

Example - DHCP Configuration for Two Networks

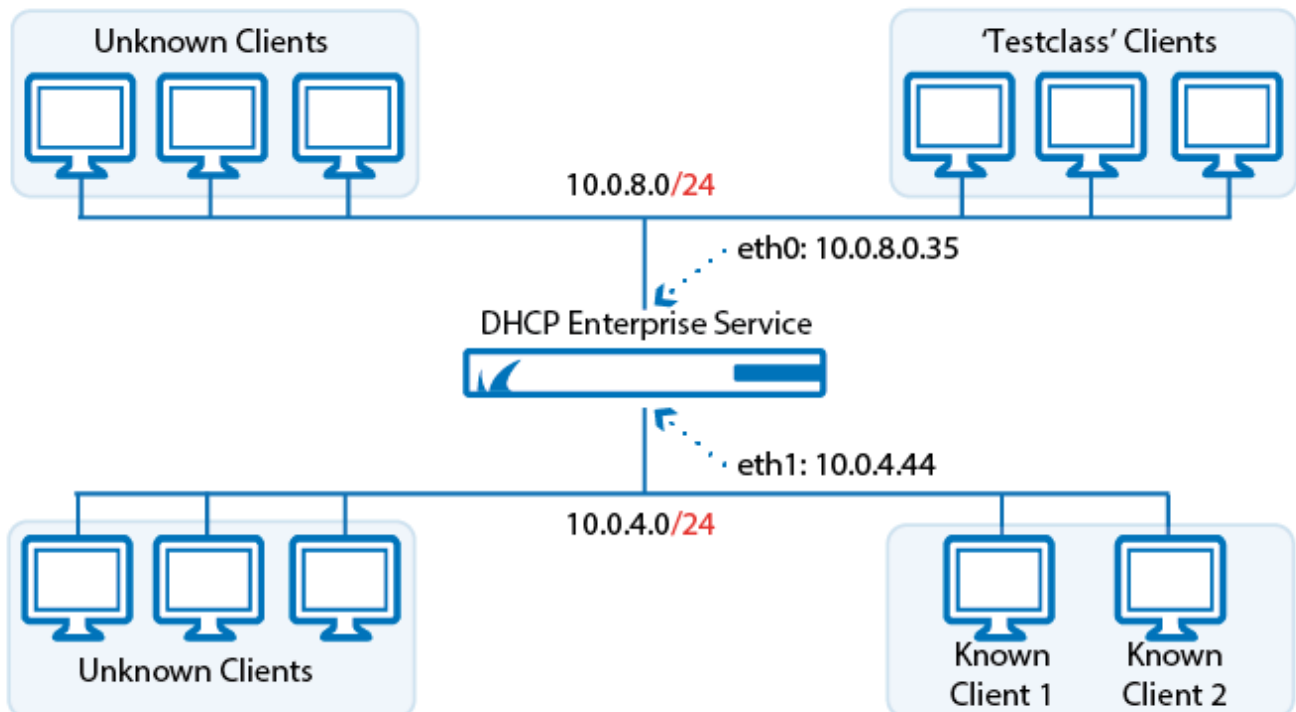
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The following article provides an overview of how to configure DHCP for an example environment. It provides steps and example settings to configure a DHCP service for an environment that contains two networks with three different IP pools.

Example Environment

For the example environment that is displayed in the following figure, a DHCP service must be configured for two networks with three different IP pools:

- **Network 1** (10.0.8.0/24) – Contains two address pools: one pool for unknown clients and one pool for known clients (identified via their MAC addresses).
- **Network 2** (10.0.4.0/24) – Contains one address pool for unknown clients and two known clients.



Example Environment Configuration

The DHCP service for the example environment can be configured with the following steps and settings:

| Step | Settings for Example Environment |
|--|--|
| Step 1: Create a virtual server. | The virtual server is created with the following settings: <ul style="list-style-type: none"> • First-IP: 10.0.8.35 • Second-IP: 10.0.4.44 |
| Step 2: Create the DHCP service. | By default, Service Availability for the DHCP service is set to <i>All-IPs</i> . |
| Step 3: Enable advanced DHCP settings. | To enable the advanced DHCP settings, you must be in the Advanced Configuration Mode. On the DHCP Enterprise Configuration - Operational Setup page, click Switch to Advanced View from the Configuration Mode menu in the left navigation pane. Make sure that you select yes from the Use Advanced Pool Configuration list. |
| Step 4: Configure DHCP classes. | A DHCP class named <i>testclass</i> is created with the following settings: <ul style="list-style-type: none"> • Match Type: MAC • Match Value List: 1:00:01: f3:34:44:2g and 1:00:01: f3:34:44:2e For Ethernet interfaces, you must enter <i>1:</i> before the MAC address |

| <p>Step 5: Configure subnets and address pools.</p> | <p>Two separate subnets are created for Network 1 (10.0.8.0/24) and Network 2 (10.0.4.0/24).</p> <p>1. A subnet named <i>Subnet1</i> for 10.0.8.0/24 is created with the following settings:</p> <ul style="list-style-type: none"> ◦ Subnet Type: <i>explicit</i> ◦ Network Address: <i>10.0.8.0/24</i> ◦ <p>Address Pools: The two address pools for Subnet1 are configured with the following settings:</p> <table border="1" data-bbox="384 595 1468 1227"> <thead> <tr> <th data-bbox="384 595 667 645">Address Pool</th> <th data-bbox="667 595 1468 645">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="384 645 667 936"> <p>Address Pool 1 - Unknown</p> </td> <td data-bbox="667 645 1468 936"> <p>From the first address pool, only unknown clients may receive IP addresses. This address pool is configured with the following settings:</p> <ul style="list-style-type: none"> ■ IP Begin: <i>10.0.8.10</i> ■ IP End: <i>10.0.8.15</i> ■ Denied Classes: <i>testclass</i> ■ Known Clients: <i>deny</i> ■ Unknown Clients: <i>allow</i> </td> </tr> <tr> <td data-bbox="384 936 667 1227"> <p>Address Pool 2 - Classpool</p> </td> <td data-bbox="667 936 1468 1227"> <p>From the second address pool, only allowed classes may receive IP addresses. This address pool is configured with the following settings:</p> <ul style="list-style-type: none"> ■ IP Begin: <i>10.0.8.20</i> ■ IP End: <i>10.0.8.30</i> ■ Allowed Classes: <i>testclass</i> ■ Known Clients: <i>not-set</i> ■ BOOTP ClientsPolicy: <i>not-set</i> </td> </tr> </tbody> </table> | Address Pool | Description | <p>Address Pool 1 - Unknown</p> | <p>From the first address pool, only unknown clients may receive IP addresses. This address pool is configured with the following settings:</p> <ul style="list-style-type: none"> ■ IP Begin: <i>10.0.8.10</i> ■ IP End: <i>10.0.8.15</i> ■ Denied Classes: <i>testclass</i> ■ Known Clients: <i>deny</i> ■ Unknown Clients: <i>allow</i> | <p>Address Pool 2 - Classpool</p> | <p>From the second address pool, only allowed classes may receive IP addresses. This address pool is configured with the following settings:</p> <ul style="list-style-type: none"> ■ IP Begin: <i>10.0.8.20</i> ■ IP End: <i>10.0.8.30</i> ■ Allowed Classes: <i>testclass</i> ■ Known Clients: <i>not-set</i> ■ BOOTP ClientsPolicy: <i>not-set</i> | | | | |
|---|--|--------------|-------------|--|--|--|---|------------------------------|--|------------------------------|--|
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| <p>Step 6: Configure known clients.</p> | <p>2. A subnet named <i>Subnet2</i> for 10.0.4.0/24 is created with the following settings:</p> <ul style="list-style-type: none"> ◦ Subnet Type: <i>explicit</i> ◦ Network Address: <i>10.0.4.0/24</i> ◦ <p>Address Pools: The subnet has one address pool which is configured with the following settings:</p> <table border="1" data-bbox="384 1469 1468 1765"> <thead> <tr> <th data-bbox="384 1469 703 1518">Address Pool</th> <th data-bbox="703 1469 1468 1518">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="384 1518 703 1765"> <p>Address Pool 1 - Unknown</p> </td> <td data-bbox="703 1518 1468 1765"> <p>From the address pool, only unknown clients may receive IP addresses. This address pool is configured with the following settings:</p> <ul style="list-style-type: none"> ■ IP Begin: <i>10.0.4.10</i> ■ IP End: <i>10.0.4.15</i> ■ Known Clients: <i>deny</i> ■ Unknown Clients: <i>allow</i> </td> </tr> </tbody> </table> <p>Two client groups are created:</p> <table border="1" data-bbox="384 1809 1193 2022"> <thead> <tr> <th data-bbox="384 1809 624 1859">Client Group</th> <th data-bbox="624 1809 1193 1859">Settings</th> </tr> </thead> <tbody> <tr> <td data-bbox="384 1859 624 1944"> <p>Known Client 1</p> </td> <td data-bbox="624 1859 1193 1944"> <ul style="list-style-type: none"> • MAC Address: <i>00:01:f3:34:44:2g</i> • Fixed IP Address: <i>10.0.4.31</i> (Optional) </td> </tr> <tr> <td data-bbox="384 1944 624 2022"> <p>Known Client 2</p> </td> <td data-bbox="624 1944 1193 2022"> <ul style="list-style-type: none"> • MAC Address: <i>00:01:f3:34:44:2e</i> • Fixed IP Address: <i>10.0.4.32</i> (Optional) </td> </tr> </tbody> </table> | Address Pool | Description | <p>Address Pool 1 - Unknown</p> | <p>From the address pool, only unknown clients may receive IP addresses. This address pool is configured with the following settings:</p> <ul style="list-style-type: none"> ■ IP Begin: <i>10.0.4.10</i> ■ IP End: <i>10.0.4.15</i> ■ Known Clients: <i>deny</i> ■ Unknown Clients: <i>allow</i> | Client Group | Settings | <p>Known Client 1</p> | <ul style="list-style-type: none"> • MAC Address: <i>00:01:f3:34:44:2g</i> • Fixed IP Address: <i>10.0.4.31</i> (Optional) | <p>Known Client 2</p> | <ul style="list-style-type: none"> • MAC Address: <i>00:01:f3:34:44:2e</i> • Fixed IP Address: <i>10.0.4.32</i> (Optional) |
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| Client Group | Settings | | | | | | | | | | |
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| <p>Known Client 2</p> | <ul style="list-style-type: none"> • MAC Address: <i>00:01:f3:34:44:2e</i> • Fixed IP Address: <i>10.0.4.32</i> (Optional) | | | | | | | | | | |

[Step 7: View real-time information for the DHCP service.](#)

To view and modify lease and IP range information for the DHCP service, click the **DHCP** tab.

Figures

1. dhcp_enterprise_config.png

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