

NAME

Local_Config – Local_Config database schema

This database is for local configuration of an ovssdb-server. The database is meant to be unique, even among multiple clustered db servers, so that configuration that is local to that server can be configured separately (e.g. Connection information).

TABLE SUMMARY

The following list summarizes the purpose of each of the tables in the **Local_Config** database. Each table is described in more detail on a later page.

| Table | Purpose |
|-------------------|-----------------------------|
| Config | ovssdb-server configuration |
| Connection | OVSSDB client connections. |

Config TABLE

The root local configuration table for an ovsdb-server. This table must have exactly one row.

Summary:

Connection Options:

connections

set of **Connections**

Details:

Connection Options:

connections: set of **Connections**

Database clients to which the Open vSwitch database server should connect or on which it should listen, along with options for how these connections should be configured. See the **Connection** table for more information.

Connection TABLE

Configuration for a database connection to an Open vSwitch database (OVSDb) client.

This table primarily configures the Open vSwitch database server (**ovsdb-server**).

The Open vSwitch database server can initiate and maintain active connections to remote clients. It can also listen for database connections.

Summary:

Core Features:

| | |
|------------------|--------------------------------------|
| target | string (must be unique within table) |
| read_only | boolean |
| role | string |

Client Failure Detection and Handling:

| | |
|-------------------------|----------------------------------|
| max_backoff | optional integer, at least 1,000 |
| inactivity_probe | optional integer |

Status:

| | |
|--------------------------------------|---|
| is_connected | boolean |
| status : last_error | optional string |
| status : state | optional string, one of ACTIVE , BACKOFF , CONNECTING , IDLE , or VOID |
| status : sec_since_connect | optional string, containing an integer, at least 0 |
| status : sec_since_disconnect | optional string, containing an integer, at least 0 |
| status : locks_held | optional string |
| status : locks_waiting | optional string |
| status : locks_lost | optional string |
| status : n_connections | optional string, containing an integer, at least 2 |
| status : bound_port | optional string, containing an integer |

Connection Parameters:

| | |
|----------------------------|--|
| other_config : dscp | optional string, containing an integer |
|----------------------------|--|

Configuration:

| | |
|---------------------|----------------------------|
| external_ids | map of string-string pairs |
|---------------------|----------------------------|

Details:

Core Features:

target: string (must be unique within table)

Connection methods for clients.

The following connection methods are currently supported:

ssl:host[:port]

The specified SSL *port* on the host at the given *host*, which can either be a DNS name (if built with unbound library) or an IP address. A valid SSL configuration must be provided when this form is used, this configuration can be specified via command-line options or the **SSL** table.

If *port* is not specified, it defaults to 6640.

SSL support is an optional feature that is not always built as part of Open vSwitch.

tcp:host[:port]

The specified TCP *port* on the host at the given *host*, which can either be a DNS name (if built with unbound library) or an IP address. If *host* is an IPv6 address, wrap it in square brackets, e.g. **tcp:[::1]:6640**.

If *port* is not specified, it defaults to 6640.

pssl:[port][:host]

Listens for SSL connections on the specified TCP *port*. Specify 0 for *port* to have the kernel automatically choose an available port. If *host*, which can either be a DNS name (if built with unbound library) or an IP address, is specified, then connections are restricted

to the resolved or specified local IP address (either IPv4 or IPv6 address). If *host* is an IPv6 address, wrap in square brackets, e.g. **pssl:6640:[::1]**. If *host* is not specified then it listens only on IPv4 (but not IPv6) addresses. A valid SSL configuration must be provided when this form is used, this can be specified either via command-line options or the **SSL** table.

If *port* is not specified, it defaults to 6640.

SSL support is an optional feature that is not always built as part of Open vSwitch.

ptcp:[port][:host]

Listens for connections on the specified TCP *port*. Specify 0 for *port* to have the kernel automatically choose an available port. If *host*, which can either be a DNS name (if built with unbound library) or an IP address, is specified, then connections are restricted to the resolved or specified local IP address (either IPv4 or IPv6 address). If *host* is an IPv6 address, wrap it in square brackets, e.g. **ptcp:6640:[::1]**. If *host* is not specified then it listens only on IPv4 addresses.

If *port* is not specified, it defaults to 6640.

When multiple clients are configured, the **target** values must be unique. Duplicate **target** values yield unspecified results.

read_only: boolean

true to restrict these connections to read-only transactions, **false** to allow them to modify the database.

role: string

String containing role name for this connection entry.

Client Failure Detection and Handling:

max_backoff: optional integer, at least 1,000

Maximum number of milliseconds to wait between connection attempts. Default is implementation-specific.

inactivity_probe: optional integer

Maximum number of milliseconds of idle time on connection to the client before sending an inactivity probe message. If Open vSwitch does not communicate with the client for the specified number of seconds, it will send a probe. If a response is not received for the same additional amount of time, Open vSwitch assumes the connection has been broken and attempts to reconnect. Default is implementation-specific. A value of 0 disables inactivity probes.

Status:

Key-value pair of **is_connected** is always updated. Other key-value pairs in the status columns may be updated depends on the **target** type.

When **target** specifies a connection method that listens for inbound connections (e.g. **ptcp**: or **punix**:), both **n_connections** and **is_connected** may also be updated while the remaining key-value pairs are omitted.

On the other hand, when **target** specifies an outbound connection, all key-value pairs may be updated, except the above-mentioned two key-value pairs associated with inbound connection targets. They are omitted.

is_connected: boolean

true if currently connected to this client, **false** otherwise.

status : last_error: optional string

A human-readable description of the last error on the connection to the manager; i.e. **strerror(errno)**. This key will exist only if an error has occurred.

status : state: optional string, one of **ACTIVE**, **BACKOFF**, **CONNECTING**, **IDLE**, or **VOID**

The state of the connection to the manager:

VOID Connection is disabled.

BACKOFF

Attempting to reconnect at an increasing period.

CONNECTING

Attempting to connect.

ACTIVE

Connected, remote host responsive.

IDLE Connection is idle. Waiting for response to keep-alive.

These values may change in the future. They are provided only for human consumption.

status : sec_since_connect: optional string, containing an integer, at least 0

The amount of time since this client last successfully connected to the database (in seconds). Value is empty if client has never successfully been connected.

status : sec_since_disconnect: optional string, containing an integer, at least 0

The amount of time since this client last disconnected from the database (in seconds). Value is empty if client has never disconnected.

status : locks_held: optional string

Space-separated list of the names of OVSDb locks that the connection holds. Omitted if the connection does not hold any locks.

status : locks_waiting: optional string

Space-separated list of the names of OVSDb locks that the connection is currently waiting to acquire. Omitted if the connection is not waiting for any locks.

status : locks_lost: optional string

Space-separated list of the names of OVSDb locks that the connection has had stolen by another OVSDb client. Omitted if no locks have been stolen from this connection.

status : n_connections: optional string, containing an integer, at least 2

When **target** specifies a connection method that listens for inbound connections (e.g. **ptcp:** or **pssl:**) and more than one connection is actually active, the value is the number of active connections. Otherwise, this key-value pair is omitted.

status : bound_port: optional string, containing an integer

When **target** is **ptcp:** or **pssl:**, this is the TCP port on which the OVSDb server is listening. (This is particularly useful when **target** specifies a port of 0, allowing the kernel to choose any available port.)

Connection Parameters:

other_config : dscp: optional string, containing an integer

The Differentiated Service Code Point (DSCP) is specified using 6 bits in the Type of Service (TOS) field in the IP header. DSCP provides a mechanism to classify the network traffic and provide Quality of Service (QoS) on IP networks. The DSCP value specified here is used when establishing the connection between the manager and the Open vSwitch. If no value is specified, a default value of 48 is chosen. Valid DSCP values must be in the range 0 to 63.

Configuration:

External configuration options

external_ids: map of string-string pairs

External client-defined key-value pairs