotalRuleCnt AclCnt RmtCnt
== =====
1  aclPro_1    2          2    0

WEC8050# show rbac remote acl-profile detail aclPro_1

===== Local Switch IP Acl Profile detail =====

ID : 1
ACL Profile Name : aclPro_1
Total Rule Count : 2
ACL List : Count (2)
          acl1(1), acl2(2)
```

Step 2) Config Acl Profile - WEC

- Configuration > AP Groups > Remote AP Group > ACL Profile
 - ACL PROFILE Configuration

AP Groups > Remote AP Group > ACL Profile

User Authentication **ACL Profile**

[Back](#) [Send To APs](#)

AP GROUP NAME testgroup01

SCOPE All ACL Profile Only

[Apply](#)

ACL PROFILE NAME test

OVERWRITE AP CONFIG Tunnel Forwarding Local Bridging Forwarding

Tunnel Forwarding

WLAN Split Tunnel ACL [Add](#) [Delete](#)

<input type="checkbox"/>	NO.	WLAN	SPLIT TUNNEL ACL	EDIT
<input type="checkbox"/>	1	wlan220	acl01	Edit

Local Bridging Forwarding

WLAN VLAN ID ACL Pre-Auth. ACL [Add](#) [Delete](#)

<input type="checkbox"/>	NO.	WLAN	VLAN ID	ACL	PRE-AUTH. ACL	EDIT
No data						

Step 2) Config Acl Profile - CLI

- Acl profile config to Remote Ap Group

```
WEC8500# configure terminal
WEC8500/configure# ap-group apg_1
WEC8500/configure/ap-group apg_1# remote
WEC8500/configure/ap-group apg_1/remote# acl-profile aclPro_1
WEC8500/configure/ap-group apg_1/remote# end
```

- Acl profile show with Remote Ap Group

```
WEC8500# show rbac remote-group summary
```

GRP_ID	GRP_NAME	PRO_ID	Role Config File Name
=====	=====	=====	=====
2	apg_1	1	etc/rmtapgrp/rbac_cfg_rmtapgrp2_XXXX.tar

Step 3) Apply to remote APs – WEC(1)

- Configuration > Security > Role Based Access Control > ACL Profile
 - Send To All Remote APs

Security > Role Based Access Control > ACL Profile

Total Entry : 1

<input type="checkbox"/>	PROFILE NAME	ACL COUNT	TOTAL RULE COUNT
<input type="checkbox"/>	aclPro_1	2	2

Foot Notes :

1. Can't be deleted if the access list is used in an Access Group.

Step 3) Apply to remote APs – WEC(2)

- Configuration > AP Groups > Remote AP Group > ACL Profile
 - Send To Aps for Remote Group
 - All : ACL profile send + ACL config(Tunnel + Local Bridging Forwarding)
 - ACL Profile Only : ACL profile send only

AP Groups > Remote AP Group > ACL Profile

User Authentication | **ACL Profile**

[Back](#) [Send To Aps](#)

AP GROUP NAME testgroup01

SCOPE All ACL Profile Only

[Apply](#)

ACL PROFILE NAME test

OVERWRITE AP CONFIG Tunnel Forwarding Local Bridging Forwarding

Tunnel Forwarding

WLAN --- Split Tunnel ACL --- [Add](#) [Delete](#)

<input type="checkbox"/>	NO.	WLAN	SPLIT TUNNEL ACL	EDIT
<input type="checkbox"/>	1	wlan220	acl01	Edit

Local Bridging Forwarding

WLAN --- VLAN ID 0 ACL --- Pre-Auth. ACL --- [Add](#) [Delete](#)

<input type="checkbox"/>	NO.	WLAN	VLAN ID	ACL	PRE-AUTH. ACL	EDIT
No data						

Step 3) Apply to remote APs – WEC(3)

- Configuration > Access Points> Remote AP > ACL Profile

- Send To Ap

- All : ACL profile send + ACL config(Tunnel + Local Bridging Forwarding)
- ACL Profile Only : ACL profile send only

Access Points > Remote AP

Back Send To APs

AP PROFILE NAME	ap_1
AP NAME	AP_f4d9fb118973
AP GROUP NAME	testgroup01
ACL PROFILE	test
SCOPE	<input checked="" type="radio"/> All <input type="radio"/> ACL Profile Only

Tunnel Forwarding

WLAN Split Tunnel ACL Add Delete

<input type="checkbox"/>	NO.	WLAN	SPLIT TUNNEL ACL	EDIT
<input type="checkbox"/>	1	wlan220	acl01	Edit

Local Bridging Forwarding

WLAN VLAN ID ACL Pre-Auth. ACL Add Delete

<input type="checkbox"/>	NO.	WLAN	VLAN ID	ACL	PRE-AUTH. ACL	EDIT
<input type="checkbox"/>	1	wlan221	0	acl01	acl01	Edit

Step 3) Apply to remote APs - CLI

- Acl Profile Send to Aps
 - All : send to all remote group Aps.
 - Acl-profile : send to APs for selected acl profile (cli only).
 - Remote-ap-group : send to APs for selected remote group.
 - Ap : send to AP for selected remote ap.

```
WEC8500# configure terminal
WEC8500/configure# rbac
WEC8500/configure/rbac# sync-config
WEC8500/configure/rbac/sync-config# all
WEC8500/configure/rbac/sync-config# acl-profile aclPro_1
WEC8500/configure/rbac/sync-config# remote-ap-group apg_1
WEC8500/configure/rbac/sync-config# ap ap_1
```

RBAC Features on Samsung APC

Version	Target	Configuration in Radius Server	Condition in Derivation Profile	Configuration in Role Profile	Role-Based User Service
v2.3.8	-802.1x user	-ACL -QoS -VLAN	N/A	N/A	-ACL -QoS -VLAN
		-Role Profile	N/A	-ACL -QoS -VLAN	-ACL -QoS -VLAN
v2.4.12	-802.1x user	-ACL -QoS -VLAN -URL	N/A	N/A	-ACL -QoS -VLAN -URL
		-Role Profile -Filter-Id	N/A	-ACL -QoS -VLAN -URL	-ACL -QoS -VLAN -URL
		None	-User-Id (Start with / End with / Contains / Equals / Not equals)		
v3.0 (plan)	-802.1x user	-ACL -QoS -VLAN -URL	N/A	N/A	-ACL -QoS -VLAN -URL
		-Role Profile -Filter-Id	N/A	-ACL -QoS -VLAN -URL -DPI	-ACL -QoS -VLAN -URL -DPI
	-802.1x user -Web Auth user	None	-User-Id -Mac-address -BSSID / SSID / Wlan -AP-Name -Device-Type -Reply message -RADIUS		

RBAC Features on Samsung APC

Role Based Access Control:

1) v2.3.8

- Support for 802.1x users
- ACL/QoS/VLAN service with Radius Server
- Role-profile based user service with Radius Server

2) v2.4.x

- URL-redirect service with Radius Server
- Filter-Id based user service with Radius Server
- Role-profile selection by Derivation Profile (condition = User-id)

3) V3.0

- Support for web auth users
- Condition enhancement in Derivation Profile
 - Mac-address
 - BSSID
 - SSID
 - Wlan
 - AP name
 - Device type
 - Reply message
 - Radius

Thank you!