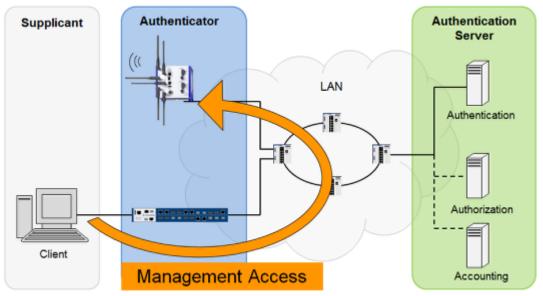


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How to use Radius to access the BAT's agent

- 2018-02-21 - BAT, WLC (HiLCOS)

General information



BAT uses so named ""**Privilege Levels**"" to define different access rights of a user to the agent. Those levels are defined as:

- 1: User, read-only
- 3: User, write-only
- 5: Admin, read only, no trace rights
- 7: Admin, read and write, no trace rights
- 9: Admin, read-only
- 11: Admin, read and write
- 15: Supervisor

All other values are mapped to ""no access"".

Additional to the ""Privilege Levels"" you can define so named ""Functional Rights"". A functional right could be e.g. the right to use a specific wizard within WEB-interface.

Open LANconfig configuration dialog

BAT-R_56AB24 Configuration			3 X
③ ●	Authentication via: RADIUS authentication Specify the attribute to b Access rights via: Specify if accounting da Accounting:	ation thenticating users while accessing the device. Internal administrator table the used by the RADIUS server for transmitting access rights. Provider specific attribute ta shall be transmitted via RADIUS. No envers in the following table. RADIUS servers	
Firewall/QoS			

- Open LANconfig dialog
- Click on ""Configuration Management Authentication"" in the left hand menu
- Click on ""RADIUS servers..."" to configure the Radius servers.

Configure Radius Servers

Add Edit RADIUS servers - New Entry Profile name: QuickFinder Add Edit Server address: 3 192.168.10.216 Port: 1.812 Secret: 4 Source address: Select Protocol: RADIUS	Profile name Backup profile	Server address Port	Source addr. Protocol C	ategory	ок
QuickFinder Add Edit Backup profile: Select Server address: 3 192.168.10.216 Pot: 1.812 Pot: 1.812 Secret: 4 Image: Show Generate paseword in the second i			RADIUS	servers - New Entry	Cancel
QuickFinder Add Edit Server address: 3 (192.168.10.216 Port: 1.812 Secret: 4 (192.168.10.216) Secret: 4 (192.168.10.216) Show Connerate password Source address: Select Protocol: RADIUS Select		-	Profile r	iame: 2 RASE	BERRY
Port: 1.812 Secret: 4 Secret: Select Protocol: RADIUS •			Backup	profile:	 Select
Port: 1.812 Secret: 4 Secret: Select Protocol: RADIUS •	QuickFinder	Add	Edit Server :	address: 3 192.1	68.10.216
Source address:			Port:		
Source address:			Secret:	4	Show
Protocol: RADIUS -				Gene	nate password
			Source	address:	✓ Select
			Protoco	RADI	US 👻
Category: Authentication -					
			Categor	y: Authe	ntication 👻

- 1. Press ""Add..."" to open the Radius Servers dialog.
- 2. Enter Profile name
- 3. Enter IP-address of your Radius server
- 4. Enter shared secret defines on your Radius server
- 5. Press ""OK""

Specify the Radius Attribute to be used

BAT-R_56A824 Configuration	
Configuration Co	Device Login Authentication Select the method for authenticating users while accessing the device. Authentication via: Internal administrator table RADIUS authentication Specify the attribute to be used by the RADIUS server for transmitting access rights. Access rights via: Provider specific attribute Specify if accounting data shall b Accounting: No Configure the RADIUS servers in the following table. RADIUS servers

Management privilege level attribute

Use ""**Management privilege level attribute**"" if you don't want to assign functional access rights to any user and you don't use Radius attribute 136 for other devices in the network.

If you use ""**Management privilege level attribute**"", configuration of Radius server is more easy cause you then can use standard Radius attribute 136 (Management-Privilege-Level).

Here is an example of freeradius users file:

testuser Cleartext-Password := ""testpassword"" User-name == ""testuser"", Service-Type := NAS-Prompt-User, Service-Type := Administrative-User, Management-Privilege-Level := ""15""

This testuser will have supervisor rights because of Management-Privilege-Level 15.

Provider specific attribute

If you use Radius attribute 136 for other devices in the network or you want to assign functional access rights to a user then choose **""Provider specific attribute""**. This is the default value.

In this case you have to use two vendor-specific Radius attributes using **vendor ID 2356**.

Access rights ID: 11 Function rights ID: 12

For freeradius these vendor-specific attributes have to be defined in a file which has to be included in /etc/freeradius/dictionary. In the following example the file is named /etc/freeradius/dictionary.hirschmann. In this case please add the red line into /etc/freeradius/dictionary. It should then look like:

.....

The filename given here should be an absolute path.
#
\$INCLUDE /usr/share/freeradius/dictionary
\$INCLUDE /etc/freeradius/dictionary.hirschmann

The file /etc/freeradius/dictionaly.hirschmann file should look like:

-*- text -*#
#
dictionary.hirschmann
#
originally by
""J.S. "" <>
#
VENDOR Hirschmann 2356
BEGIN-VENDOR Hirschmann
Attributes
ATTRIBUTE Hirschmann-Access-Rights 11 integer
ATTRIBUTE Hirschmann-Function-Rights 12 integer
END-VENDOR Hirschmann

An example for a users file could be:

```
network Cleartext-Password := ""hirschmann""
User-name == ""network"",
Hirschmann-Access-Rights := ""1"",
Hirschmann-Function-rights := ""67"",
```

This is how the values for ""Hirschmann-Functional-Rights"" can be calculated:

- 1. Open the console of the BAT.
- 2. Change to the directory **Setup** > **Config** > **Admins**.
- 3. The command set? shows you the current mapping of the function rights to the corresponding hexadecimal code (e.g. Device-Search (0x80)).
- 4. To combine function rights, you add their hex values together.
- 5. Convert the hexadecimal value to a decimal number.
- 6. By using this decimal value in the function rights ID, you can transfer the corresponding rights.

In above example the user ""network"" gets functional rights for Basic-Wizard (0x1) Security-Wizard (0x2) Time-Setting (0x40)

Sum: 43 (HEX) = 67 (DEZ)