

**NAME**

ovn-ctl – Open Virtual Network northbound daemon lifecycle utility

**SYNOPSIS**

**ovn-ctl** [*options*] *command* [-- *extra\_args*]

**DESCRIPTION**

This program is intended to be invoked internally by Open Virtual Network startup scripts. System administrators should not normally invoke it directly.

**COMMANDS**

**start\_northd**  
**start\_controller**  
**start\_controller\_vtep**  
**start\_ic**  
**stop\_northd**  
**stop\_controller**  
**stop\_controller\_vtep**  
**stop\_ic**  
**restart\_northd**  
**restart\_controller**  
**restart\_controller\_vtep**  
**restart\_ic**  
**promote\_ovnnb**  
**promote\_ovnsb**  
**demote\_ovnnb**  
**demote\_ovnsb**  
**status\_ovnnb**  
**status\_ovnsb**  
**start\_ovsdb**  
**start\_nb\_ovsdb**  
**start\_sb\_ovsdb**  
**stop\_ovsdb**  
**stop\_nb\_ovsdb**  
**stop\_sb\_ovsdb**  
**restart\_ovsdb**  
**run\_nb\_ovsdb**  
**run\_sb\_ovsdb**  
**promote\_ic\_nb**  
**promote\_ic\_sb**  
**demote\_ic\_nb**  
**demote\_ic\_sb**  
**status\_ic\_nb**  
**status\_ic\_sb**  
**start\_ic\_ovsdb**  
**start\_ic\_nb\_ovsdb**  
**start\_ic\_sb\_ovsdb**  
**stop\_ic\_ovsdb**  
**stop\_ic\_nb\_ovsdb**  
**stop\_ic\_sb\_ovsdb**  
**restart\_ic\_ovsdb**  
**run\_ic\_nb\_ovsdb**  
**run\_ic\_sb\_ovsdb**

**OPTIONS**

--ovn-northd-priority=*NICE*

```

--ovn-northd-wrapper=WRAPPER
--ovn-controller-priority=NICE
--ovn-controller-wrapper=WRAPPER
--ovn-ic-priority=NICE
--ovn-ic-wrapper=WRAPPER
--ovsdb-nb-wrapper=WRAPPER
--ovsdb-sb-wrapper=WRAPPER
--ovn-user=USER:GROUP
-h | --help

```

## FILE LOCATION OPTIONS

```

--db-sock=SOCKET
--db-nb-file=FILE
--db-sb-file=FILE
--db-nb-schema=FILE
--db-sb-schema=FILE
--db-sb-create-insecure-remote=yes|no
--db-nb-create-insecure-remote=yes|no
--db-ic-nb-file=FILE
--db-ic-sb-file=FILE
--db-ic-nb-schema=FILE
--db-ic-sb-schema=FILE
--db-ic-sb-create-insecure-remote=yes|no
--db-ic-nb-create-insecure-remote=yes|no
--db-nb-config-file=FILE
--db-sb-config-file=FILE
--db-ic-nb-config-file=FILE
--db-ic-sb-config-file=FILE
--db-sb-relay-config-file=FILE
--ovn-controller-ssl-key=KEY
--ovn-controller-ssl-cert=CERT
--ovn-controller-ssl-ca-cert=CERT
--ovn-controller-ssl-bootstrap-ca-cert=CERT

```

## PROTOCOL, CIPHER AND CIPHERSUITE OPTIONS

```

--ovn-controller-ssl-protocols=PROTOCOLS
--ovn-ic-ssl-protocols=PROTOCOLS
--ovn-northd-ssl-protocols=PROTOCOLS
--ovn-nb-db-ssl-protocols=PROTOCOLS
--ovn-sb-db-ssl-protocols=PROTOCOLS
--ovn-ic-nb-db-ssl-protocols=PROTOCOLS
--ovn-ic-sb-db-ssl-protocols=PROTOCOLS

```

```

--ovn-controller-ssl-ciphers=CIPHERS
--ovn-ic-ssl-ciphers=CIPHERS
--ovn-northd-ssl-ciphers=CIPHERS
--ovn-nb-db-ssl-ciphers=CIPHERS
--ovn-sb-db-ssl-ciphers=CIPHERS
--ovn-ic-nb-db-ssl-ciphers=CIPHERS
--ovn-ic-sb-db-ssl-ciphers=CIPHERS
--ovn-controller-ssl-ciphersuites=CIPHERSUITES
--ovn-ic-ssl-ciphersuites=CIPHERSUITES
--ovn-northd-ssl-ciphersuites=CIPHERSUITES
--ovn-nb-db-ssl-ciphersuites=CIPHERSUITES
--ovn-sb-db-ssl-ciphersuites=CIPHERSUITES
--ovn-ic-nb-db-ssl-ciphersuites=CIPHERSUITES
--ovn-ic-sb-db-ssl-ciphersuites=CIPHERSUITES

```

#### ADDRESS AND PORT OPTIONS

```

--db-nb-sync-from-addr=IP ADDRESS
--db-nb-sync-from-port=PORT NUMBER
--db-nb-sync-from-proto=PROTO
--db-sb-sync-from-addr=IP ADDRESS
--db-sb-sync-from-port=PORT NUMBER
--db-sb-sync-from-proto=PROTO
--db-ic-nb-sync-from-addr=IP ADDRESS
--db-ic-nb-sync-from-port=PORT NUMBER
--db-ic-nb-sync-from-proto=PROTO
--db-ic-sb-sync-from-addr=IP ADDRESS
--db-ic-sb-sync-from-port=PORT NUMBER
--db-ic-sb-sync-from-proto=PROTO
--ovn-northd-nb-db=PROTO:IP ADDRESS: PORT..
--ovn-northd-sb-db=PROTO:IP ADDRESS: PORT..
--ovn-ic-nb-db=PROTO:IP ADDRESS: PORT..
--ovn-ic-sb-db=PROTO:IP ADDRESS: PORT..

```

#### CLUSTERING OPTIONS

```

--db-nb-cluster-local-addr=IP ADDRESS
--db-nb-cluster-local-port=PORT NUMBER
--db-nb-cluster-local-proto=PROTO (tcp/ssl)
--db-nb-cluster-remote-addr=IP ADDRESS
--db-nb-cluster-remote-port=PORT NUMBER
--db-nb-cluster-remote-proto=PROTO (tcp/ssl)
--db-nb-election-timer=Timeout in milliseconds
--db-sb-cluster-local-addr=IP ADDRESS

```

```

--db-sb-cluster-local-port=PORT NUMBER
--db-sb-cluster-local-proto=PROTO (tcp/ssl)
--db-sb-cluster-remote-addr=IP ADDRESS
--db-sb-cluster-remote-port=PORT NUMBER
--db-sb-cluster-remote-proto=PROTO (tcp/ssl)
--db-sb-election-timer=Timeout in milliseconds
--db-ic-nb-cluster-local-addr=IP ADDRESS
--db-ic-nb-cluster-local-port=PORT NUMBER
--db-ic-nb-cluster-local-proto=PROTO (tcp/ssl)
--db-ic-nb-cluster-remote-addr=IP ADDRESS
--db-ic-nb-cluster-remote-port=PORT NUMBER
--db-ic-nb-cluster-remote-proto=PROTO (tcp/ssl)
--db-ic-sb-cluster-local-addr=IP ADDRESS
--db-ic-sb-cluster-local-port=PORT NUMBER
--db-ic-sb-cluster-local-proto=PROTO (tcp/ssl)
--db-ic-sb-cluster-remote-addr=IP ADDRESS
--db-ic-sb-cluster-remote-port=PORT NUMBER
--db-ic-sb-cluster-remote-proto=PROTO (tcp/ssl)
--db-cluster-schema-upgrade=yes|no

```

### PROBE INTERVAL OPTIONS

```

--db-nb-probe-interval-to-active=Time in milliseconds
--db-sb-probe-interval-to-active=Time in milliseconds

```

### EXTRA OPTIONS

Any options after '-' will be passed on to the binary run by *command* with the exception of `start_northd`, which can have options specified in `ovn-northd-db-params.conf`. Any *extra\_args* passed to `start_northd` will be passed to the `ovsdb-servers` if `--ovn-manage-ovsdb=yes`

### CONFIGURATION FILES

Following are the optional configuration files. If present, it should be located in the `etc` dir

#### **ovnnb-active.conf**

If present, this file should hold the url to connect to the active Northbound DB server

```
tcp:x.x.x.x:6641
```

#### **ovnsb-active.conf**

If present, this file should hold the url to connect to the active Southbound DB server

```
tcp:x.x.x.x:6642
```

#### **ovn-northd-db-params.conf**

If present, `start_northd` will not start the DB server even if `--ovn-manage-ovsdb=yes`. This file should hold the database url parameters to be passed to `ovn-northd`.

```
--ovnnb-db=tcp:x.x.x.x:6641 --ovnsb-db=tcp:x.x.x.x:6642
```

#### **ic-nb-active.conf**

If present, this file should hold the url to connect to the active Interconnection Northbound DB server

```
tcp:x.x.x.x:6645
```

**ic-sb-active.conf**

If present, this file should hold the url to connect to the active Interconnection Southbound DB server

```
tcp:x.x.x.x:6646
```

**ovn-ic-db-params.conf**

If present, this file should hold the database url parameters to be passed to ovn-ic.

```
--ic-nb-db=tcp:x.x.x.x:6645 --ic-sb-db=tcp:x.x.x.x:6646
```

**RUNNING OVN DB SERVERS WITHOUT DETACHING**

```
# ovn-ctl run_nb_ovsdb
```

This command runs the OVN nb ovsdb-server without passing the **detach** option, making it to block until ovsdb-server exits. This command will be useful for starting the OVN nb ovsdb-server in a container.

```
# ovn-ctl run_sb_ovsdb
```

This command runs the OVN sb ovsdb-server without passing the **detach** option, making it to block until ovsdb-server exits. This command will be useful for starting the OVN sb ovsdb-server in a container.

```
# ovn-ctl run_ic_nb_ovsdb
```

This command runs the OVN IC-NB ovsdb-server without passing the **detach** option, making it to block until ovsdb-server exits. This command will be useful for starting the OVN IC-NB ovsdb-server in a container.

```
# ovn-ctl run_ic_sb_ovsdb
```

This command runs the OVN IC-SB ovsdb-server without passing the **detach** option, making it to block until ovsdb-server exits. This command will be useful for starting the OVN IC-SB ovsdb-server in a container.

**EXAMPLE USAGE****Run ovn-controller on a host already running OVS**

```
# ovn-ctl start_controller
```

**Run ovn-northd on a host already running OVS**

```
# ovn-ctl start_northd
```

**All-in-one OVS+OVN for testing**

```
# ovs-ctl start --system-id="random"
```

```
# ovn-ctl start_northd
```

```
# ovn-ctl start_controller
```

**Promote and demote ovsdb servers**

```
# ovn-ctl promote_ovnnb
```

```
# ovn-ctl promote_ovnsb
```

```
# ovn-ctl --db-nb-sync-from-addr=x.x.x.x --db-nb-sync-from-port=6641 --db-nb-probe-interval-to-active=60000 demote_ovnnb
```

```
# ovn-ctl --db-sb-sync-from-addr=x.x.x.x --db-sb-sync-from-port=6642 --db-sb-probe-interval-to-active=60000 demote_ovnsb
```

**Creating a clustered db on 3 nodes with IPs x.x.x.x, y.y.y.y and z.z.z.z**

*Starting OVN ovsdb servers and ovn-northd on the node with IP x.x.x.x*

```
# ovn-ctl --db-nb-addr=x.x.x.x --db-nb-create-insecure-remote=yes --db-sb-addr=x.x.x.x --db-sb-create-insecure-remote=yes --db-nb-cluster-local-addr=x.x.x.x --db-sb-cluster-local-addr=x.x.x.x --ovn-northd-nb-db=tcp:x.x.x.x:6641,tcp:y.y.y.y:6641,tcp:z.z.z.z:6641 --ovn-northd-sb-db=tcp:x.x.x.x:6642,tcp:y.y.y.y:6642,tcp:z.z.z.z:6642 start_northd
```

*Starting OVN ovsdb-servers and ovn-northd on the node with IP y.y.y.y and joining the cluster started at x.x.x.x*

```
# ovn-ctl --db-nb-addr=y.y.y.y --db-nb-create-insecure-remote=yes --db-sb-addr=y.y.y.y
--db-sb-create-insecure-remote=yes --db-nb-cluster-local-addr=y.y.y.y --db-sb-cluster-lo-
cal-addr=y.y.y.y --db-nb-cluster-remote-addr=x.x.x.x --db-sb-cluster-remote-addr=x.x.x.x
--ovn-northd-nb-db=tcp:x.x.x.x:6641,tcp:y.y.y.y:6641,tcp:z.z.z.z:6641
--ovn-northd-sb-db=tcp:x.x.x.x:6642,tcp:y.y.y.y:6642,tcp:z.z.z.z:6642 start_northd
```

Starting OVN ovsdb-servers and ovn-northd on the node with IP z.z.z.z and joining the cluster started at x.x.x.x

```
# ovn-ctl --db-nb-addr=z.z.z.z --db-nb-create-insecure-remote=yes --db-nb-cluster-lo-
cal-addr=z.z.z.z --db-sb-addr=z.z.z.z --db-sb-create-insecure-remote=yes --db-sb-cluster-lo-
cal-addr=z.z.z.z --db-nb-cluster-remote-addr=x.x.x.x --db-sb-cluster-remote-addr=x.x.x.x
--ovn-northd-nb-db=tcp:x.x.x.x:6641,tcp:y.y.y.y:6641,tcp:z.z.z.z:6641
--ovn-northd-sb-db=tcp:x.x.x.x:6642,tcp:y.y.y.y:6642,tcp:z.z.z.z:6642 start_northd
```

### Passing ssl keys when starting OVN dbs will supersede the default ssl values in db

Starting standalone ovn db server passing SSL/TLS certificates

```
# ovn-ctl --ovn-nb-db-ssl-key=/etc/ovn/ovnnb-privkey.pem
--ovn-nb-db-ssl-cert=/etc/ovn/ovnnb-cert.pem --ovn-nb-db-ssl-ca-cert=/etc/ovn/cacert.pem
--ovn-sb-db-ssl-key=/etc/ovn/ovnsb-privkey.pem --ovn-sb-db-ssl-cert=/etc/ovn/ovnsb-cert.pem
--ovn-sb-db-ssl-ca-cert=/etc/ovn/cacert.pem start_northd
```

### Avoiding automatic clustered OVN database schema upgrade

If you desire more control over clustered DB schema upgrade, you can opt-out of automatic on-start upgrade attempts with **--no-db-cluster-schema-upgrade**.

Start OVN NB and SB clustered databases on host with IP x.x.x.x without schema upgrade

```
# ovn-ctl start_nb_ovsdb --db-nb-cluster-local-addr=x.x.x.x --no-db-cluster-schema-upgrade
# ovn-ctl start_sb_ovsdb --db-sb-cluster-local-addr=x.x.x.x --no-db-cluster-schema-upgrade
```

Trigger clustered DB schema upgrade manually

```
# ovsdb-client convert unix:/var/run/ovn/ovnnb_db.sock /usr/local/share/ovn/ovn-nb.ovsschema #
ovsdb-client convert unix:/var/run/ovn/ovnsb_db.sock /usr/local/share/ovn/ovn-sb.ovsschema
```