

## Configuring the Extended DHCP Relay Agent

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You can configure extended DHCP relay options on the router and enable the router to function as a DHCP relay agent. A DHCP relay agent forwards DHCP request and reply packets between a DHCP client and a DHCP server. You can use DHCP relay in carrier edge applications such as video/IPTV to obtain configuration parameters, including an IP address, for your subscribers.

To configure the extended DHCP relay agent on the router, include the `dhcp-relay` statement:

```
dhcp-relay {
  dynamic-profile profile-name;
  authentication {
    password password-string;
    username-include {
      circuit-type;
      delimiter delimiter-character;
      domain-name domain-name-string;
      logical-system-name;
      mac-address;
      option-60;
      option-82 [circuit-id] [remote-id];
      routing-instance-name;
      user-prefix user-prefix-string;
    }
  }
  overrides {
    always-write-giaddr;
    always-write-option-82;
    interface-client-limit number;
    layer2-unicast-replies;
    trust-option-82;
    disable-relay;
  }
  relay-option-60 {
    vendor-option {
      (equals | starts-with) (ascii match-string | hexadecimal match-hex) {
        (default-relay-server-group server-group-name |
        default-local-server-group local-server-group-name |
        drop);
      }
      (default-relay-server-group server-group-name |
      default-local-server-group local-server-group-name |
      drop);
    }
  }
  relay-option-82 {
    circuit-id {
      prefix host-name logical-system-name routing-instance-name;
    }
  }
}
```

```

server-group {
    server-group-name {
        server-ip-address;
    }
}
active-server-group server-group-name;
group group-name {
    dynamic-profile profile-name;
    active-server-group server-group-name;
    authentication {
        password password-string;
        username-include {
            circuit-type;
            delimiter delimiter-character;
            domain-name domain-name-string;
            logical-system-name;
            mac-address;
            option-60;
            option-82 [circuit-id] [remote-id];
            overrides {
                always-write-giaddr;
                always-write-option-82;
                layer2-unicast-replies;
                trust-option-82;
                disable-relay;
            }
            routing-instance-name;
            user-prefix user-prefix-string;
        }
    }
}
relay-option-60 {
    vendor-option {
        (equals | starts-with) (ascii match-string | hexadecimal match-hex) {
            (default-relay-server-group server-group-name |
            default-local-server-group local-server-group-name |
            drop);
        }
        (default-relay-server-group server-group-name |
        default-local-server-group local-server-group-name |
        drop);
    }
}
relay-option-82 {
    circuit-id {
        prefix host-name logical-system-name routing-instance-name;
    }
}
interface interface-name [upto upto-interface-name] [exclude];
}
traceoptions {
    flag all;
    flag database;
}

```

```

flag state;
flag interface;
flag rtsock;
flag packet;
flag packet-option;
flag io;
flag ha;
flag ui;
flag general;
flag fwd;
flag rpd;
file file-name {
    <files number>;
    <size maximum-file-size>;
    <match regex>;
    <world-readable | no-world-readable>;
}
}
}

```

You can include these statements at the following hierarchy levels:

- [edit forwarding-options]
- [edit logical-systems *logical-system-name* forwarding-options]
- [edit logical-systems *logical-system-name* routing-instances *routing-instance-name* forwarding-options]
- [edit routing-instances *routing-instance-name* forwarding-options]

For more information about how to use the DHCP relay agent in a video/IPTV application, see the *JUNOS Feature Guide*.



**NOTE:** The extended DHCP relay agent options configured with the `dhcp-relay` statement are incompatible with the DHCP/BOOTP relay agent options configured with the `bootp` statement. As a result, you cannot enable both the extended DHCP relay agent and the DHCP/BOOTP relay agent on the router at the same time.

For information about the DHCP/BOOTP relay agent, see the *JUNOS Policy Framework Configuration Guide*.

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- Related Topics**
- Interaction Between the DHCP Relay Agent, DHCP Client, and DHCP Servers
  - Access and Access-Internal Routes
  - DHCP State Persistence
  - Graceful Routing Engine Switchover
  - Overriding the Default DHCP Relay Configuration
  - Using Option 60 Information to Forward Client Traffic to Specific DHCP Servers
  - Enabling and Disabling Insertion of Option 82 Information
  - Configuring Server Groups

- Configuring Active Server Groups
- Grouping Interfaces with Common DHCP Relay Configuration
- Using External AAA Authentication Services with DHCP
- Verifying and Managing DHCP Relay Agent Clients
- Tracing Extended DHCP Relay Agent Operations
- Example: Minimum DHCP Relay Agent Configuration
- Example: DHCP Relay Agent Configuration with Multiple Clients and Servers
- Example: Using Option 60 Strings to Forward DHCP Client Traffic
- Example: Using Option 60 Strings to Drop DHCP Client Traffic