

Example - DHCP Configuration for Two Networks

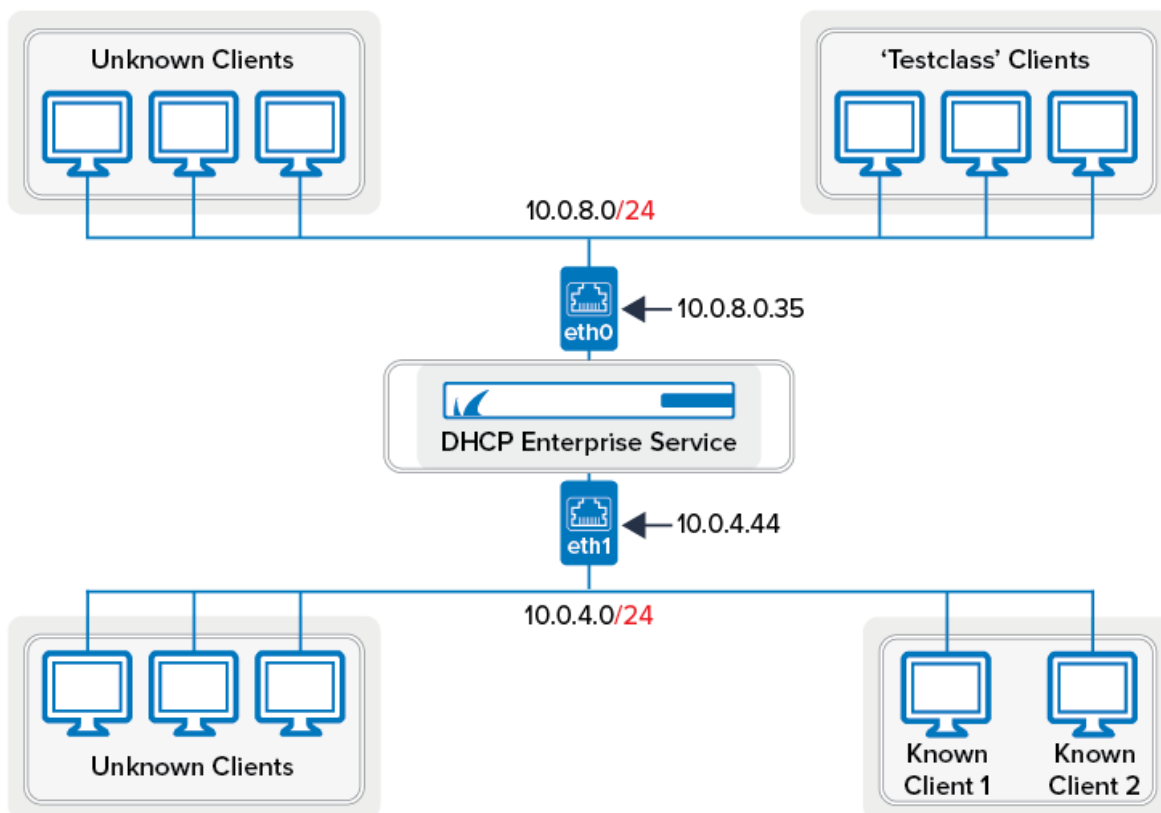
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The following article provides an overview of how to configure DHCP for an example environment. It provides steps and example settings to configure a DHCP service for an environment that contains two networks with three different IP pools.

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: Introduce IP addresses for the DHCP service	On the Box > Network page, click IP Configuration from the Configuration Mode menu in the left navigation pane. In the Shared networks and IPs section, click + and add the following addresses: <ul style="list-style-type: none"> • eth0: 10.0.8.35 • eth1: 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 1: 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="379 595 1471 1227"> <thead> <tr> <th data-bbox="379 595 692 645">Address Pool</th> <th data-bbox="692 595 1471 645">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="379 645 692 936"> <p>Address Pool 1 - Unknown</p> </td> <td data-bbox="692 645 1471 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="379 936 692 1227"> <p>Address Pool 2 - Classpool</p> </td> <td data-bbox="692 936 1471 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 Clients Policy: <i>not-set</i> </td> </tr> </tbody> </table> <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="379 1469 1471 1765"> <thead> <tr> <th data-bbox="379 1469 711 1518">Address Pool</th> <th data-bbox="711 1469 1471 1518">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="379 1518 711 1765"> <p>Address Pool 1 - Unknown</p> </td> <td data-bbox="711 1518 1471 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>	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 Clients Policy: <i>not-set</i> 	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>
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<p>Step 6: Configure known clients.</p>	<p>Two client groups are created:</p> <table border="1" data-bbox="379 1809 1190 2022"> <thead> <tr> <th data-bbox="379 1809 619 1859">Client Group</th> <th data-bbox="619 1809 1190 1859">Settings</th> </tr> </thead> <tbody> <tr> <td data-bbox="379 1859 619 1939"> <p>Known Client 1</p> </td> <td data-bbox="619 1859 1190 1939"> <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="379 1939 619 2022"> <p>Known Client 2</p> </td> <td data-bbox="619 1939 1190 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>	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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[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_conf.png

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