RADIUS accounting interim update to be sent immediately after learned

Revision History

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| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Description** |
| **0.1** | **09/25/2014** | **Yejun Zong** | **Initial version** |

# Introduction

See Auth Enhancement epic for more background.   
  
HiveOS should send out interim update with device IP address immediately once the IP address is snooped from DHCP exchange. The interim update should only contain DHCP snooped IP address.   
  
This allows RADIUS server to authorize service with minimal delay.   
  
Acceptance Criteria:   
\* Create a RADIUS authentication set up, which can use the AP's RADIUS.   
\* prepare a device by connecting it to a different network first, that's to ensure the ip range of the device is different from the test set up.   
\* now connect the device to the test network, using RADIUS.   
\* capture RADIUS accounting messages, as well as DHCP handshake. Verify that a RADIUS accounting interim update is sent shortly after the DHCP address is obtained.

# Test strategy

# Test Acceptance Criterion from Development

# Topology

# TestCase

## Function TestCase

#### RADIUS accounting interim update, enable dhcp to renew IP

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| --- | --- | --- | --- |
| Case ID | **Radius\_Accounting\_Interim\_Update\_1** | | |
| Priority | Accept | Automation Flag | yes |
| Topology to use | STA1----wireless----AP1----SW | | |
| Description | Accounting start will be delay to sent after authenticaion success, the delay interval is 1 second. | | |
| Platform Dependence |  | | |
| Pre-condition | * Configure a ssid with 802.1x auth on AP1 * Configure a radius server to support eap type * Configure an account on radius server | | |
| Test procedure | 1. STA1 disable the dhcp process 2. STA1 connects the ssid using 802.1x is successful 3. Wait 1 second , result1. 4. STA1 enable the dhcp process,result2. | | |
| Expect result | 1. Accounting start will be delay to sent after authenticaion success, the delay interval is 1 second. There’s no STA1’s IP address in the accounting start packet. 2. The accounting update packet is send out immediately after the station gets a new IP. Use the wireshark to check. | | |

#### RADIUS accounting interim update, change dhcp pool to renew IP

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| --- | --- | --- | --- |
| Case ID | **Radius\_Accounting\_Interim\_Update\_2** | | |
| Priority | Accept | Automation Flag | no |
| Topology to use | STA1----wireless----AP1----SW | | |
| Description | Accounting start will be delay to sent after authenticaion success, the delay interval is 1 second. | | |
| Platform Dependence |  | | |
| Pre-condition | * Configure a ssid with 802.1x auth on AP1 * Configure a radius server to support eap type * Configure an account on radius server | | |
| Test procedure | 1. STA1 enable the dhcp process 2. STA1 connects the ssid using 802.1x is successful 3. Wait 1 second , result1. 4. STA1 renew IP, result2. | | |
| Expect result | 1. Accounting start will be delay to send after authenticaion success, the delay interval is 1 second. There will be a new IP address in the accounting start packet if the station have gotten it. 2. If the IP address is the same, AP will not send out an accounting update packet, else AP will send out an accounting update packet immediately, and the packet contains a new IP. | | |
| Comment |  | | |

#### RADIUS accounting interim update, change user-profile to renew IP

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| --- | --- | --- | --- |
| Case ID | **Radius\_Accounting\_Interim\_Update\_3** | | |
| Priority | Middle | Automation Flag | yes |
| Topology to use | STA1----wireless----AP1----SW | | |
| Description | Accounting start will be delay to sent after authenticaion success, the delay interval is 1 second. | | |
| Platform Dependence |  | | |
| Pre-condition | * Configure a ssid with 802.1x auth on AP1 * Configure a radius server to support eap type * Configure an account on radius server | | |
| Test procedure | 1. STA1 enable the dhcp process 2. STA1 connects the ssid using 802.1x is successful 3. Wait 1 second , result1. 4. Change vlan for the same UPID in the user-profile, result2. | | |
| Expect result | 1. Accounting start will be delay to send after authenticaion success, the delay interval is 1 second. There will be a new IP address in the accounting start packet if the station have gotten it. 2. AP will send out an accounting update packet immediately after the station obtains a new IP address from DHCP, and the packet contains the new IP. | | |
| Comment |  | | |

#### RADIUS accounting interim update, roaming with dhcp IP

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| --- | --- | --- | --- |
| Case ID | **Radius\_Accounting\_Interim\_Update\_4** | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | STA1----wireless----AP1----SW  AP2-----| | | |
| Description | the acct-multi-session-id is included in the start. This is used in roaming. | | |
| Platform Dependence |  | | |
| Pre-condition | * Configure a ssid with 802.1x auth on AP1 and AP2 * Configure a radius server to support eap type * Configure an account on radius server | | |
| Test procedure | 1. STA1 connects the AP1 using 802.1x is successful 2. Wait 1 second , result1. 3. STA1 roams to AP2, result2. | | |
| Expect result | 1. Accounting start will be delay to sent after authenticaion success, the delay interval is 1 second. There will be an acct-multi-session-id in the accounting start packet. 2. Accounting start will be sent immediately on AP2 after roaming success, the acct-multi-session-id is the same. Besides, the accounting start packet contains the station’s IP address. | | |
| Comment |  | | |

#### RADIUS accounting interim update, static IP

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| --- | --- | --- | --- |
| Case ID | **Radius\_Accounting\_Interim\_Update\_5** | | |
| Priority | Accept | Automation Flag | yes |
| Topology to use | STA1----wireless----AP1----SW | | |
| Description | Add DHCP address in accounting message only, but still report static and DHCP address to HM. | | |
| Platform Dependence |  | | |
| Pre-condition | * Configure a ssid with 802.1x auth on AP1 and AP2 * Configure a radius server to support eap type * Configure an account on radius server | | |
| Test procedure | 1. Configure a static IP address with wifi interface on STA1 2. STA1 connects the AP1 using 802.1x is successful 3. Wait 1 second , and STA1 ping gateway, result1. 4. Use HM to check the client’s status, result2. 5. STA1 uses DHCP to obtain a new IP address, result3. | | |
| Expect result | 1. Accounting start will be delay to sent after authenticaion success, the delay interval is 1 second. There’s no STA1’s static IP address in the accounting start packet. 2. The client’s local IP address on HM is just the STA1’s static IP address. 3. Verify that a RADIUS accounting interim update is sent shortly after the DHCP address is obtained. The DHCP address is included in the packet. | | |
| Comment |  | | |

#### RADIUS accounting interim update, roaming with static IP

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| --- | --- | --- | --- |
| Case ID | **Radius\_Accounting\_Interim\_Update\_6** | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | STA1----wireless----AP1----SW  AP2-----| | | |
| Description | Add DHCP address in accounting message only. STA1 roams to AP2 with static IP address. Check the accounting message. | | |
| Platform Dependence |  | | |
| Pre-condition | * Configure a ssid with 802.1x auth on AP1 and AP2 * Configure a radius server to support eap type * Configure an account on radius server | | |
| Test procedure | 1. Configure a static IP address with wifi interface on STA1 2. STA1 connects the AP1 using 802.1x is successful 3. Wait 1 second , and STA1 ping gateway, result1. 4. STA1 roams to AP2, result2. | | |
| Expect result | 1. Accounting start will be delay to sent after authenticaion success, the delay interval is 1 second. There’s no STA1’s static IP address in the accounting start packet. 2. Accounting start will be sent immediately on AP2 after roaming success, the acct-multi-session-id is the same. And there’s no STA1’s IP address in the packet. | | |
| Comment |  | | |

#### RADIUS accounting interim update, remove Service-Type attribute form accounting on and off

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| --- | --- | --- | --- |
| Case ID | **Radius\_Accounting\_Interim\_Update\_7** | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | STA1----wireless----AP1----SW | | |
| Description | remove Service-Type attribute form accounting on and off | | |
| Platform Dependence |  | | |
| Pre-condition | * Configure a ssid with 802.1x auth on AP1 and AP2 * Configure a radius server to support eap type * Configure an account on radius server | | |
| Test procedure | 1. interface wifi1 ssid xxx shutdown,result1. 2. no interface wifi1 ssid xxx shutdown,result2. | | |
|  | 1. AP sent an accounting off packet immediately, and the packet did not contains Service-Type attribute. 2. AP sent an accounting on packet immediately, and the packet did not contains Service-Type attribute. | | |
| Comment |  | | |