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−local−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−local−addr=z.z.z.z −−db−sb−addr=z.z.z.z −−db−sb−create−insecure−remote=yes −−db−sb−cluster−local−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