



DH2i DxEnterprise 19.5 Software: MSSQL Availability Groups for Linux on Azure Quickstart Guide

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Install and Configure SQL Server

To install Microsoft SQL Server on Linux, please reference the following Microsoft documentation:

- [Installation guidance for SQL Server on Linux](#)

Setup DxEnterprise and Availability Groups

1. Connect to the first node via SSH.
2. Run the setup.sh script configure DxEnterprise, start the services and activate the license.

Syntax

```
# bash /opt/dh2i/bin/setup.sh
```

3. Add a Vhost using the "sudo dxcli cluster-add-vhost" command.

Syntax

```
dxcli cluster-add-vhost <vhost> <vips> <nodes> [autofailback] [priority[1-5]]
```

Parameters

Name	Description	Required
vhost	The name of the Vhost.	True
vips	The virtual IP(s) for the Vhost (comma separated list for multiples). The use of a loopback address (127.0.0.1) is supported, but must be preceded by an asterisk (*).	True
nodes	The node(s) to add to the Vhost (comma separated list for multiples).	True
autofailback	Set autofailback option, or leave blank if autofailback is not desired.	False
priority	The priority order of failover between Vhosts (1 is the highest and 5 is the lowest).	False

Example

```
sudo dxcli cluster-add-vhost vhost1 *127.0.0.1 dxemssql1
```

4. Use the "sudo dxcli encrypt-text" command to encrypt the SQL Server sysadmin password which will be used to create the availability group.

Syntax

```
dxcli encrypt-text <value>
```

Parameters

Name	Description	Required
value	The text to be encrypted.	True

Example

```
dxcli encrypt-text p@ssw0rd
```

5. Add an availability group to the Vhost using the "sudo dxcli add-ags" command. The SQL Server sysadmin password must be encrypted using the "sudo dxcli encrypt-text" command.

Syntax

```
dxcli add-ags <vhost> <ags_name>
```

```
<node_name|instance_name|sql_login|sql_pass|mirror_port|availability_mode|[tunnel_port]>
```

Parameters

Name	Description	Required
vhost	The name of the Vhost.	True
ags_name	The name of the availability group.	True
node_name	The name of the node.	True
instance_name	The name of the instance.	True
sql_login	A SQL server sysadmin user.	True
sql_pass	The password for the SQL Server sysadmin user (encrypted using "dxcli encrypt-text")	True
mirror_port	The mirroring port to use for the availability group (default is 5022).	True
availability_mode	Synchronous_commit, asynchronous_commit or configuration only.	True
tunnel_port	The port to be used for the tunnel connections (for cross availability zone, cross-region). This port should be unique per node.	False

Example

```
sudo dxcli add-ags vhost1 ags1
```

```
"dxemssql1|mssqlserver|sa|6pnFaDrRS+W/F+dkRuPKAA==|5022|synchronous_commit|25022"
```

- Set a One Time Passkey (OTPK) using the "sudo dxcli set-otpk" command. The output of this command will be used to join the second node to the DxEnterprise cluster.

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

```
sudo dxcli set-otpk
```

- Connect to the second node via SSH.
- Run the setup.sh script configure DxEnterprise, start the services and activate the license.

Syntax

```
# bash /opt/dh2i/bin/setup.sh
```

- Join the second node to the DxEnterprise cluster using the "sudo dxcli join-cluster" command. 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 that was generated in step 6.

Syntax

```
dxcli join-cluster
```

Parameters

Interactive only.

Example

```
sudo dxcli join-cluster
```

- Add the second node to the existing availability group Vhost using the "sudo dxcli add-ags-node" command. The SQL Server sysadmin password must be encrypted using the "sudo dxcli encrypt-text" command.

Syntax

```
dxcli add-ags-node <vhost> <ags_name>  
<node_name|instance_name|sql_login|sql_pass|mirror_port|availability_mode|[tunnel_port]>
```

Parameters

Name	Description	Required
vhost	The name of the Vhost.	True
ags_name	The name of the availability group.	True
node_name	The name of the node.	True

instance_name	The name of the instance.	True
sql_login	A SQL server sysadmin user.	True
sql_pass	The password for the SQL Server sysadmin user (encrypted using "dxcli encrypt-text")	True
mirror_port	The mirroring port to use for the availability group (default is 5022).	True
availability_mode	Synchronous_commit, asynchronous_commit or configuration only.	True
tunnel_port	The port to be used for the tunnel connections (for cross availability zone, cross-region). This port should be unique per node.	False

Example

```
sudo dxcli add-ags-node vhost1 ags1
```

```
"dxemssql2|mssqlserver|sa|6pnFaDrRS+W/F+dkRuPKAA==|5022|synchronous_commit|35022"
```

11. Add databases to the availability group using the "sudo dxcli add-ags-databases" command.

Syntax

```
dxcli add-ags-databases <vhost> <ags_name> <db_name>
```

Parameters

Name	Description	Required
vhost	The name of the Vhost.	True
ags_name	The name of the availability group.	True
db_name	The name of the SQL Server database (comma separated list for multiples).	True

Example

```
sudo dxcli add-ags-databases vhost1 ags1 db1,db2,db3
```

12. Verify the details of the availability group using the "sudo dxcli get-ags-detail" command.

Syntax

dxcli get-ags-detail <vhost> <ags_name>

Parameters

Name	Description	Required
vhost	The name of the Vhost.	True
ags_name	The name of the availability group.	True

Example

sudo dxcli get-ags-detail vhost1 ags1

13. Optional: Add a listener using the "sudo add-ags-listener" command (SQL Server 2019 and later only).

Syntax

dxcli add-ags-listener <vhost> <ags_name> <port>

Parameters

Name	Description	Required
vhost	The name of the Vhost.	True
ags_name	The name of the availability group.	True
port	The port number for the listener.	True

Example

sudo dxcli add-ags-listener vhost1 ags1 42002

References

- [DH2i Support Portal](#)
- [DxEnterprise v19.5 Admin Guide](#)
- [DxEnterprise v19.5 DxCli Guide](#)