

Example: DHCP Relay Agent Configuration with Multiple Clients and Servers

The following example shows a more complex extended DHCP relay agent configuration for a network that includes multiple DHCP clients and DHCP servers. A more detailed explanation follows the example.

```
[edit forwarding-options]
dhcp-relay {
  server-group {
    server-group {
      sp-1 {
        10.0.2.1;
        10.0.2.2;
      }
      sp-2 {
        10.33.2.1;
        10.33.2.2;
        10.33.2.3;
      }
    }
  }
  active-server-group sp-1;
  overrides layer2-unicast-replies;
  group clients_a {
    relay-option-82 circuit-id;
    interface fe-1/0/1.1;
    interface fe-1/0/1.2;
    interface fe-1/0/1.3;
  }
  group clients_b {
    relay-option-82 {
      circuit-id {
        prefix routing-instance-name;
      }
    }
    interface fe-1/0/1.4;
    interface fe-1/0/1.5;
    interface fe-1/0/1.6;
  }
  group eth_dslam_relay {
    active-server-group sp-2;
    overrides {
      trust-option-82;
      layer2-unicast-replies;
    }
    interface fe-1/0/1.7;
    interface fe-1/0/1.8;
    interface fe-1/0/1.9;
  }
}
```

This example creates two server-groups: **sp-1**, which includes DHCP server addresses 10.0.2.1 and 10.0.2.2, and **sp-2**, which includes DHCP server addresses 10.33.2.1, 10.33.2.2, and 10.33.2.3. The active server group to which the DHCP relay agent configuration applies is **sp-1**. A global override is set that causes the DHCP relay agent to use layer 2 unicast transmission to send DHCP reply packets from the DHCP server to DHCP clients during the discovery process.

The example also creates three groups of subscribers and their associated Fast Ethernet interfaces: `clients_a`, `clients_b`, and `eth_dslam_relay`. These groups are configured to meet different needs, as follows:

- The `clients_a` and `clients_b` groups consist of basic subscribers. The service provider for these groups inserts option 82 information in the DHCP packets that are destined for the DHCP server.
- The subscribers in `eth_dslam_relay` are connected to an Ethernet digital subscriber line access multiplexer (DSLAM) that functions as a layer 2 DHCP relay agent. The active server group for `eth_dslam_relay` is `sp-2`. Overrides are set for the `eth_dslam_relay` group that enable the DHCP relay agent to trust option 82 information and to use layer 2 unicast transmission to send DHCP reply packets to DHCP clients during discovery.