```
pinyu@sdnlab:~$ sudo ovs-vsctl add-br br0 -- set Bridge br0 fail-mode=secure
[sudo] password for pinyu:
ovs-vsctl: cannot create a bridge named br0 because a bridge named br0 already exists
pinyu@sdnlab:~$ ovs-vsctl del-br br0
ovs-vsctl: unix:/usr/local/var/run/openvswitch/db.sock: database connection failed (Permission denied)
pinyu@sdnlab:~$ sudo ovs-vsctl del-br br0
[sudo] password for pinyu:
pinyu@sdnlab:~$ sudo ovs-vsctl add-br br0 -- set Bridge br0 fail-mode=secure
```

```
pinyu@sdnlab:~$ sudo ovs-vsctl show
6abe975b-72dd-4c11-bae7-d155570bf010
    Bridge br0
        fail_mode: secure
        Port br0
            Interface br0
                type: internal
    ovs_version: "2.12.90"
```

```
pinyu@sdnlab:~/ovs$ vi add4port.sh
pinyu@sdnlab:~/ovs$ ls
acinclude.m4    autom4te.cache  configure           distfiles      m4              missing-distfiles  python        tutorial            xenserver
aclocal.m4      boot.sh         configure.ac        Documentation  MAINTAINERS.rst NEWS               README.rst    utilities
add4port.sh     build-aux       CONTRIBUTING.rst    include        Makefile        NOTICE             rhel          Vagrantfile
all-distfiles   config.h        cxx-check           ipsec          Makefile.am     ofproto            selinux       Vagrantfile-FreeBSD
all-gitfiles    config.h.in     datapath            lib            Makefile.in     ovsdb              stamp-h1      vswitchd
appveyor.yml    config.log      datapath-windows    libtool        manpage-check   package.m4         tests         vtep
AUTHORS.rst     config.status   debian              LICENSE        manpages.mk     poc                third-party   windows
pinyu@sdnlab:~/ovs$
pinyu@sdnlab:~/ovs$ sudo chmod 700 add4port.sh
pinyu@sdnlab:~/ovs$ ls
acinclude.m4    autom4te.cache  configure           distfiles      m4              missing-distfiles  python        tutorial            xenserver
aclocal.m4      boot.sh         configure.ac        Documentation  MAINTAINERS.rst NEWS               README.rst    utilities
add4port.sh     build-aux       CONTRIBUTING.rst    include        Makefile        NOTICE             rhel          Vagrantfile
all-distfiles   config.h        cxx-check           ipsec          Makefile.am     ofproto            selinux       Vagrantfile-FreeBSD
all-gitfiles    config.h.in     datapath            lib            Makefile.in     ovsdb              stamp-h1      vswitchd
appveyor.yml    config.log      datapath-windows    libtool        manpage-check   package.m4         tests         vtep
AUTHORS.rst     config.status   debian              LICENSE        manpages.mk     poc                third-party   windows
```

```
pinyu@sdnlab:~/ovs$ sudo ./add4port.sh
ovs-vsctl: Port does not contain a column whose name matches "--set"
ovs-ofctl: br0: couldn't find port `p1'
ovs-vsctl: Port does not contain a column whose name matches "--set"
ovs-ofctl: br0: couldn't find port `p2'
ovs-vsctl: Port does not contain a column whose name matches "--set"
ovs-ofctl: br0: couldn't find port `p3'
ovs-vsctl: Port does not contain a column whose name matches "--set"
ovs-ofctl: br0: couldn't find port `p4'
pinyu@sdnlab:~/ovs$
pinyu@sdnlab:~/ovs$ vi add4port.sh
pinyu@sdnlab:~/ovs$ sudo ./add4port.sh
pinyu@sdnlab:~/ovs$
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-vsctl show
6abe975b-72dd-4c11-bae7-d155570bf010
    Bridge br0
        fail_mode: secure
        Port p2
            Interface p2
                type: internal
        Port br0
            Interface br0
                type: internal
        Port p3
            Interface p3
                type: internal
        Port p1
            Interface p1
                type: internal
        Port p4
            Interface p4
                type: internal
    ovs_version: "2.12.90"
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl show br0
OFPT_FEATURES_REPLY (xid=0x2): dpid:0000f258153abf43
n_tables:254, n_buffers:0
capabilities: FLOW_STATS TABLE_STATS PORT_STATS QUEUE_STATS ARP_MATCH_IP
actions: output enqueue set_vlan_vid set_vlan_pcp strip_vlan mod_dl_src mod_dl_dst mod_nw_src mod_nw_dst mod_nw_tos mod_tp_src mod_tp_dst
 1(p1): addr:a6:2c:51:cb:78:5c
     config:     0
     state:      0
     speed: 0 Mbps now, 0 Mbps max
 2(p2): addr:32:93:61:3d:58:75
     config:     0
     state:      0
     speed: 0 Mbps now, 0 Mbps max
 3(p3): addr:32:bc:97:1f:bc:70
     config:     0
     state:      0
     speed: 0 Mbps now, 0 Mbps max
 4(p4): addr:22:d8:cb:cf:5e:aa
     config:     0
     state:      0
     speed: 0 Mbps now, 0 Mbps max
 LOCAL(br0): addr:f2:58:15:3a:bf:43
     config:     PORT_DOWN
     state:      LINK_DOWN
     speed: 0 Mbps now, 0 Mbps max
OFPT_GET_CONFIG_REPLY (xid=0x4): frags=normal miss send len=0
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl add-flow br0 \
> "table=0,dl_src=01:00:00:00:00:00/01:00:00:00:00:00,actions=drop"
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl add-flow br0 "table=0,dl_dst=01:80:c2:00:00:00/ff:ff:ff:ff:ff:f0,actions=drop"
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl add-flow br0 "table=0,priority=0,actions=resubmit(,1)"
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl dump-flows br0
 cookie=0x0, duration=329.916s, table=0, n_packets=0, n_bytes=0, dl_src=01:00:00:00:00:00/01:00:00:00:00:00 actions=drop
 cookie=0x0, duration=195.016s, table=0, n_packets=0, n_bytes=0, dl_dst=01:80:c2:00:00:00/ff:ff:ff:ff:ff:f0 actions=drop
 cookie=0x0, duration=42.753s, table=0, n_packets=5, n_bytes=882, priority=0 actions=resubmit(,1)
pinyu@sdnlab:~/ovs$ sudo ovs-appctl ofproto/trace br0 in_port=1,dl_dst=01:80:c2:00:00:05
Flow: in_port=1,vlan_tci=0x0000,dl_src=00:00:00:00:00:00,dl_dst=01:80:c2:00:00:05,dl_type=0x0000

bridge("br0")
------------
 0. dl_dst=01:80:c2:00:00:00/ff:ff:ff:ff:ff:f0, priority 32768
    drop

Final flow: unchanged
Megaflow: recirc_id=0,eth,in_port=1,dl_src=00:00:00:00:00:00/01:00:00:00:00:00,dl_dst=01:80:c2:00:00:00/ff:ff:ff:ff:ff:f0,dl_type=0x0000
Datapath actions: drop
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-appctl ofproto/trace br0 in_port=1,dl_dst=01:80:c2:00:00:10
Flow: in_port=1,vlan_tci=0x0000,dl_src=00:00:00:00:00:00,dl_dst=01:80:c2:00:00:10,dl_type=0x0000

bridge("br0")
------------
 0. priority 0
    resubmit(,1)
 1. No match.
    drop

Final flow: unchanged
Megaflow: recirc_id=0,eth,in_port=1,dl_src=00:00:00:00:00:00/01:00:00:00:00:00,dl_dst=01:80:c2:00:00:10/ff:ff:ff:ff:ff:f0,dl_type=0x0000
Datapath actions: drop
```

```
pinyu@sdnlab:~/ovs$ ovs-ofctl add-flow br0 "table=1,priority=0,actions=drop"
ovs-ofctl: /usr/local/var/run/openvswitch/br0.mgmt: failed to open socket (Permission denied)
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl add-flow br0 "table=1,priority=0,actions=drop"
[sudo] password for pinyu:
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl add-flows br0 - << 'EOF'
> table = 1 ,priority=99,in_port = 2,vlan_tci=0,actions=mod_vlan_vid:20,resubmit(,2)
> table = 1, priority=99,in_port = 3,vlan_tci=0,actions=mod_vlan_vid:30,resubmit(,2)
> table = 1, priority=99,in_port = 4,vlan_tci=0,actions=mod_vlan_vid:30,resubmit(,2)
> EOF
ovs-ofctl: -:1: field table missing value
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl add-flows br0  << 'EOF'
table = 1 ,priority=99,in_port = 2,vlan_tci=0,actions=mod_vlan_vid:20,resubmit(,2)
table = 1, priority=99,in_port = 3,vlan_tci=0,actions=mod_vlan_vid:30,resubmit(,2)
table = 1, priority=99,in_port = 4,vlan_tci=0,actions=mod_vlan_vid:30,resubmit(,2)
EOF
ovs-ofctl: 'add-flows' command requires at least 2 arguments
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl add-flows br0 - << 'EOF'
table = 1 ,priority=99,in_port = 2,vlan_tci=0,actions=mod_vlan_vid:20,resubmit(,2)
table = 1, priority=99,in_port = 3,vlan_tci=0,actions=mod_vlan_vid:30,resubmit(,2)
table = 1, priority=99,in_port = 4,vlan_tci=0,actions=mod_vlan_vid:30,resubmit(,2)
EOF
ovs-ofctl: -:1: field table missing value
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-appctl ofproto/trace br0 in_port=1,vlan_tci=5
Flow: in_port=1,vlan_tci=0x0005,vlan_tci1=0x0000,dl_src=00:00:00:00:00:00,dl_dst=00:00:00:00:00:00,dl_type=0x0000

bridge("br0")
-------------
 0. priority 0
    resubmit(,1)
 1. in_port=1, priority 99
    resubmit(,2)
 2. No match.
    drop

Final flow: unchanged
Megaflow: recirc_id=0,eth,in_port=1,dl_src=00:00:00:00:00:00/01:00:00:00:00:00,dl_dst=00:00:00:00:00:00/ff:ff:ff:ff:ff:f0,dl_type=0x0000
Datapath actions: drop
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-appctl ofproto/trace br0 in_port=2
Flow: in_port=2,vlan_tci=0x0000,dl_src=00:00:00:00:00:00,dl_dst=00:00:00:00:00:00,dl_type=0x0000

bridge("br0")
-------------
 0. priority 0
    resubmit(,1)
 1. priority 0
    drop

Final flow: unchanged
Megaflow: recirc_id=0,eth,in_port=2,dl_src=00:00:00:00:00:00/01:00:00:00:00:00,dl_dst=00:00:00:00:00:00/ff:ff:ff:ff:ff:f0,dl_type=0x0000
Datapath actions: drop
```

```
pinyu@sdnlab:~/ovs$ ovs-ofctl add-flows br0 - <<'EOF'
>    table=1, priority=99, in_port=2, vlan_tci=0, actions=mod_vlan_vid:20, resubmit(,2)
>    table=1, priority=99, in_port=3, vlan_tci=0, actions=mod_vlan_vid:30, resubmit(,2)
>    table=1, priority=99, in_port=4, vlan_tci=0, actions=mod_vlan_vid:30, resubmit(,2)
> EOF
ovs-ofctl: /usr/local/var/run/openvswitch/br0.mgmt: failed to open socket (Permission denied)
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl add-flows br0 - <<'EOF'
   table=1, priority=99, in_port=2, vlan_tci=0, actions=mod_vlan_vid:20, resubmit(,2)
   table=1, priority=99, in_port=3, vlan_tci=0, actions=mod_vlan_vid:30, resubmit(,2)
   table=1, priority=99, in_port=4, vlan_tci=0, actions=mod_vlan_vid:30, resubmit(,2)
EOF
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-ofctl dump-flows br0
 cookie=0x0, duration=4383.461s, table=0, n_packets=0, n_bytes=0, dl_src=01:00:00:00:00:00/01:00:00:00:00:00 actions=drop
 cookie=0x0, duration=4248.561s, table=0, n_packets=0, n_bytes=0, dl_dst=01:80:c2:00:00:00/ff:ff:ff:ff:ff:f0 actions=drop
 cookie=0x0, duration=4096.298s, table=0, n_packets=22, n_bytes=3136, priority=0 actions=resubmit(,1)
 cookie=0x0, duration=2027.719s, table=1, n_packets=2, n_bytes=273, priority=99,in_port=p1 actions=resubmit(,2)
 cookie=0x0, duration=167.695s, table=1, n_packets=0, n_bytes=0, priority=99,in_port=p2,vlan_tci=0x0000 actions=mod_vlan_vid:20,resubmit(,2)
 cookie=0x0, duration=167.695s, table=1, n_packets=0, n_bytes=0, priority=99,in_port=p3,vlan_tci=0x0000 actions=mod_vlan_vid:30,resubmit(,2)
 cookie=0x0, duration=167.695s, table=1, n_packets=0, n_bytes=0, priority=99,in_port=p4,vlan_tci=0x0000 actions=mod_vlan_vid:30,resubmit(,2)
 cookie=0x0, duration=2218.966s, table=1, n_packets=6, n_bytes=819, priority=0 actions=drop
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-appctl ofproto/trace br0 in_port=2,vlan_tci=5
Flow: in_port=2,vlan_tci=0x0005,vlan_tci1=0x0000,dl_src=00:00:00:00:00:00,dl_dst=00:00:00:00:00:00,dl_type=0x0000

bridge("br0")
-------------
 0. priority 0
    resubmit(,1)
 1. priority 0
    drop

Final flow: unchanged
Megaflow: recirc_id=0,eth,in_port=2,vlan_tci=0x0005,dl_src=00:00:00:00:00:00/01:00:00:00:00:00,dl_dst=00:00:00:00:00:00/ff:ff:ff:ff:ff:f0,dl_type=0x0000
0
Datapath actions: drop
```

```
pinyu@sdnlab:~/ovs$ sudo ovs-appctl ofproto/trace br0 in_port=2
Flow: in_port=2,vlan_tci=0x0000,dl_src=00:00:00:00:00:00,dl_dst=00:00:00:00:00:00,dl_type=0x0000

bridge("br0")
-------------
 0. priority 0
    resubmit(,1)
 1. in_port=2,vlan_tci=0x0000, priority 99
    mod_vlan_vid:20
    resubmit(,2)
 2. No match.
    drop

Final flow: in_port=2,dl_vlan=20,dl_vlan_pcp=0,vlan_tci1=0x0000,dl_src=00:00:00:00:00:00,dl_dst=00:00:00:00:00:00,dl_type=0x0000
Megaflow: recirc_id=0,eth,in_port=2,dl_src=00:00:00:00:00:00/01:00:00:00:00:00,dl_dst=00:00:00:00:00:00/ff:ff:ff:ff:ff:f0,dl_type=0x0000
Datapath actions: drop
```