



Purpose: To Configure Subnet-Based DHCP and Assign the DHCP Lease from the Subnet of Your Choice.

To assign a subnet-based DHCP IP address, based on specific switch port, you would need to have a VLAN or RFC1493 compatible switch connected to the subscriber side. In this example we are using a VLAN switch that is already configured with VLAN tagging.

Note: For instructions on how to configure VLAN tagging on your switch please refer to your user’s manual for that switch.

Step 1: Add a new pool

By default, DHCP is enabled and configured on the NSE. Login to the NSE and select Configuration/DHCP to view the settings.

Note: You may change the default pool to any other desired network/subnet (192.168.1.0 For example) by clicking on the DHCP Server IP link, make the changes and click “Modify”

To add a new pool click on “Add”, specify the IP addresses for the new pool then click on “Add”.

A screenshot of a web-based configuration interface for DHCP settings. The page has a green header bar with the text 'DHCP Settings'. Below the header, there is a section for configuring a DHCP pool. The 'Enable this DHCP Pool' checkbox is checked. The following fields are filled with values: 'DHCP Server IP' is 192.168.1.1, 'DHCP Server Netmask' is 255.255.255.0, 'DHCP Pool Start IP' is 192.168.1.2, 'DHCP Pool Stop IP' is 192.168.1.150, and 'DHCP Lease Minutes' is 60. There is a blue information icon to the right of the 'DHCP Pool Start IP' field. Under the 'Router:' section, the 'DHCP Server IP' radio button is selected. Other options include 'Specify:' with an empty text box, 'Public Pool' (unselected), 'Private Pool' (selected), 'IP Upsell Pool' (unselected), and 'Default Pool' (unselected). At the bottom, there are three buttons: '+ Add Pool', '+ Add Pool to add options', and 'Restore'.



Step 2: Enable Subnet-based DHCP.

In the main DHCP Configuration Page enable Subnet-based, check Save to enable.

DHCP Settings

DHCP Services: Disabled Relay Server

DHCP Relay Parameters:

DHCP Server IP

DHCP Relay Agent IP i

Relay Agent Information (option 82) »

DHCP Server Parameters: Subnet-based IP-Upsell Forwarded DHCP Client

Step 2: Enable VLAN tagging in the NSE

Under Configuration/Port-Location enable 802.1Q two-way and click Save. You do not have to reboot the NSE.

Port-Location Settings

How AG determines where your subscribers are located.

In Room Port Mapping Enabled ⚠ Caution

Username

Password

No Port-Location mapping

VLAN IDs

802.1Q two-way



There are 3 ways of assigning Subnet-based DHCP addresses to subscribers

- a. Using the Port-Location table
- b. Using the Radius Nomadix-Subnet attribute
- c. Manually configuring the subscriber's internal database entry

A. Assign Subnet-based DHCP Using Port-Location

Click on “Add” in the Port-Location folder. Configure the Location, Port and Subnet that is used to lease out the IP addresses for this port, Description, State and click on Add.

Note: Location is the actual room which is used when charging to PMS.

Port is the VLAN ID that is configured on the switch. Description is optional, State “No Charge” means subscriber will not be prompted with the login and/or billing screens, where “Charge for use” will.

Add a Port-Location

Location ⓘ

Port (e.g. VLAN ID)

Description ⓘ

Provide DHCP Service ⓘ

Subnet

Default QoS Policy

State

No Charge (Authorization not needed)

Blocked

Charge for Use (Authorization is required) ⓘ

Internally-authorized subscribers ⓘ

Enable Facebook Login

Enable RADIUS Billing

Enable PMS Billing

Enable Credit Card Billing

Billing plan(s) available on port ⓘ

All plans

No plans

Specific plans

Hourly Plan

Allow Intra-port communication

* FB=Facebook Login, RAD=RADIUS, PMS=PMS, CC=Credit Card, HFB=Hyatt Freebird

In the above configuration a subscriber will obtain an IP address from the 192.168.1.0 subnet added in the first section of this document.

Note: Depending on the subnet mask the Subnet ID could be different



In the Subscriber Administration/Current screen you can check to see the user gets an IP address from the 192.168.1.0 subnet.

MAC	IP	Port	Room	User Name	Bandwidth Up / Down	Throughput In-Out Up / In-Out Down	AAA State	Expiration
00:10:A4:B1:0F:9D	192.168.1.12	2	2		0 / 0	29-29 / 1177-1177	Valid	Unlimited

B. Assign the Subnet-based IP Using the Nomadix-Subnet Attribute on a Radius Server

When using the Nomadix-Subnet attribute to assign the DHCP pool, you must first configure the default DHCP pool to have a short lease time. The reason for this is that the user will obtain a lease from the default pool prior to logging in via Radius. Once the client machine renews its lease, which is done automatically when 50% of their current DHCP lease elapses, the user will receive a lease from the designated subnet pool.

Configure the User and the Dictionary files on your Radius server to include the Nomadix-Subnet Attribute

Dictionary

```
ATTRIBUTE Nomadix-Subnet          6      string (1, 0)
```

User's database

```
"test" Auth-Type := Local, User-Password == "test"
      Nomadix-Subnet = "192.168.1.0",
```

Note: The above example is based on a Free Radius configuration for Linux



Enable “Radius Subnet Attribute” in Configuration/Radius Client folder, under Miscellaneous Options.

RADIUS Client Settings
Setup AG as a RADIUS client

Server Selection and Communication

Default RADIUS Mode: Disabled Realm-Based Fixed
 Default RADIUS Service Profile: testradius ▼

Local Authentication Port: (0 means port number will be selected dynamically)
 Local Accounting Port: (0 means port number will be selected dynamically)

Later login supersedes previous

Miscellaneous Options

Default User Idle Timeout: (seconds)
 User Login Retry Timeout: (seconds)

Enable Automatic Subscriber Reauthentication
 Automatic Subscriber Reauthentication Timeout: (minutes)
 Restrict Reauthentication to Originally Authenticated Zone
 Enable URL Redirection

RADIUS Client Settings

Send NAS identifier
 NAS identifier:
 Send NAS IP
 Send NAS Port type
 NAS Port Type:
 Send Framed IP
 Enable Termination-Action Radius Attribute
 Percent of Max Subscriber Data Volume to Trigger RADIUS-Request Termination-Action event: ▼ (only applicable for volume-based sessions)
 Enable Session-Terminate-End-Of-Day When Authorized
 Enable Byte Count Reset On Account Start
 Enable Radius Subnet Attribute

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00:10:A4:B1:0F:9D	192.168.1.12	0		subnet	0 / 0	24-24 / 499-499	Valid	Radius: Unlimited



C. Manually Configure Subscriber's MAC Address for Subnet-based IP

In the Subscriber Administration folder click on “Add” and type the MAC address plus the subnet ID as shown in the example below then click on “Add”.

Add a Subscriber Profile to the Database

Subscriber
 Device
 Group Account

DHCP Address Type:
 Private
 Public
 i

MAC Address:

IP Address:

Subnet:

Username:

Password:

Expiration Time: hrs mins

Paid: USD

User Definable 1:

User Definable 2:

Max Upstream Bandwidth: Kbps

Max Downstream Bandwidth: Kbps

Class Name:

QoS Policy:

Count-down after Login: Enabled

SMTP Redirection: Enabled i

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MAC	IP	Port	Room	User Name	Bandwidth Up / Down	Throughput In-Out Up / In-Out Down	AAA State	Expiration
00:10:A4:B1:0F:9D	192.168.1.12	0			0 / 0	0-0 / 0-0	Valid	Unlimited