

[Cisco Metacloud](#) > [Solutions](#) Search

Troubleshooting a Deleted DHCP Port



Marek Glinski

3 months ago · Updated

In this Solution:

- [Why you should not delete a DHCP port](#)
- [Restoring DHCP service](#)
- [Verifying that DHCP is available](#)

The DHCP port is the access point in your virtual network to the DHCP service, which provides IP addresses for launched VMs. The service also gives an instance access to metadata and configuration information, such as its SSH public key, `cloud-init` script, and static routing information. When you create a subnet in Metacloud, DHCP is enabled by default.

Why You Should Not Delete the DHCP Port

In a network with DHCP enabled, deleting the DHCP port cuts off access to the DHCP service, which would disrupt connectivity for VMs. Any new VM would not be allocated an IP address and would fail to connect to the network. A new VM appears to have an IP address in the Dashboard, and it returns a value for `IP address` when you run the `openstack show` command in the CLI; however, running `ip addr show` in the VM console returns no IP address:

```
CentOS release 6.7 (Final)
Kernel 2.6.32-573.3.1.el6.x86_64 on an x86_64

centos-6-x86-64-genericcloud-1508-mc login:
Last login: Tue Aug  8 21:47:11 on tty1
[root@centos-6-x86-64-genericcloud-1508-mc ~]# ip addr show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        inet6 ::1/128 scope host
            valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP q
en 1000
    link/ether fa:16:3e:f0:26:92 brd ff:ff:ff:ff:ff:ff
    inet6 fe80::f816:3eff:fef0:2692/64 scope link
        valid_lft forever preferred_lft forever
[root@centos-6-x86-64-genericcloud-1508-mc ~]#
```

The log for the VM shows no IP address for `eth0`, which identifies the network interface, and it displays errors that indicate unavailability of the OpenStack metadata service:

```
ci-info: ++++++Net device info+++++
ci-info: +-----+-----+-----+-----+-----+
ci-info: | Device | Up | Address | Mask | Hw-Address |
ci-info: +-----+-----+-----+-----+-----+
ci-info: | lo | True | 127.0.0.1 | 255.0.0.0 | . |
ci-info: | eth0 | True | . | . | fa:16:3e:f0:26: |
ci-info: +-----+-----+-----+-----+-----+
ci-info: !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!Route info failed!!!!!!!!!!!!
2017-08-08 18:02:11,892 - url_helper.py[WARNING]: Calling 'http://
2017-08-08 18:02:12,896 - url_helper.py[WARNING]: Calling 'http://
```

Any existing VM with a DHCP lease requiring renewal would lose connectivity because the DHCP service could not provision leases.

Metacloud 4.0 (Liberty) and later versions prevent these disruptions by automatically creating a new DHCP port to replace a deleted port. This protection is not available in Icehouse or earlier versions.

If you accidentally delete a DHCP port in Icehouse, the port appears to be deleted, but the associated IP address remains "live," responding to ICMP pings. The port continues to exist as a network namespace on a Metacloud Control Plane (MCP) and still has a DHCP agent associated with it, but it no longer exists in a database.

Restoring DHCP

Correcting a DHCP service outage in Icehouse due to a deleted DHCP port involves removing and resetting the connection between the DHCP agent and the network. You must be a Metacloud Administrator to perform this action.

Note: Avoid launching new instances on the affected network until you complete this action.

Some of the following commands require OpenStack CLI version 3.11.0 or later. With earlier versions, you will need to use Neutron CLI equivalents for some commands. See [Software and Versions FAQ](#).

Temporarily Removing the DHCP Agent from the Network

1. View the UUID of the affected network:

```
$ openstack network list
```

ID	Name	Subnet
<network_uuid>	PUBLIC EXTERNAL - DO NOT MODIFY	<subnet_uuid>
<affected_network_uuid>	network_2	<subnet_uuid>

2. Verify that a DHCP agent is attached to the affected network and note the agent UUID:

```
$ openstack network agent list --network <network_uuid>
```

ID	Agent Type	Host
<agent_uuid>	DHCP agent	<mcp_host_na

Tip: Typically, there is one agent per Availability Zone (AZ).

3. Remove the network from the DHCP agent:

```
$ openstack network agent remove network --dhcp <agent_uuid> <netw
```

4. Verify that the network has been detached from the agent:

```
$ openstack network agent list --network <network_uuid>
command returns no output
```

Re-attaching the network to the DHCP agent

1. Re-attach the network to the agent:

```
$ openstack network agent add network --dhcp <agent_uuid> <network
```

2. Verify that the network is attached to the agent:

```
$ openstack network agent list --network <network_uuid>
+-----+-----+-----+
| ID                | Agent Type | Host                |
+-----+-----+-----+
| <agent_uuid>      | DHCP agent | <mcp_host_na        |
+-----+-----+-----+
```

Verifying That DHCP is Available

To verify that DHCP is restored, check that the DHCP port is visible in the network it was deleted from.

In the Dashboard

1. Click **Networks** on the *Project* drop-down list.

2. Click the name of a network, and view the *Ports* table on the *Network Overview* page.

The DHCP port shows *network:dhcp* as the attached device.

Tenant A > Networks > Network Details: silver

NETWORK OVERVIEW

NAME silver

ID [REDACTED]

PROJECT ID [REDACTED]

STATUS Active

ADMIN STATE UP

SHARED No

EXTERNAL NETWORK No

MTU Unknown

PROVIDER NETWORK Network Type: vlan

Physical Network: bond0

Segmentation ID: 2710

SUBNETS

+ CREATE SUBNET (QUOTA EXCEEDED) X DELETE SUBNETS

NAME	NETWORK ADDRESS	IP VERSION	GATEWAY IP	ACTIONS
silver-subnet	[REDACTED]	IPv4	[REDACTED]	EDIT SUBNET

Displaying 1 item

PORTS

NAME	FIXED IPS	ATTACHED DEVICE	STATUS	ADMIN STATE	ACTIONS
(fb2fc6ad-cd20)	[REDACTED]	network:router_interface	Active	UP	EDIT PORT
(f722c73d-5f7a)	[REDACTED]	network:router_interface	Active	UP	EDIT PORT
(c478688c-dd84)	[REDACTED]	network:router_interface	Active	UP	EDIT PORT
vip	[REDACTED]	Detached	Down	UP	EDIT PORT
(2a53ea6c-0ac6)	[REDACTED]	network:dhcp	Active	UP	EDIT PORT
vip	[REDACTED]	Detached	Down	UP	EDIT PORT

In the CLI

1. Find the DHCP port for the affected network:

```
$ openstack port list --device-owner network:dhcp --network <affected_network>
```

ID	Name	MAC Address
<port_uuid>		fa:16:3e:43:14:6c

2. View the device owner and status of the DHCP port:

```
$ openstack port show <port_uuid>
```

Field	Value
admin_state_up	UP
allowed_address_pairs	
binding_host_id	<host_name>
binding_profile	
binding_vif_details	port_filter='True'
binding_vif_type	bridge
binding_vnic_type	normal
created_at	None
data_plane_status	None
description	None
device_id	dhcpd<dhcp_uuid>
device_owner	network:dhcp
dns_assignment	None
dns_name	None
extra_dhcp_opts	
fixed_ips	ip_address='<address>', subnet_id='<subnet_id>'
id	<port_uuid>
ip_address	None
mac_address	fa:16:3e:43:14:6c
name	
network_id	<network_uuid>

option_name	None
option_value	None
port_security_enabled	False
project_id	<project_uuid>
qos_policy_id	None
revision_number	None
security_group_ids	
status	ACTIVE
subnet_id	None
tags	None
trunk_details	None
updated_at	None
+-----+-----	

Tip: You can also use these methods to identify a DHCP port and avoid deleting it.

Using the VM Console

If you launched any VMs after DHCP service was disrupted, you can check to see if they have IP addresses after you restore DHCP:

1. In the Dashboard click **Instances** on the *Project* drop-down list.
2. In the *Instances* table, click the name of the VM that you created after DHCP service was disrupted.
3. Click the **Console** tab.
4. When a login challenge appears in the console, enter your credentials for the VM.
5. At the command prompt, run `ip addr show` and view the results. An IP address appears in `eth0`, which identifies the network interface.

Product Marketing > Instances > Instance Detail: instance2

Overview

Log

Console

Action Log

Instance Console

Current console type: SPICE

SWITCH TO VNC

If console is not responding to keyboard input: click the grey status bar below. [Click here to show only console](#)

To exit the fullscreen mode, click the browser's back button.

SPICE

Send Ctrl-Alt-Del

```
Last login: Tue Aug  8 21:47:11 on tty1
[root@centos-6-x86-64-genericcloud-1508-mc ~]# ip addr show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        inet6 ::1/128 scope host
            valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP ql
en 1000
    link/ether fa:16:3e:f0:26:92 brd ff:ff:ff:ff:ff:ff
    inet6 fe80::f816:3eff:fe0:2692/64 scope link
        valid_lft forever preferred_lft forever
[root@centos-6-x86-64-genericcloud-1508-mc ~]# ip addr show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        inet6 ::1/128 scope host
            valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP ql
en 1000
    link/ether fa:16:3e:f0:26:92 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.4/24 brd 192.168.1.255 scope global eth0
    inet6 fe80::f816:3eff:fe0:2692/64 scope link
        valid_lft forever preferred_lft forever
[root@centos-6-x86-64-genericcloud-1508-mc ~]#
```



Was this article helpful?

☒ Yes☐ No

0 out of 0 found this helpful

Have more questions? [Submit a request](#)

Return to top

Recently viewed articles[Tagging Instances with Metadata](#)[Troubleshooting a "Missing" User When Using LDAP](#)**Related articles**[Migrating VMware instances to Metacloud](#)[Software and Versions FAQ](#)[Troubleshooting Connectivity for an External VLAN](#)[Configuring a Virtual IP for High Availability](#)[Detaching and Deleting Ports Attached to Network Resources](#)
