DH2i DxOdyssey 19.5 Software:

Docker Quickstart Guide

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Setting up a DxOdyssey Docker Container

This document assumes that a SQL Server instance located at site A is listening on port 1433. Site B does not have direct network access to the instance. The steps below describe how to create a tunnel that clients at site B can use to access the SQL Server instance at site A.

More information on downloading and installing SQL Server for Linux can be found in the references section at the end of this document.

Pull a DxOdyssey Docker Image
- docker pull dh2i/dxo
- docker pull dh2i/dxo:xenial
- docker pull dh2i/dxo:centos7

Start the DxOdyssey Container

DxOdyssey uses TCP port 7979 for gateway group administration with the DxOdyssey Client UI. The -d flag runs the container detached so that the command line may still be used on the host machine, -h assigns the container hostname used by DxOdyssey, --name specifies the name within Docker for the container, -v maps the volume for persistent data, and -p is for each port mapping assigned to the container. The following command example shows port 7979 being mapped to port 17979 for the DxOdyssey Client UI connections. If multiple containers are being run on the same server, then the mapped port needs to be unique for each container.
- docker run -p 17979:7979 -d -h SITE_A_HOSTNAME --name SITE_A_NAME -v SITE_A_NAME:/etc/dh2i dh2i/dxo

Connect to the Container
- docker exec -it SITE_A_NAME bash

Activate the DxOdyssey License Key

Syntax
- dxcli activate-server <license_key> [node]

Parameters

Name	Description	Required
license_key	The license key.	True
node	The name of the node.	False

Example
- dxcli activate-server AAAA-BBBB-CCCC-DDDD

Set the DxOdyssey Passkey

A passkey is required in order to connect remotely to the gateway using the DxOdyssey Client UI for gateway group administration.

- dxcli gateway-group-set-secret

Set a One-Time Passkey

Additional gateways may join the gateway group using DxOdyssey tunneling technology. To join another container using NAT, a one-time passkey (OTPK) must be set for the gateway group. Save the GUID output from this command.

Syntax

- dxcli set-otpk [ttl] [otpk]

Parameters

Name	Description	Required
Ttl	The time to live	False
Otpk	The one time passkey in base64.	False

Example

- dxcli set-otpk

Create an Additional Container

To connect to a tunnel origin in a container, the tunnel origin port needs to be mapped to the host machine. Specify the additional mapping with a -p flag.

Mapped ports need to be unique for each origin. The following command example shows container port 21433 being mapped for use as a tunnel origin at site B.

- docker run -p 27979:7979 -p 21433:21433 -d -h SITE_B_HOSTNAME --name SITE_B_NAME -v SITE_B_NAME:/etc/dh2i dh2i/dxo

Join the Gateway Group

After connecting to the container and activating DxOdyssey, use the saved OTPK GUID to join the gateway group. When prompted to join via NAT proxy, select Yes. When prompted to enter the NAT proxy, use the default value of match.dh2i.com. When prompted for the passkey, use the OTPK.

- dxcli join-gateway-group

Create a Tunnel for SQL Server

The following command example shows the creation of a tunnel with a DxOdyssey Docker container origin at site B that accepts connections from any local IP (0.0.0.0) on port 21433, a destination gateway of the DxOdyssey Docker container at site A and a destination IP of the SQL Server host at site A using the default port of 1433.

Syntax

- dxcli add-tunnel <name> <enabled [true|false]> <destination_gateway> <destination_address:destination_port> <origin_gateway,origin_address:origin_port[,address_filter]>|<origin_gateway,origin_address:origin_port[,address_filter]>

Parameters

Name	Description	Required
name	The name of the tunnel.	True
enabled	Enable the tunnel (true or false).	True
destination_gateway	The name of the destination gateway.	True
destination_address	The IP address of the destination.	True
destination_port	The port number for the destination IP.	True
origin_gateway	The name of the gateway where the listener is active.	True
origin_address	Set to 0.0.0.0 to allow all IP connections or 127.0.0.1 for local connections only.	True
origin_port	The port number for the origin gateway.	True
address_filter	The name of the address filter to add to the tunnel.	False

Example

- dxcli add-tunnel SQL_TUNNEL true SITE_A_HOSTNAME SQL_HOST_IP:1433 SITE_B_HOSTNAME,0.0.0.0:21433

Connect to the SQL Server Instance

To connect SSMS to SQL Server using the configured tunnel, use one of the following connection strings from a client machine within site B's network.

- DOCKER_HOST_IP,21433
- DOCKER_HOST_HOSTNAME,21433

References

- [DH2i Support Portal](#)
- [DxOdyssey 19.5 Documentation](#)
- [DxOdyssey v19.5 DxCli Guide](#)
- [Installation guidance for SQL Server on Linux](#)