
Triple Play DHCP Command Reference

Configuration Commands

- Router DHCP Commands on page 387
- VPLS DHCP Commands on page 390
- IES DHCP Commands on page 392
- VPRN DHCP Commands on page 395
- IES/VPRN IPv6-DHCP6 Commands on page 399
- Local User Database Commands on page 401
- Show Commands on page 408
- Clear Commands on page 410
- DHCP Debug Commands on page 411

Global DHCP Commands

```

config
  — system
    — dhcp6
      — adv-noaddrs-global [esm-proxy] [esm-relay] [relay] [server]
      — no adv-noaddrs-global

```

Router DHCP Commands

```

config
  — router
    — dhcp
    — dhcp6
      — local-dhcp-server server-name [create]
      — no local-dhcp-server server-name
        — [no] allow-lease-query
        — description description-string
        — no description
        — failover
          — [no] ignore-mclt-on-takeover
          — maximum-client-lead-time [hrs hours] [min minutes] [sec seconds]
          — no maximum-client-lead-time
          — partner-down-delay [hrs hours] [min minutes] [sec seconds]
          — no partner-down-delay
          — peer ip-address tag sync-tag
          — no peer
          — [no] shutdown

```

- [no] **startup-wait-time** [min *minutes*] [sec *seconds*] [days *days*] [hrs *hours*] [min *minutes*] [sec *seconds*]
- [no] **force-renews**
- [no] **ignore-rapid-commit**
- [no] **interface-id-mapping**
- **lease-hold-time** [days *days*] [hrs *hours*] [min *minutes*] [sec *seconds*]
- **no lease-hold-time**
- [no] **lease-hold-time-for**
 - [no] **internal-lease-ipsec**
 - [no] **solicited-release**
- **pool** *pool-name* [create]
- **no pool** *pool-name*
 - **delegated-prefix-length** *bits*
 - **no delegated-prefix-length**
 - **description** *description-string*
 - **no description**
 - [no] **exclude-prefix** *ipv6-prefix/prefix-length*
 - **failover**
 - [no] **ignore-mclt-on-takeover**
 - **maximum-client-lead-time** [hrs *hours*] [min *minutes*] [sec *seconds*]
 - **no maximum-client-lead-time**
 - **partner-down-delay** [hrs *hours*] [min *minutes*] [sec *seconds*]
 - **no partner-down-delay**
 - **peer** *ip-address* **tag** *sync-tag*
 - **no peer**
 - [no] **shutdown**
 - [no] **startup-wait-time** [min *minutes*] [sec *seconds*] [days *days*] [hrs *hours*] [min *minutes*] [sec *seconds*]
- **max-lease-time** [days *days*] [hrs *hours*] [min *minutes*] [sec *seconds*]
- **no max-lease-time**
- **min-lease-time** [days *days*] [hrs *hours*] [min *minutes*] [sec *seconds*]
- **no min-lease-time**
- **minimum-free** *minimum-free* [percent] [event-when-depleted]
- **no minimum-free**
- **offer-time** [min *minutes*] [sec *seconds*]
- **no offer-time**
- **options**
 - **custom-option** *option-number* **address** [*ip-address...*(up to 4 max)]
 - **custom-option** *option-number* **hex** *hex-string*
 - **custom-option** *option-number* **string** *ascii-string*
 - **no custom-option** *option-number*
 - **dns-server** [*ip-address...*(up to 4 max)]
 - **domain-name** *domain-name*
 - **no domain-name**
 - **lease-rebind-time** [days *days*] [hrs *hours*] [min *minutes*] [sec *seconds*]
 - **no lease-rebind-time**
 - **lease-renew-time** [days *days*] [hrs *hours*] [min *minutes*] [sec *seconds*]
 - **no lease-renew-time**

- **lease-time** [days *days*] [hrs *hours*] [min *minutes*] [sec *seconds*]
- **no lease-time**
- **netbios-name-server** *ip-address* [*ip-address*...(up to 4 max)]
- **no netbios-name-server**
- **netbios-node-type** *netbios-node-type*
- **no netbios-node-type**
- [no] **nak-non-matching-subnet**
- **prefix** *ipv6-addr/prefix-len* [**failover** {*local* | *remote*}] [**pd**] [**wan-host**] [**create**]
- **no prefix** *ipv6-addr/prefix-len*
 - **thresholds**
 -
- **thresholds**
 - [no] **minimum-free** **prefix-length** [1..128]
 - [no] **depleted-event**
 - **minimum** **percent** [0..100]
 - **no minimum**
- **subnet** {*ip-address/mask*|*ip-address netmask*} [**create**]
- **no subnet** {*ip-address/mask*|*ip-address netmask*}
 - [no] **address-range** *start-ip-address end-ip-address*
 - [no] **drain**
 - [no] **exclude-addresses** *start-ip-address* [*end-ip-address*]
 - **maximum-declined** *maximum-declined*
 - **no maximum-declined**
 - **minimum-free** *minimum-free* [**percent**] [**event-when-depleted**]
 - **no minimum-free**
 - **options**
 - **custom-option** *option-number* **address** [*ip-address*...(upto 4 max)]
 - **custom-option** *option-number* **hex** *hex-string*
 - **custom-option** *option-number* **string** *ascii-string*
 - **no custom-option** *option-number*
 - **default-router** *ip-address* [*ip-address*...(up to 4 max)]
 - **no default-router**
 - **subnet-mask** *ip-address*
 - **no subnet-mask**
- **subnet-binding** **key** [*sys-id-svc-id* | *sys-id* | *string*] **unbind-delay** [hrs *hours*] [min *mins*] [sec *secs*]
- **no subnet-binding** **key**
- **use-gi-address** [**scope** *scope*]
- **no use-gi-address**
- **use-pool-from-client** **delimiter** *delimiter*
- **use-pool-from-client**
- **no use-pool-from-client**
- **use-link-address** [**scope** *scope*]
- **no use-link-address**
- **user-db** *local-user-db-name*
- **no user-db**
- **user-ident** *user-ident*
- **no user-ident**

VPLS DHCP Commands

```

config
  — service
    — [no] vpls service-id [customer customer-id] [vpn vpn-id] [m-vpls]
      — sap sap-id [split-horizon-group group-name] [capture-sap]
        — dhcp
          — description description-string
          — no description
          — lease-populate [nbr-of-entries]
          — no lease-populate
          — [no] option
            — action {dhcp-action}
            — no action
            — [no] circuit-id [ascii-tuple | vlan-ascii-tuple]
            — remote-id [mac | string string]
            — no remote-id
            — [no] vendor-specific-option
              — [no] client-mac-address
              — [no] sap-id
              — [no] service-id
              — string text
              — no string
              — [no] system-id
            — proxy-server
              — emulated-server
              — lease-time
              — [no] shutdown
            — [no] shutdown
            — [no] snoop
        — dhcp-user-db local-user-db-name
        — no dhcp-user-db
        — dhcp-python-policy policy-name
        — no dhcp-python-policy
        — dhcp6-user-db local-user-db-name
        — no dhcp6-user-db
        — dhcp6
          — description description-string
          — no description
          — [no] option
            — interface-id
            — interface-id ascii-tuple
            — interface-id vlan-ascii-tuple
            — no interface-id
            — remote-id
            — remote-id mac
            — remote-id string [32 chars max]
            — no remote-id
          — [no] shutdown
          — [no] snoop
        — dhcp-python-policy policy-name
        — no dhcp-python-policy
        — dhcp6-user-db local-user-db-name
        — no dhcp6-user-db
        — ipoe-session
          — description description-string
          — no description

```

- **ipoe-session-policy** *policy-name*
- **no ipoe-session-policy**
- **[no] shutdown**
- **user-db** *local-user-db-name*
- **no user-db**
- **mesh-sdp** *sdp-id[:vc-id]* [**vc-type** {**ether** | **vlan**}]
- **dhcp**
 - **description** *description-string*
 - **no description**
 - **[no] snoop**
- **ppp-user-db** *local-user-db-name*
- **no ppp-user-db**
- **pppoe-user-db** *local-user-db-name*
- **no pppoe-user-db**
- **spoke-sdp** *sdp-id[:vc-id]* [**vc-type** {**ether** | **vlan**}] [**split-horizon-group** *group-name*]
- **dhcp**
 - **description** *description-string*
 - **no description**
 - **[no] snoop**

IES DHCP Commands

```

config
  — service
    — ies service-id [customer customer-id] [vpn vpn-id]
      — [no] interface ip-int-name
        — dhcp
          — description description-string
          — no description
          — gi-address ip-address [src-ip-addr]
          — no gi-address
          — lease-populate nbr-of-leases
          — no lease-populate
          — [no] option
            — action {replace | drop | keep}
            — no action
            — circuit-id [ascii-tuple | ifindex | sap-id | vlan-ascii-tuple]
            — no circuit-id
            — remote-id [mac | string string]
            — no remote-id
            — [no] vendor-specific-option
              — [no] client-mac-address
              — [no] pool-name
              — [no] sap-id
              — [no] service-id
              — string text
              — no string
              — [no] system-id
          — proxy-server
            — emulated-server ip-address
            — no emulated-server
            — lease-time [days days] [hrs hours] [min minutes] [sec seconds] [override]
            — no lease-time
            — [no] shutdown
          — [no] relay-plain-bootp
          — relay-unicast-msg [release-update-src-ip]
          — no relay-unicast-msg
          — python-policy policy-name
          — no python-policy
          — server server1 [server2...(up to 8 max)]
          — no server
          — [no] shutdown
          — [no] trusted
        — [no] ipv6
          — address ipv6-address/prefix-length [cui-64]
          — no address ipv6-address/prefix-length
          — [no] dhcp6-relay
            — description description-string
            — no description
            — lease-populate [nbr-of-leases]
            — lease-populate [nbr-of-leases] route-populate [pd na [ta]
            — lease-populate [nbr-of-leases] route-populate pd [na] [ta] [exclude]

```

- **lease-populate** *[nbr-of-leases]* **route-populate** *[pd]*
 - [na]** **ta**
- **no lease-populate**
- **[no] neighbor-resolution**
- **[no] option**
 - **interface-id**
 - **interface-id** *ascii-tuple*
 - **interface-id** *ifindex*
 - **interface-id** *sap-id*
 - **no interface-id**
 - **[no] remote-id**
- **server** *ipv6z-address* *[ipv6z-address...(up to 8 max)]*
- **no server** *[ipv6z-address...(up to 8 max)]*
- **description** *description-string*
- **no description**
- **source-address** *ipv6-address*
- **no source-address**
- **[no] dhcp6-server**
 - **max-nbr-of-leases** *max-nbr-of-leases*
 - **no max-nbr-of-leases**
 - **[no] prefix-delegation**
 - **[no] prefix** *ipv6-address/prefix-length*
 - **duid** *duid* **[iaid]** *iaid*
 - **no duid**
 - **preferred-lifetime** *seconds*
 - **preferred-lifetime** **infinite**
 - **no preferred-lifetime**
 - **valid-lifetime** *seconds*
 - **valid-lifetime** **infinite**
 - **no valid-lifetime**
 - **[no] shutdown**
- **icmp6**
 - **packet-too-big** *[number seconds]*
 - **no packet-too-big**
 - **param-problem** *[number seconds]*
 - **no param-problem**
 - **redirects** *[number seconds]*
 - **no redirects**
 - **time-exceeded** *[number seconds]*
 - **no time-exceeded**
 - **unreachables** *[number seconds]*
 - **no unreachables**
- **[no] local-proxy-nd**
- **neighbor** *ipv6-address mac-address*
- **no neighbor** *ipv6-address*
- **proxy-nd-policy** *policy-name* *[policy-name...(up to 5 max)]*
- **no proxy-nd-policy**
- **[no] subscriber-interface** *ip-int-name*
 - **dhcp**
 - **gi-address** *ip-address* *[src-ip-addr]*
 - **no gi-address**
 - **relay-unicast-msg** *[release-update-src-ip]*
 - **no relay-unicast-msg**
 - **[no] virtual-subnet**
 - **[no] group-interface** *ip-int-name*

- **dhcp**
 - **client-applications** {[**dhcp**] [**pppoe**]}
 - **no client-applications**
 - **description** *description-string*
 - **no description**
 - **gi-address** *ip-address* [*src-ip-addr*]
 - **no gi-address**
 - **gi-address** [*nbr-of-leases*]
 - **lease-populate** [*nbr-of-leases*] **l2-header** [**mac** *ieee-address*]
 - **no lease-populate**
 - [**no**] **match-circuit-id**
 - [**no**] **option**
 - **action** {**replace** | **drop** | **keep**}
 - **no action**
 - **circuit-id** [**ascii-tuple** | **ifindex** | **sap-id** | **vlan-ascii-tuple**]
 - **no circuit-id**
 - **remote-id** [**mac** | **string** *string*]
 - **no remote-id**
 - [**no**] **vendor-specific-option**
 - [**no**] **client-mac-address**
 - [**no**] **pool-name**
 - [**no**] **sap-id**
 - [**no**] **service-id**
 - **string** *text*
 - **no string**
 - [**no**] **system-id**
 - **relay-unicast-msg** [*release-update-src-ip*]
 - **no relay-unicast-msg**
 - **server** *server1* [*server2...*(up to 8 max)]
 - **no server**
 - [**no**] **shutdown**
 - [**no**] **trusted**
- [**no**] **pppoe**
 - **anti-spoof** *pppoe-anti-spoofing-type*
 - **no anti-spoof**
 - **description** *description-string*
 - **no description**
 - **dhcp-client**
 - [**no**] **ccag-use-origin-sap**
 - **policy** *ppp-policy-name*
 - **no policy**
 - **sap-session-limit** *sap-session-limit*
 - **no sap-session-limit**
 - **session-limit** *session-limit*
 - **no session-limit**
 - [**no**] **shutdown**
 - **user-db** *local-user-db-name*
 - **no user-db**

VPRN DHCP Commands

```

config
  — service
    — vprn
      — dhcp
      — dhcp6
        — local-dhcp-server-server server-name [create]
        — no local-dhcp-server server-name
          — [no] allow-lease-query
          — description description-string
          — no description
          — failover
            — [no] ignore-mclt-on-takeover
            — maximum-client-lead-time [hrs hours] [min minutes] [sec seconds]
            — no maximum-client-lead-time
            — partner-down-delay [hrs hours] [min minutes] [sec seconds]
            — no partner-down-delay
            — peer ip-address tag sync-tag
            — no peer
            — [no] shutdown
            — [no] startup-wait-time [min minutes] [sec seconds] [days days] [hrs hours] [min minutes] [sec seconds]
        — lease-hold-time [days days] [hrs hours] [min minutes] [sec seconds]
        — no lease-hold-time
        — [no] lease-hold-time-for
          — [no] internal-lease-ipsec
          — [no] solicited-release
        — pool pool-name [create]
        — no pool pool-name
          — failover
            — [no] ignore-mclt-on-takeover
            — maximum-client-lead-time [hrs hours] [min minutes] [sec seconds]
            — no maximum-client-lead-time
            — partner-down-delay [hrs hours] [min minutes] [sec seconds]
            — no partner-down-delay
            — peer ip-address tag sync-tag
            — no peer
            — [no] shutdown
            — [no] startup-wait-time [min minutes] [sec seconds] [days days] [hrs hours] [min minutes] [sec seconds]
            — prefix ipv6-addr/prefix-len [failover {local | remote}] [pd] [wan-host] [create]
            — no prefix ipv6-addr/prefix-len
              — thresholds
                — [no] minimum-free prefix-length [1..128]
                — [no] depleted-event
                — minimum [percent [0..100]] [number [0..4294967295]]

```

- **[no] interface** *ip-int-name*
 - **dhcp**
 - **description** *description-string*
 - **no description**
 - **gi-address** *ip-address* [*src-ip-addr*]
 - **no gi-address**
 - **lease-populate** [*nbr-of-leases*]
 - **no lease-populate**
 - **[no] option**
 - **action** {*replace* | *drop* | *keep*}
 - **no action**
 - **circuit-id** [*ascii-tuple* | *ifindex* | *sap-id* | *vlan-ascii-tup*]
 - **no circuit-id**
 - **remote-id** [*mac* | *string string*]
 - **no remote-id**
 - **[no] vendor-specific-option**
 - **[no] client-mac-address**
 - **[no] pool-name**
 - **[no] sap-id**
 - **[no] service-id**
 - **string** *text*
 - **no string**
 - **[no] system-id**
 - **[no] nak-non-matching-subnet**
 - **python-policy** *policy-name*
 - **no python-policy**
 - **proxy-server**
 - **emulated-server** *ip-address*
 - **no emulated-server**
 - **lease-time** [*days days*] [*hrs hours*] [*min minutes*] [*sec seconds*] [*override*]
 - **no lease-time**
 - **[no] shutdown**
 - **[no] relay-plain-bootp**
 - **relay-unicast-msg** [*release-update-src-ip*]
 - **no relay-unicast-msg**
 - **server** *server1* [*server2...*(up to 8 max)]
 - **no server**
 - **[no] shutdown**
 - **[no] trusted**
 - **[no] use-arp**
 - **user-ident** *user-ident*
 - **no user-ident**
 - **no minimum**

VPRN DHCP Subscriber Interface Commands

```

config
  — service
    — vprn
      — subscriber-interface ip-int-name [ fwd-service service-id  fwd-subscriber-interface
        ip-int-name] [ create]
      —  no subscriber-interface ip-int-name
        —  dhcp
          —  client-applications  dhcp
          —  client-applications  pppoe
          —  client-applications  dhcp pppoe
          —  no client-applications
          —  description description-string
          —  no description
          —  gi-address ip-address [src-ip-addr]
          —  no gi-address
          —  lease-populate nbr-of-leases
          —  no lease-populate
          — [ no]  option
            — [ no]  vendor-specific-option
              — [ no]  client-mac-address
              — [ no]  sap-id
              — [ no]  service-id
              —  string text
              —  no string
              — [ no]  system-id
            —  proxy-server
              —  emulated-server ip-address
              —  no emulated-server
              —  lease-time [ days days] [ hrs hours] [ min minutes] [ sec
                seconds] [ override]
              —  no lease-time
              — [ no]  shutdown
            —  relay-unicast-msg [release-update-src-ip]
            —  no relay-unicast-msg
            —  server server1 [server2...(up to 8 max)]
            —  no server
            — [ no]  shutdown
            — [ no]  virtual-subnet
          — [ no]  group-interface ip-int-name
            — [ no]  arp-populate
            —  arp-timeout seconds
            —  no arp-timeout
            —  authentication-policy name
            —  no authentication-policy
            —  description description-string
            —  no description
            —  dhcp
              —  description description-string
              —  no description
              —  gi-address ip-address [src-ip-addr]
              —  no gi-address
              —  lease-populate [nbr-of-leases]  l2-header [ mac ieee-
                address]

```

- **no lease-populate**
- **[no] match-circuit-id**
- **[no] option**
 - **action** {**replace** | **drop** | **keep**}
 - **no action**
 - **circuit-id** [**ascii-tuple**|**ifindex**|**sap-id**|**vlan-ascii-tuple**]
 - **no circuit-id**
 - **remote-id** [**mac** | **string** *string*]
 - **no remote-id**
 - **[no] vendor-specific-option**
 - **[no] client-mac-address**
 - **[no] sap-id**
 - **[no] service-id**
 - **string** *text*
 - **no string**
 - **[no] system-id**
- **proxy-server**
 - **emulated-server** *ip-address*
 - **no emulated-server**
 - **lease-time** [**days** *days*] [**hrs** *hours*] [**min** *minutes*] [**sec** *seconds*] [**override**]
 - **no lease-time**
 - **[no] shutdown**
- **relay-unicast-msg** [*release-update-src-ip*]
- **no relay-unicast-msg**
- **server** *server1* [*server2*...(up to 8 max)]
- **no server**
- **[no] shutdown**
- **[no] trusted**

IES/VP RN IPv6-DHCP6 Commands

```

configure
  — service
    — ies service-id/vprn service-id
      — subscriber-interface
        — group-interface
          — ipv6
            — dhcp6
              — [no] allow-multiple-wan-addresses
              — filter filter-id
              — no filter
              — [no] option
                — interface-id [ascii-tuple]
                — interface-id ifindex
                — interface-id sap-id
                — interface-id string string
                — no interface-id
                — [no] remote-id
              — [no] override-slaac
              — pd-managed-route [next-hop {ipv4 | ipv6}]
              — no pd-managed-route
              — [no] proxy-server
                — client-applications {[dhcp] [ppp]}
                — no client-applications
                — preferred-lifetime [days days] [hrs hours] [min minutes] [sec seconds]
                — preferred-lifetime infinite
                — no preferred-lifetime
                — rebind-timer [days days] [hrs hours] [min minutes] [sec seconds]
                — no rebind-timer
                — renew-timer [days days] [hrs hours] [min minutes] [sec seconds]
                — no renew-timer
                — server-id duid-en hex hex-string
                — server-id duid-en string ascii-string
                — server-id duid-ll
                — no server-id
                — no shutdown
                — valid-lifetime [days days] [hrs hours] [min minutes] [sec seconds]
                — valid-lifetime infinite
                — no valid-lifetime
              — python-policy name
              — no python-policy
              — [no] relay
                — client-applications [dhcp] [ppp]
                — no client-applications
                — description description-string
                — no description
                — link-address ipv6-address
                — no link-address
                — [no] server [ipv6z-address...(upto 8 max)]

```

- **no server**
- **[no] shutdown**
- **source-address** *ipv6-address*
- **no source-address**
- **[no] snooping**
- **[no] shutdown**
- **user-db** *local-user-db-name*
- **no user-db**
- user-ident *user-ident*
- no user-ident
- **[no] ipoe-bridged-mode**
- **[no] qos-route-lookup**
- **[no] router-advertisements**
 - **current-hop-limit** *limit*
 - **no current-hop-limit**
 - **[no] dns-options**
 - **[no] include-dns**
 - **rdnss-lifetime** *seconds*
 - **rdnss-lifetime infinite**
 - **no rdnss-lifetime**
 - **force-mcast** [*ip*] [*mac*]
 - **no force-mcast**
 - **[no] managed-configuration**
 - **max-advertisement** *seconds*
 - **no max-advertisement**
 - **min-advertisement** *seconds*
 - **no min-advertisement**
 - **mtu** *bytes*
 - **no mtu**
 - **[no] other-stateful-configuration**
 - **[no] prefix-options**
 - **[no] autonomous**
 - **[no] on-link**
 - **preferred-lifetime** *seconds*
 - **preferred-lifetime infinite**
 - **no preferred-lifetime**
 - **reachable-time** *milli-seconds*
 - **no reachable-time**
 - **retransmit-time** *milli-seconds*
 - **no retransmit-time**
 - **router-lifetime** *seconds*
 - **router-lifetime no-default-router**
 - **no router-lifetime**
 - **[no] shutdown**
- **router-solicit**
 - **inactivity-timer** [*days days*] [*hrs hours*] [*min minutes*] [*sec seconds*]
 - **inactivity-timer infinite**
 - **no inactivity-timer**
 - **min-auth-interval** [*days days*] [*hrs hours*] [*min minutes*] [*sec seconds*]
 - **no min-auth-interval**
 - **[no] shutdown**
 - **user-db** *local-user-db-name*
 - **no user-db**
- **[no] urpf-check**
 - **mode** {*strict|loose|strict-no-ecmp*}

Local User Database Commands

- IPoE Commands on page 401
- PPP Commands on page 405

IPoE Commands

```

config
— subscriber-mgmt
— local-user-db local-user-db-name [create]
— no local-user-db local-user-db-name
— description description-string
— no description
— ipoe
— host host-name [create]
— no host host-name
— acct-policy acct-policy-name [duplicate acct-policy-name]
— no acct-policy
— address gi-address [scope scope]
— address ip-address
— address pool pool-name [secondary-pool sec-pool-name]
[delimiter delimiter]
— address use-pool-from-client [delimiter delimiter]
— no address
— auth-domain-name domain-name
— no auth-domain-name
— auth-policy policy-name
— no auth-policy
— diameter-application-policy policy-name
— no diameter-application-policy
— diameter-auth-policy name
— no diameter-auth-policy
— gi-address ip-address
— no gi-address
— host-identification
— circuit-id string ascii-string
— circuit-id hex hex-string
— no circuit-id
— derived-id derived-id-string
— no derived-id
— encap-tag-range start-tag start-tag end-tag end-tag
— no encap-tag-range
— mac ieee-address
— no mac
— option60 hex-string
— no option60
— remote-id hex hex-string
— remote-id string ascii-string
— no remote-id
— sap-id sap-id
— no sap-id
— service-id service-id
— no service-id
— string string

```

- **no string**
- **system-id** *system-id*
- **no system-id**
- **identification-strings** *option-number* [**create**]
- **no identification-strings**
 - **ancp-string** *ancp-string*
 - **no ancp-string**
 - **app-profile-string** *app-profile-string*
 - **no app-profile-string**
 - **category-map** *category-map-name*
 - **no category-map**
 - **inter-dest-id** *intermediate-destination-id*
 - **no inter-dest-id**
 - **sla-profile-string** *sla-profile-string*
 - **no sla-profile-string**
 - **sub-profile-string** *sub-profile-string*
 - **no sub-profile-string**
 - **subscriber-id** *sub-ident-string*
 - **no subscriber-id**
- **ipv6-address** *ipv6-address*
- **no ipv6-address**
- **ipv6-delegated-prefix** *ipv6-prefix/prefix-length*
- **no ipv6-delegated-prefix**
- **ipv6-delegated-prefix-length** *bits*
- **no ipv6-delegated-prefix-length**
- **ipv6-delegated-prefix-pool** *pool-name*
- **no ipv6-delegated-prefix-pool**
- **[no] ipv6-lease-times**
 - **preferred-lifetime** [**days** *days*] [**hrs** *hrs*] [**min** *min*] [**sec** *sec*]
 - **preferred-lifetime** *infinite*
 - **no preferred-lifetime**
 - **rebind-timer** [**days** *days*] [**hrs** *hrs*] [**min** *min*] [**sec** *sec*]
 - **no rebind-timer**
 - **renew-timer** [**days** *days*] [**hrs** *hrs*] [**min** *min*] [**sec** *sec*]
 - **no renew-timer**
 - **valid-lifetime** [**days** *days*] [**hrs** *hrs*] [**min** *min*] [**sec** *sec*]
 - **valid-lifetime** *infinite*
 - **no valid-lifetime**
- **ipv6-slaac-prefix** *ipv6-prefix/prefix-length*
- **no ipv6-slaac-prefix**
- **ipv6-slaac-prefix-pool** *pool*
- **no ipv6-slaac-prefix-pool**
- **ipv6-wan-address-pool** *pool-name*
- **no ipv6-wan-address-pool**
- **link-address** *ipv6-address*
- **no link-address**
- **match-radius-proxy-cache**
 - **delete-hold-time** *seconds*
 - **no delete-hold-time**
 - **fail-action** {**continue**|**drop**}
 - **no fail-action**
 - **mac-format** *mac-format*
 - **no mac-format**

- **match** {circuit-id|mac|remote-id}
- **match option** [1..254] [option6 [1..65535]]
- **match option6** [1..65535]
- **no match**
- **server** [service service-id] **name** server-name
- **no server**
- **msap-defaults**
 - **group-interface** ip-int-name [**prefix** {port-id}]
 - **group-interface** ip-int-name [**suffix** {port-id}]
 - **no group-interface**
 - **policy** msap-policy-name
 - **no policy**
 - **service** service-id
 - **no service**
- **options**
 - **custom-option** option-number **address** [ip-address...(up to 4 max)]
 - **custom-option** option-number **hex** hex-string
 - **custom-option** option-number **string** ascii-string
 - **no custom-option** option-number
 - **default-router** ip-address [ip-address...(up to 4 max)]
 - **no default-router**
 - **dns-server** **address** [ip-address...(upto 4 max)]
 - **no dns-server**
 - **domain-name** domain-name
 - **no domain-name**
 - **lease-rebind-time** [**days** days] [**hrs** hours] [**min** minutes] [**sec** seconds]
 - **no lease-rebind-time**
 - **lease-renew-time** [**days** days] [**hrs** hours] [**min** minutes] [**sec** seconds]
 - **no lease-renew-time**
 - **lease-time** [**days** days] [**hrs** hours] [**min** minutes] [**sec** seconds]
 - **no lease-time**
 - **netbios-name-server** **ip-address** [ip-address...(up to 4 max)]
 - **no netbios-name-server**
 - **netbios-node-type** netbios-node-type
 - **no netbios-node-type**
 - **subnet-mask** ip-address
 - **no subnet-mask**
- **options6**
 - **dns-server** ipv6-address [ipv6-address...(upto 4 max)]
 - **no dns-server**
- **to-client-options**
 - **dhcpv4**
 - **option** option-number **address** ipv4-address [ipv4-address...(upto 4 max)]
 - **option** option-number **hex** hex-string
 - **option** option-number **string** ascii-string
 - **no option** option-number
 - **dhcpv6**

- **option** *option-number* **address** *ipv6-address*
[*ipv6-address...*(upto 4 max)]
- **option** *option-number* **hex** *hex-string*
- **option** *option-number* **string** *ascii-string*
- **no option** *option-number*
- **ipv4**
 - **option** *option-number* **address** [*ip-address...*(up to 4 max)]
 - **option** *option-number* **hex** *hex-string*
 - **option** *option-number* **string** *ascii-string*
 - **no option** *option-number*
- **ipv6**
 - **option** *option-number* **address** [*ip-address...*(up to 4 max)]
 - **option** *option-number* **hex** *hex-string*
 - **option** *option-number* **string** *ascii-string*
 - **no option** *option-number*
- **retail-service-id** *service-id*
- **no retail-service-id**
- **server** *ip-address*
- **no server**
- **server6** *ipv6-address*
- **no server6**
- **[no] shutdown**
- **mask type** *ipoe-match-type* {[**prefix-string** *prefix-string* | **prefix-length** *prefix-length*] [**suffix-string** *suffix-string* | **suffix-length** *suffix-length*]}
- **no mask type** *ipoe-match-type*
- **match-list** *ipoe-match-type-1* [*ipoe-match-type-2...*(up to 4 max)]
- **no match-list**

PPP Commands

```

config
— subscriber-mgmt
  — local-user-db local-user-db-name [create]
  — no local-user-db local-user-db-name
    — description description-string
    — no description
  — ppp
    — host host-name [create]
    — no host host-name
      — [no] access-loop-encapsulation
        — encap-offset [type type]
        — no encap-offset
        — rate-down rate
        — no rate-down
      — access-loop-information
        — circuit-id sap-id
        — circuit-id ASCII string
        — no circuit-id
        — remote-id mac
        — remote-id ASCII string
        — no remote-id
      — acct-policy acct-policy-name [duplicate acct-policy-name]
      — no acct-policy
      — address gi-address [scope scope]
      — address ip-address [prefix-length]
      — address pool pool-name [secondary-pool sec-pool-name]
        [delimiter delimiter]
      — address use-pool-from-client [delimiter delimiter]
      — no address
      — auth-policy policy-name
      — no auth-policy
      — diameter-application-policy policy-name
      — no diameter-application-policy
      — diameter-auth-policy name
      — no diameter-auth-policy
      — [no] force-ipv6cp
      — host-identification
        — circuit-id string ascii-string
        — circuit-id hex hex-string
        — no circuit-id
        — encap-tag-range start-tag start-tag end-tag end-tag
        — no encap-tag-range
        — mac ieee-address
        — no mac
        — remote-id hex hex-string
        — remote-id string ascii-string
        — no remote-id
        — sap-id sap-id
        — no sap-id
        — service-name service-name
        — no service-name
        — username user-name
        — username user-name [no-domain]

```

- **username** *user-name* **domain-only**
- **no username**
- **identification-strings** *option-number* [**create**]
- **no identification-strings**
 - **ancp-string** *ancp-string*
 - **no ancp-string**
 - **app-profile-string** *app-profile-string*
 - **no app-profile-string**
 - **category-map** *category-map-name*
 - **no category-map**
 - **inter-dest-id** *intermediate-destination-id*
 - **no inter-dest-id**
 - **sla-profile-string** *sla-profile-string*
 - **no sla-profile-string**
 - **sub-profile-string** *sub-profile-string*
 - **no sub-profile-string**
 - **subscriber-id** *sub-ident-string*
 - **no subscriber-id**
- **[no] ignore-df-bit**
- **interface** *ip-int-name* **service-id** *service-id*
- **no interface**
- **ipv6-address** *ipv6-address*
- **no ipv6-address**
- **ipv6-delegated-prefix** *ipv6-prefix/prefix-length*
- **no ipv6-delegated-prefix**
- **ipv6-delegated-prefix-length** *bits*
- **no ipv6-delegated-prefix-length**
- **ipv6-delegated-prefix-pool** *pool-name*
- **no ipv6-delegated-prefix-pool**
- **[no] ipv6-lease-times**
 - **preferred-lifetime** [*days days*] [*hrs hrs*] [*min min*] [*sec sec*]
 - **preferred-lifetime** *infinite*
 - **no preferred-lifetime**
 - **rebind-timer** [*days days*] [*hrs hrs*] [*min min*] [*sec sec*]
 - **no rebind-timer**
 - **renew-timer** [*days days*] [*hrs hrs*] [*min min*] [*sec sec*]
 - **no renew-timer**
 - **valid-lifetime** [*days days*] [*hrs hrs*] [*min min*] [*sec sec*]
 - **valid-lifetime** *infinite*
 - **no valid-lifetime**
- **ipv6-slaac-prefix** *ipv6-prefix/prefix-length*
- **no ipv6-slaac-prefix**
- **ipv6-slaac-prefix-pool** *pool*
- **no ipv6-slaac-prefix-pool**
- **ipv6-wan-address-pool** *pool-name*
- **no ipv6-wan-address-pool**
- **l2tp**
 - **group** *tunnel-group-name* [**service-id** *service-id*]
 - **no group**
- **msap-defaults**
 - **group-interface** *ip-int-name* [**prefix** *{port-id}*]
 - **group-interface** *ip-int-name* [**suffix** *{port-id}*]
 - **no group-interface**

- **policy** *msap-policy-name*
- **no policy**
- **service** *service-id*
- **no service**
- **options**
 - **custom-option** *option-number* **address** [*ip-address...*(up to 4 max)]
 - **custom-option** *option-number* **hex** *hex-string*
 - **custom-option** *option-number* **string** *ascii-string*
 - **no custom-option** *option-number*
 - **dns-server** **address** [*ip-address...*(upto 4 max)]
 - **no dns-server**
 - **netbios-name-server** **ip-address** [*ip-address...*(up to 4 max)]
 - **no netbios-name-server**
- **options6**
 - **dns-server** *ipv6-address* [*ipv6-address...*(upto 4 max)]
 - **no dns-server**
- **pado-delay** *deci-seconds*
- **no pado-delay**
- **password** **ignore**
- **password** {**chap** *password* |**pap** *password*} [**hash**|**hash2**]
- **no password**
- **pre-auth-policy** *policy-name*
- **no pre-auth-policy**
- **to-client-options**
 - **ipv4**
 - **option** *option-number* **address** [*ip-address...*(up to 4 max)]
 - **option** *option-number* **hex** *hex-string*
 - **option** *option-number* **string** *ascii-string*
 - **no option** *option-number*
 - **ipv6**
 - **option** *option-number* **address** [*ip-address...*(up to 4 max)]
 - **option** *option-number* **hex** *hex-string*
 - **option** *option-number* **string** *ascii-string*
 - **no option** *option-number*
- **retail-service-id** *service-id*
- **no retail-service-id**
- [**no**] **shutdown**

Show Commands

```

show
  -- router
    -- dhcp
      -- lease-state [sap sap-id]
      -- servers
      -- statistics [interface ip-int-name | ip-address]
      -- summary
      -- local-dhcp-server server-name
        -- associations
        -- declined-addresses ip-address[/mask] [detail]
        -- declined-addresses pool pool-name
        -- free-addresses ip-address[/mask]
        -- free-addresses summary [subnet ip-address[/mask]]
        -- free-addresses pool pool-name
        -- leases ip-address[/mask] address-from-user-db [detail]
        -- leases ip-address[/mask] dhcp-host dhcp-host-name [detail]
        -- leases ip-address[/mask] ppp-host ppp-host-name [detail]
        -- leases ip-address[/mask] [detail]
        -- pool-ext-stats [pool-name]
        -- server-stats
        -- subnet-ext-stats ip-address[/mask]
        -- subnet-ext-stats pool pool-name
        -- subnet-stats ip-address[/mask]
        -- subnet-stats pool pool-name
        -- summary
      -- servers
    -- router
      -- dhcp6
        -- local-dhcp-server server-name
          -- associations
          -- interface-id-mapping
          -- leases [ipv6-address/prefix-length] [type] [state] [detail]
          -- pool-ext-stats [pool-name]
          -- prefix-ext-stats ipv6-address/prefix-length
          -- prefix-ext-stats pool pool-name
          -- pool-threshold-stats [pool-name] detail [format {exact|scientific}]
          -- pool-threshold-stats [pool-name]
          -- prefix-threshold-stats pool pool-name detail [format {exact|scientific}]
          -- prefix-threshold-stats pool pool-name
          -- prefix-threshold-stats ipv6-address/prefix-length detail [format
            {exact|scientific}]
          -- prefix-threshold-stats ipv6-address/prefix-length
          -- server-stats
          -- summary
        -- statistics
        -- summary
  
```

```

show
  — service
    — id service-id
      — dhcp
        — lease-state [wholesaler service-id] [sap sap-id|sdp sdp-id:vc-id] interface
          interface-name|ip-address ip-address[/mask]|chaddr ieee-address|mac
          ieee-address{[port port-id] [no-inter-dest-id | inter-dest-id inter-dest-id] }
          [session {none|ipoe}] [detail]
        — statistics [sap sap-id] | [sdp [sdp-id[:vc-id]] | interface ip-int-name]
        — summary
      — virtual-subnet subscriber sub-ident
      — virtual-subnet [sap sap-id]
      — dhcp6
        — lease-state [detail] [wholesaler service-id] [session {none|ipoe|ppp}]
        — lease-state [detail] interface interface-name [wholesaler service-id] [session
          {none|ipoe|ppp}]
        — lease-state [detail] ipv6-address ipv6-prefix[/prefix-length] [wholesaler
          service-id] [session {none|ipoe|ppp}]
        — lease-state [detail] mac ieee-address [wholesaler service-id] [session
          {none|ipoe|ppp}]
        — lease-state [interface ip-int-name]
        — lease-state
  — system
    — dhcp6

```

Show Commands

Tools Commands

- tools**
- **subscriber-mgmt**
- **remap-lease-state old-mac** *ieee-address* **mac** *ieee-address*
- **remap-lease-state sap** *sap-id* [*mac ieee-address*]

Clear Commands

- clear**
- **router**
- **dhcp**
- **lease-state** [**interface** *ip-int-name* | *ip-addr* | **ip-address** *ip-address* | **mac** *ieee-address*]
- **local-dhcp-server server-name**
- **declined-addresses** *ip-address[/mask]*
- **declined-addresses pool** *pool-name*
- **leases** *ip-address[/mask]* [**offered**]
- **pool-ext-stats** [*pool-name*]
- **server-stats**
- **subnet-ext-stats** *ip-address[/mask]*
- **subnet-ext-stats pool** *pool-name*
- **statistics** [*ip-int-name* | *ip-address*]
- **dhcp6**
- **local-dhcp-server server-name**
- **leases** [*ipv6-address/prefix-length*] [*type*] [*state*]
- **leases all** [*type*] [*state*]
- **pool-ext-stats** [*pool-name*]
- **pool-threshold-stats** [*pool-name*]
- **prefix-ext-stats** *ipv6-address/prefix-length*
- **prefix-ext-stats pool** *pool-name*
- **prefix-threshold-stats** *ipv6-address/prefix-length*
- **prefix-threshold-stats pool** *pool-name*
- **server-stats**
- **statistics**
- **service**
- **id service-id**
- **dhcp**
- **lease-state [no-dhcp-release]**
- **lease-state [port port-id] [inter-dest-id intermediate-destination-id] [no-dhcp-release]**
- **lease-state [port port-id] no-inter-dest-id [no-dhcp-release]**
- **lease-state ip-address ip-address [no-dhcp-release]**
- **lease-state mac ieee-address no-dhcp-release**
- **lease-state sap sap-id [no-dhcp-release]**
- **lease-state sdp sdp-id:vc-id [no-dhcp-release]**
- **statistics [sap sap-id | sdp [sdp-id[:vc-id]] | interface ip-int-name | ip-address]**
- **dhcp6**
- **lease-state [ip-address ipv6-address/prefix-length] [mac ieee-address]**

DHCP Debug Commands

```

debug
  — router
    — ip
      — [no] dhcp [ip-int-name]
          — detail-level {low | medium | high}
          — no detail-level
          — mode {dropped-only | ingr-and-dropped | egr-ingr-and-dropped}
          — no mode
      — dhcp6 [ip-int-name]
      — no dhcp6
      — [no] local-dhcp-server server-name [lease-address ip-address]
          — detail-level {low | medium | high}
          — no detail-level
          — mode {dropped-only | ingr-and-dropped | egr-ingr-and-dropped}
          — no mode

```

Tools Commands

```

tools
  — perform
    — subscriber-mgmt
      — edit-ppp-session sap sap-id ip ip-address [subscriber sub-ident-string] [sub-profile-string sub-profile-string] [sla-profile-string sla-profile-string] [inter-dest-id intermediate-destination-id] [ancp-string ancp-string] [app-profile-string app-profile-string] [user-name user-name]
      — eval-lease-state [svc-id service-id] [sap sap-id] [subscriber sub-ident-string] [ip ip-address]
      — local-user-db local-user-db-name
        — ppp
          — authentication pppoe-user-name [password password]
          — host-lookup [mac ieee-address] [remote-id remote-id] [user-name user-name] [circuit-id circuit-id] circuit-id-hex circuit-id-hex]
        — dhcp
          — host-lookup [mac ieee-address] [remote-id remote-id] [sap-id sap-id] [service-id service-id] [string vso-string] [system-id system-id] [option60 hex-string] [circuit-id circuit-id] circuit-id-hex circuit-id-hex]

```

Show Commands