Technical Notes

EMC® NetWorker® Configuring SQL VDI AlwaysOn Availability Group backups in Multi-homed (Backup LAN) Network by using NetWorker Module for Microsoft

Release number 9.0

TECHNICAL NOTES

302-002-249
REV 02

November, 2015

These technical notes contain the following information:

EMC²

Revision history

The following table presents the revision history of this document.

Revision	Date	Description
02	November, 2015	This revision contains the following updates: • Changed the names and IP addresses in the figure in "Example backup LAN environment configuration" section. These changes are reflected in the content of the document. • Incorporated copy edit feedback.
01	September, 2015	First release of these technical notes for EMC NetWorker Module for Microsoft release 9.0.

Note

This document was accurate at publication time. Go to EMC Online Support (https://support.emc.com) to ensure that you are using the latest version of this document.

Overview

These technical notes provide the information about how to perform Microsoft SQL Server AlwaysOn Availability Group (AAG) backups by using EMC® NetWorker® Module for Microsoft (NMM) release 9.0 in a multihomed environment. NMM Supports SQL Server AAG backup from the SQL standalone server.

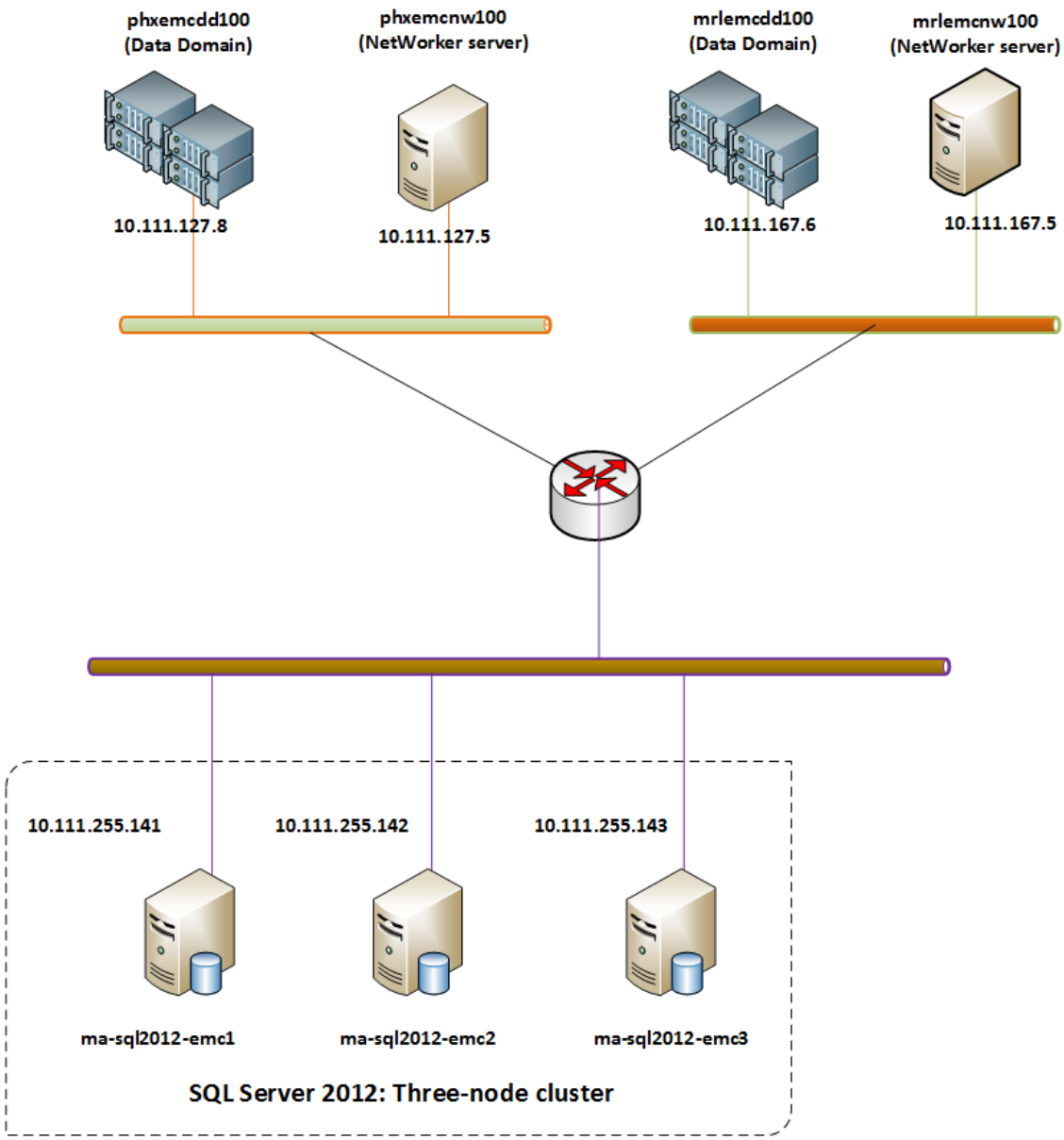
The procedures in this document are based on an example setup with the following configuration:

- SQL AAG is configured for a SQL virtual cluster with three nodes.
- The SQl virtual cluster automatically fails over in case of high availability.
- The backup is performed by using a SQL standalone server as the backup node.
- **Prefer Secondary** is the AAG backup policy.

Example backup LAN environment configuration

The following figure describes the detailed layout of the backup LAN environment.

Figure 1 Sample backup LAN environment



The example setup consists of:

- SQL Server 2012 Windows Cluster: ma-sql2012-emc
  - Node 1: ma-sql-emc1.onemc.com
  - Node 2: ma-sql-emc2.onemc.com
  - Node 3: ma-sql-emc3.onemc.com
- SQL Server instances:
  - Instance 1: masql2012emc1.onemc.com

    - Instance 2: masql2012emc3.onemc.com
- phxemcnw100.emcmgmt.local: NetWorker server
- mrlemcnw100.emcmgmt.local: NetWorker server
- phxemcdd100.emcmgmt.local: Data Domain
- mrlemcdd100.emcmgmt.local: Data Domain

Update the IP address, hostname, and FQDN in the etc/hosts file for all the components in your setup. The following table provides details for the example setup.

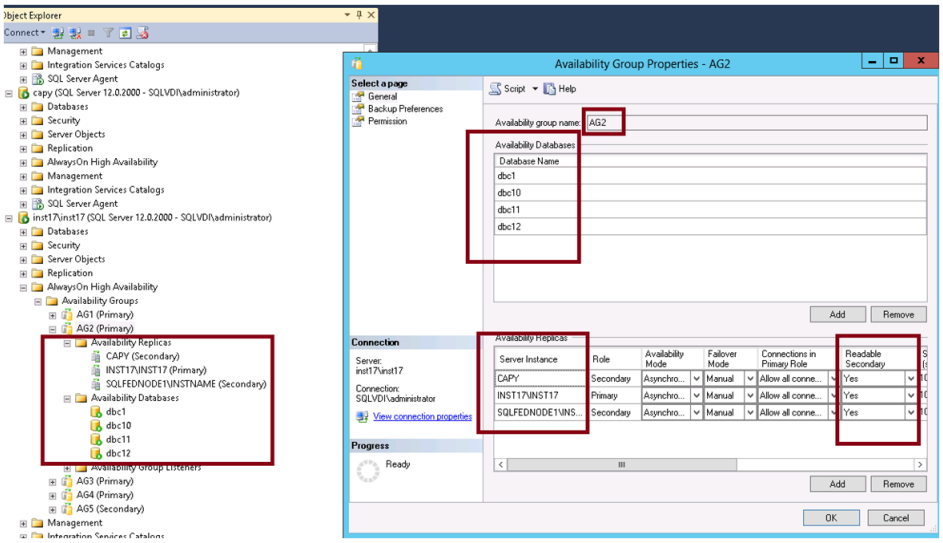
IP address	Hostname	FQDN	Description of host
10.111.255.140	ma-sql2012-emc	ma-sqlemc.onemc.com	SQL 2012 cluster
10.111.255.144	masql2012-emc1	masqlemc1.onemc.com	SQL 2012 instance 1
10.111.255.145	masql2012-emc3	masqlemc3.onemc.com	SQL 2012 instance 1
10.111.255.141	ma-sql2012-emc1	ma-sqlemc1.onemc.com	SQL 2012 node 1
10.111.255.142	ma-sql2012-emc2	ma-sqlemc2.onemc.com	SQL 2012 node 2
10.111.255.143	ma-sql2012-emc3	ma-sqlemc3.onemc.com	SQL 2012 node 3
10.111.127.8	phxemcdd100	phxemcdd100.emcmgmt.local	Data Domain
10.111.255.6	mrlemcdd100	mrlemcdd100.emcmgmt.local	Data Domain
10.111.127.5	phxemcnw100	phxemcnw100.onemc.com	NetWorker server
10.111.255.5	mrlemcnw100	mrlemcnw100.onemc.com	NetWorker server

Configuring SQL AlwaysOn Availability Group

Create the AlwaysOn Availability Group from any SQL virtual instance or the standalone server. Use the SQL Server Management Studio (SSMS) to perform the steps in this section.

Perform the following steps after you create the SQL AlwaysOn Availability Group from the **masql2012emc1** SQL virtual instance for the **db1**, **db2**, and **db3** databases :

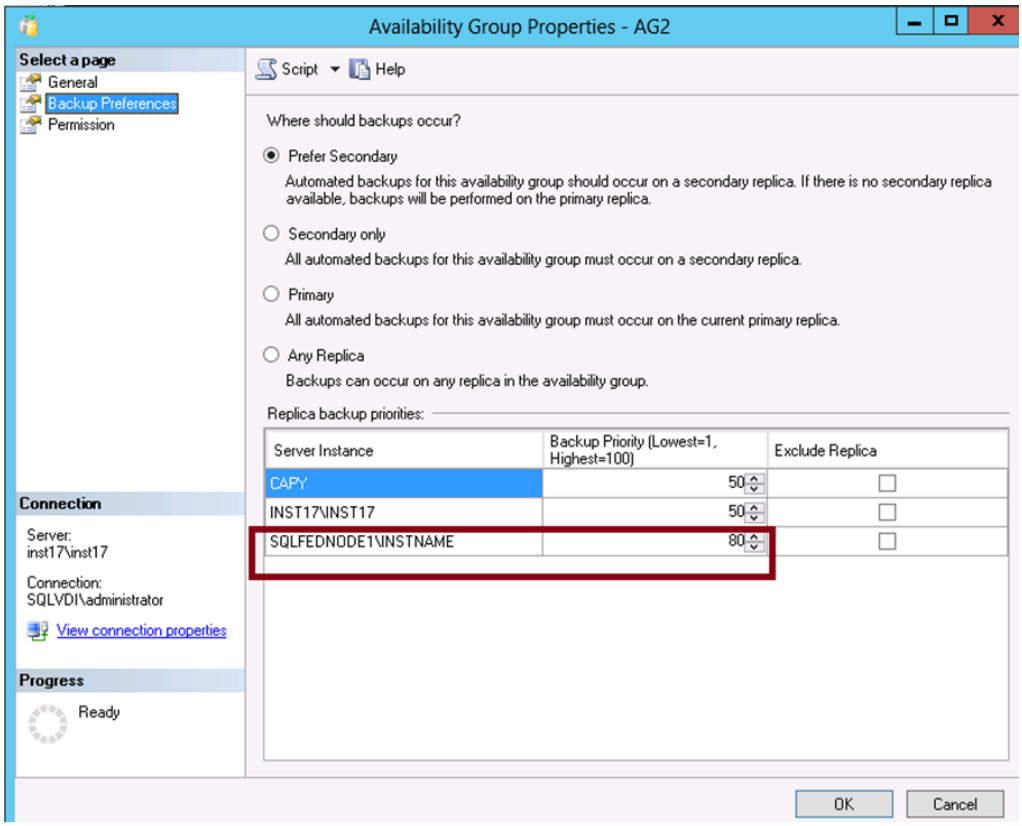
1. Add the **masql2012emc3** and **ma-sql-emcX.onemc.com** replicas to the SQL AlwaysOn Availability Group.
2. Set the backup preference to **secondary only**, **prefer secondary**, or **any replica**.
3. Set the priority of the **ma-sql-emcX.onemc.com** node to the highest, as shown in the following figure.



Perform the following steps after you create the SQL AlwaysOn Availability Group from the **ma-sql-emcX.onemc.com** SQL standalone server:

1. Set the backup preference to **Primary**.
2. Set the readable secondary of all the nodes to **YES**.

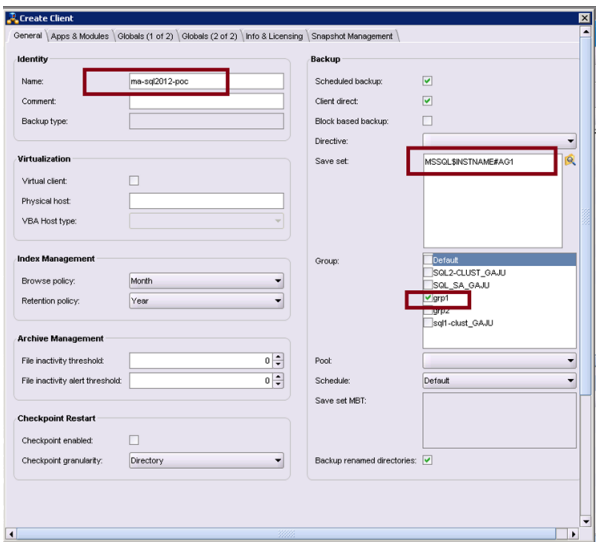
The following image displays the **SQL FEDNODE1\INSTNAME** SQL standalone server with **Prefer Secondary** as the backup preference and **80** as the highest backup priority.



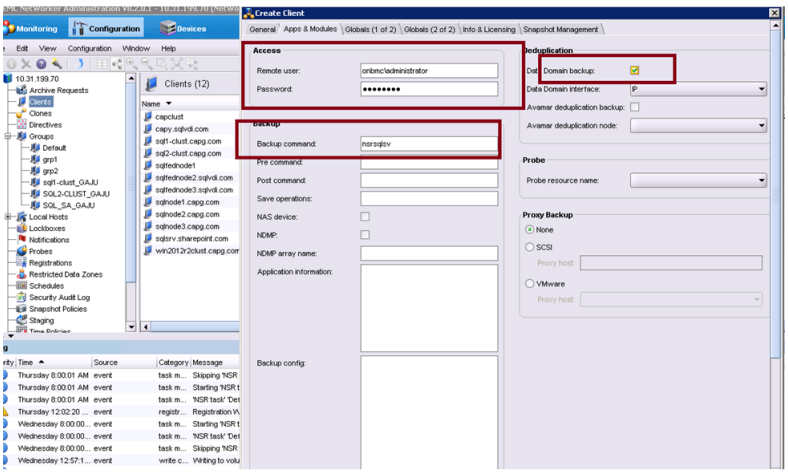
If you select any other preference and perform a backup of any SQL virtual instance, the backup fails.

Configuring NetWorker server

1. Create a client resource for the Windows cluster:
   a. In the **NetWorker Administration** window, click **Protection**.
   b. In the expanded left panel, select **Clients**.
   c. From the **File** menu, select **New**.
   The **Create Client** dialog box appears.
   d. On the **General** tab:
      a. In the **Name** field, type **ma-sql2012-emc**, which is the Windows cluster name.
      b. In the **Save set** field, type **MSSQL$INSTNAME#AG1**, where **INSTNAME** is the named instance name on the standalone node and **AG1** is the AlwaysOn Availability Group name. If the standalone node has a default instance, then type **MSSQL#AG1**.

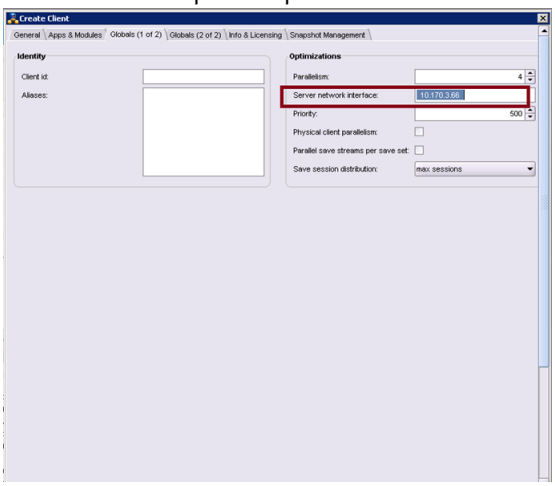


   e. On the **Apps & Modules** tab:
      a. Type the remote username and the password in the **Remote user** and the **Password** fields respectively.
      b. To back up the data to a Data Domain system, select **Data Domain backup**.
      c. In the **Backup Command** field, type **nsrsqlv**.



f. If the NetWorker server is the storage node, on the **Globals (1 of 2)** tab:

a. In the **Server network interface** field, type the backup LAN interface of the server. The example setup uses 10.170.3.66 as shown in the following figure:

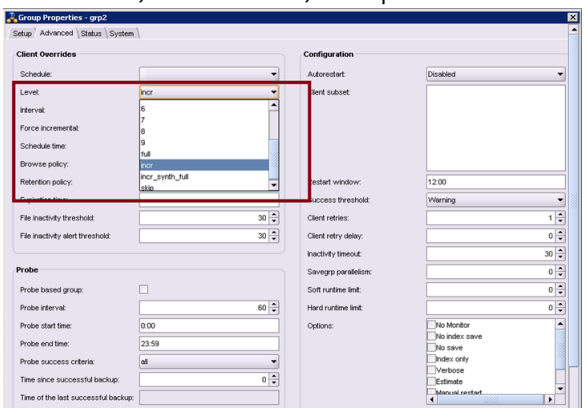


b. Click **OK**.

The Windows client resource is successfully created.

2. Create client resources for all the Windows cluster nodes—ma-sqlpoc1.onbmc.com, ma-sql-poc2.onbmc.com, ma-sql-poc3.onbmc.com, and ma-sql-pocX.onbmc.com with save sets.

3. In **NMC**, on the **Group Properties › Advanced** tab, set the backup level to full, incremental, or differential, as required.



4. Start the backup and check the backup LAN traffic on the standalone node.

Published November, 2015