



DH2i DxEnterprise 21.0 Software: Extended Vhosts for AG Quick Start Guide

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Extended Vhosts for AG

This guide describes how to add an Extended Vhost (exVhost) to a DxEnterprise cluster and then add an availability group to the exVhost. DxEnterprise supports two types of Vhosts: Vhosts, which have nodes as members, and exVhosts whose members consist of other Vhosts. The exVhosts are designed for running an availability group (AG) across multiple HA instances. This gives users the ability to have HA on both the primary replica and secondary replicas for the AG while providing independent health monitoring and failovers of the HA instances and the AG.

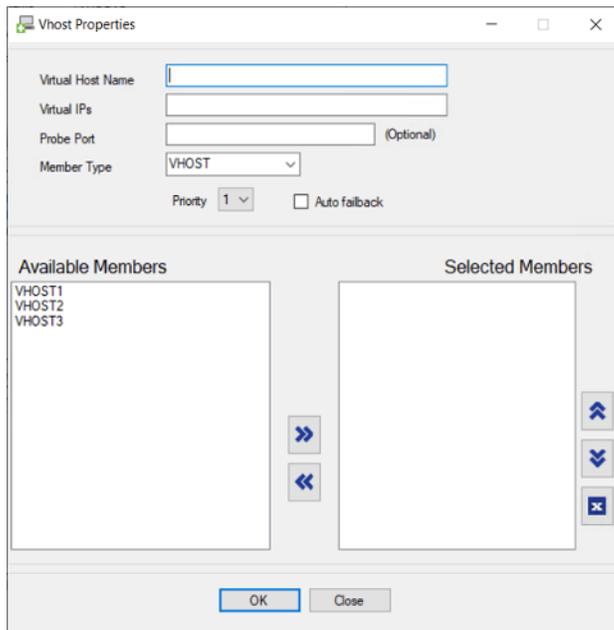
NOTE: *This doc covers the deployment of three AG replicas. When deploying availability groups, please consider the Microsoft SQL Server quorum requirements for automatic failover described in this KB: [Quorum Considerations for SQL Server Availability Groups](#).*

Add an exVhost

To configure an exVhost, DxEnterprise HA instances will need to be configured beforehand. For more information on configuring an HA instance, please see the DxEnterprise Administration Guide under the section titled **Add a Virtual SQL Server Instance**.

NOTE: *For SQL Server on Linux, SQL Server 2019 CU9 or later will need to be installed and virtualized.*

- **DxAdmin**



1. Right-click on **DxCluster** and select **Add virtual host**.
2. Add the name for the exVhost.
3. Add the virtual IP for the exVhost. If no virtual IP is required, then supply “*127.0.0.1” to assign the local loopback address to the exVhost.
4. OPTIONAL: Add a probe port for internal load balancer probing.
5. Under **Member Type**, select **VHOST**.

6. Add the desired Vhost members from the **Available Members** list to the **Selected Members** list.

- **DxCLI**

Run the `dxcli cluster-add-vhost` command.

Syntax

```
dxcli cluster-add-vhost <vhost> <vips> <nodes | VHOST:vhosts>
[autofailback] [1-5] [ilbports]
```

Parameters

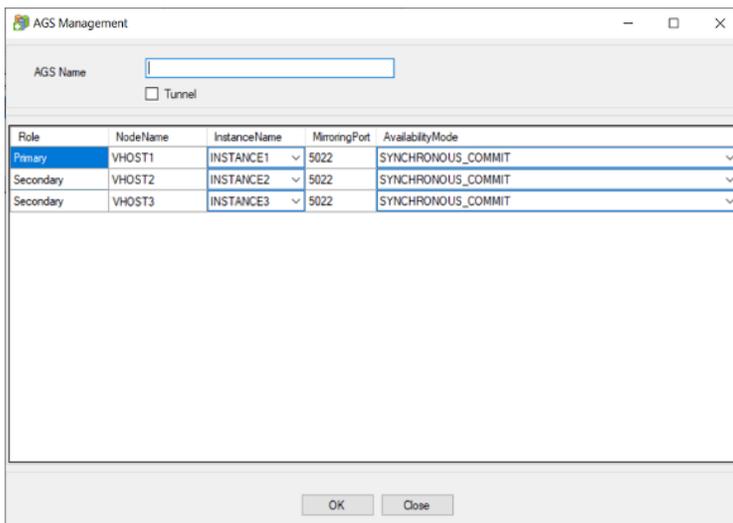
Name	Description	Required
vhost	The name of the Vhost.	True
vips	The virtual IP(s) for the Vhost (comma separated list for multiples).	True
nodes VHOST:vhosts	The node(s) or Vhost(s) to add (comma separated list for multiples).	True
autofailback	Set autofailback or leave blank if autofailback is not desired.	False
priority	The priority order of failover between Vhosts (1 is the highest and 5 is the lowest).	False
ilb_ports	Ports to use for internal load balancer probing (comma separated list for multiples).	False

Example

```
dxcli cluster-add-vhost exvhost1 10.1.200.101
VHOST:vhost1,VHOST:vhost2,VHOST:vhost3 false 1 40001
```

Add an Availability Group to an exVhost

- **DxAdmin**



1. Right-click on the exVhost and select **Add availability group**.

2. Add a name for the AGS.
3. OPTIONAL: Select the **Tunnel** checkbox to automatically create tunnel connections between AG members. This is applicable for cross-site, cross-domain cluster topology joined through the DH2i Matchmaking Cloud service (match.dh2i.com).
4. Verify that the correct instances are selected for each Vhost.
5. Set the desired mirroring port (default is 5022).
6. Verify that the correct Availability Mode is selected for each Vhost.
7. Click **OK** to commit the changes

- **DxCLI** –

Run the `dxcli add-ags` command.

Syntax

```
dxcli add-ags <vhost> <ags_name> <param1> <param2> <...>
```

```
<param1> :
```

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

```
<param2> :
```

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

```
<...> :
```

```
<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
param1	A set of parameters for the primary replica in the availability group.	True
param2	A set of parameters for the secondary replica in the availability group.	True
...	A set of parameters for each additional replica in the availability group.	False
node_name	The name of the primary replica member.	True
instance_name	The name of the instance.	True
sql_login	Leave blank.	True
sql_pass	Leave blank.	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 tunnel connections (for cross-site, cross-domain replication).	False
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Example

```
dxcli add-ags exvhost1 ags1  
"VHOST:vhost1|instance1|||5022|SYNCHRONOUS_COMMIT"  
"VHOST:vhost2|instance2|||5022|SYNCHRONOUS_COMMIT"  
"VHOST:vhost3|instance3|||5022|SYNCHRONOUS_COMMIT"
```

References

- [DxEnterprise Admin Guide](#)
- [DxEnterprise DxCLI Guide](#)
- [Quorum Considerations for SQL Server Availability Groups](#)
- [DH2i Support Portal](#)