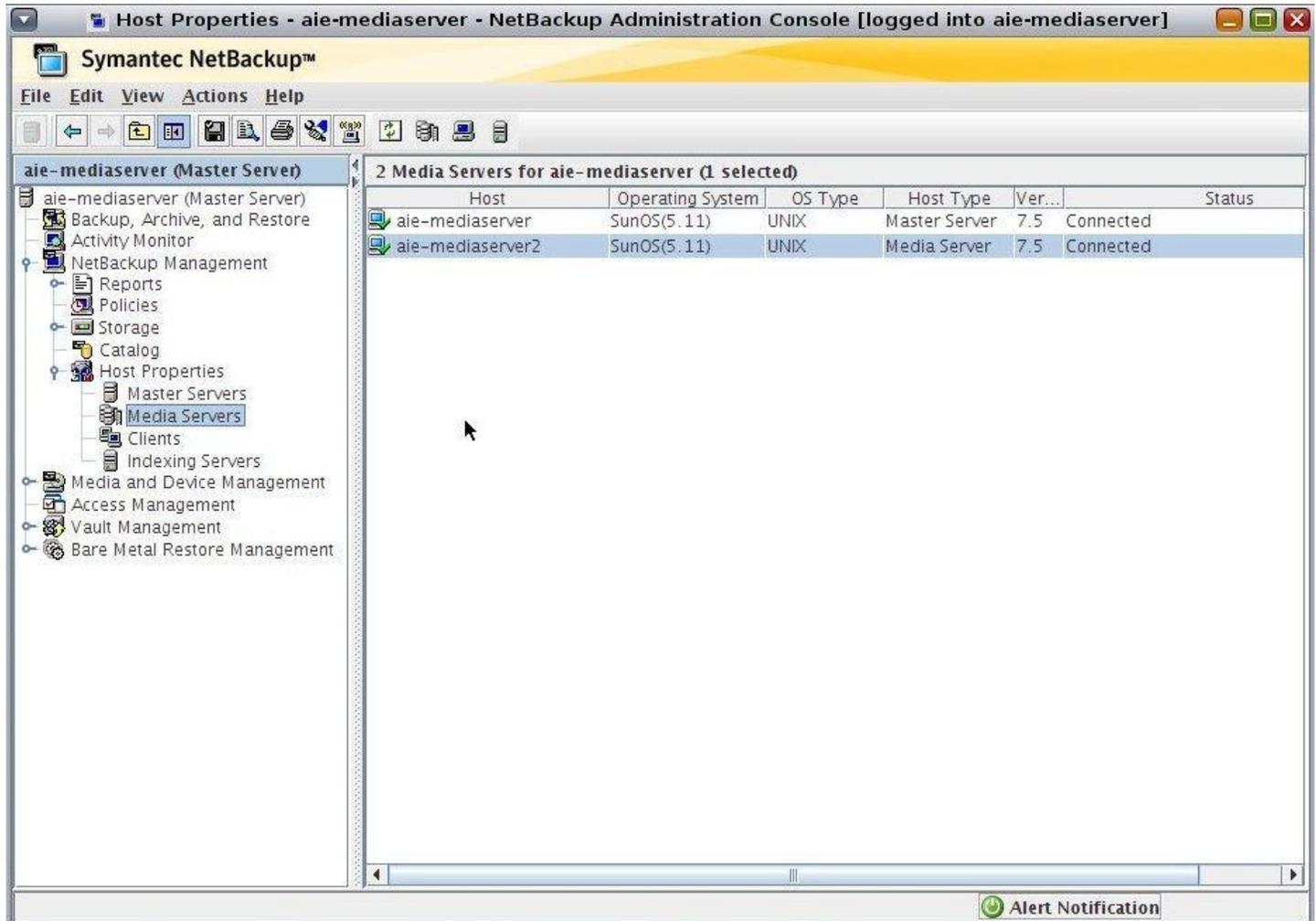


Verify Connectivity

1. From the NetBackup Master Server (aie-mediaserver) launch the NetBackup GUI: /usr/opensv/netbackup/bin/jnbSA&
2. Navigate to the Media Server list: NetBackup Management->Host Properties->Media Servers

Users should see aie-mediaserver and aie-mediaserver2 in the list. Select each one and a green check box should appear indicating connection to each server:

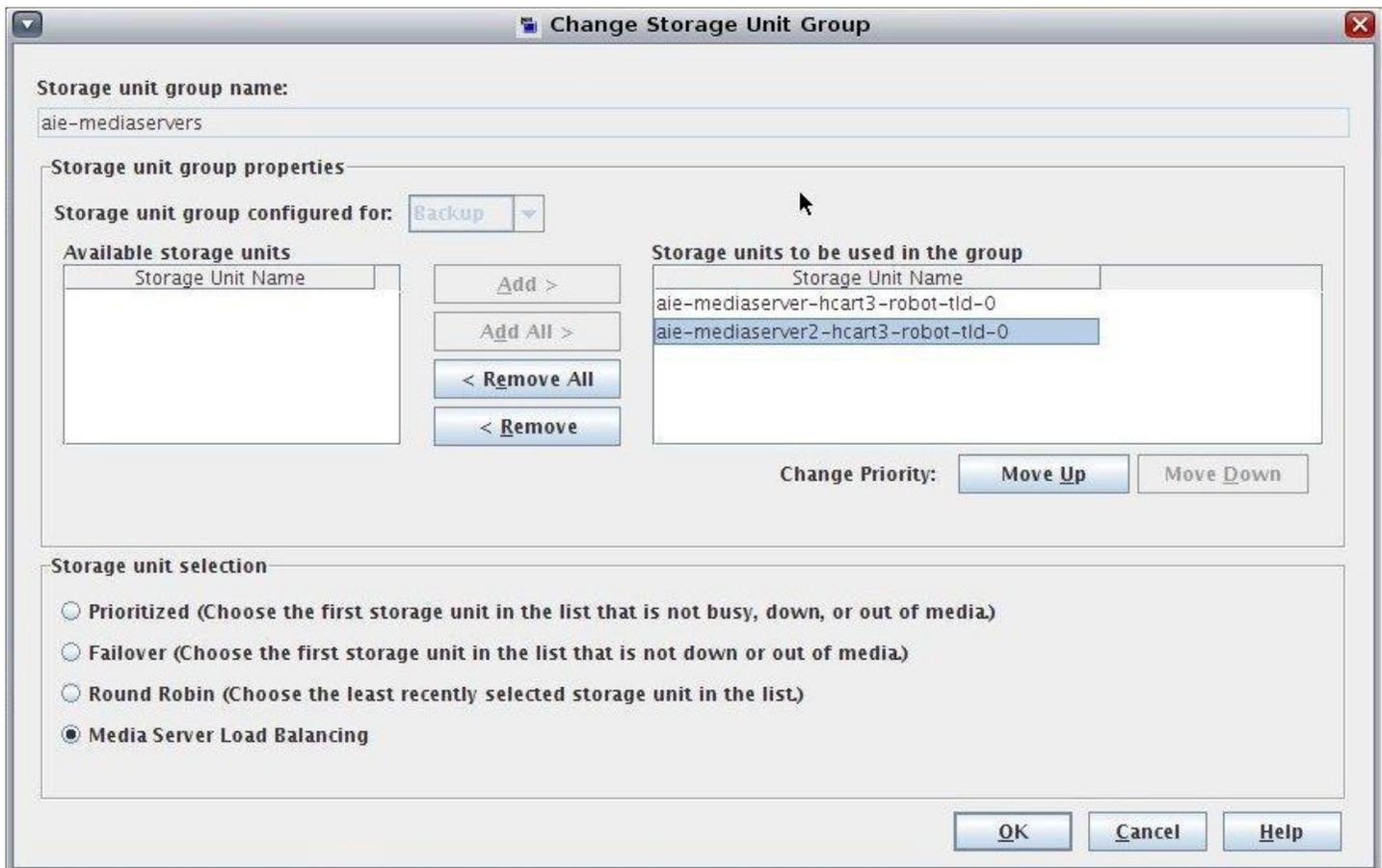


Configuring Storage Devices

1. Use the NetBackup Configuration Wizard and follow the prompts to configure the storage devices. For this configuration the robot should be discovered on the NetBackup Master Server, and the tape drives should be split evenly between NetBackup Media Servers **aie-mediaserver** and **aie-mediaserver2**.
2. Navigate to Media and Device Management-> Devices->Drives and then Media Management->Devices->Robots to verify the configuration.
3. Inventory the robot and setup tape pools per organizational rules.

Configure Storage Unit Groups

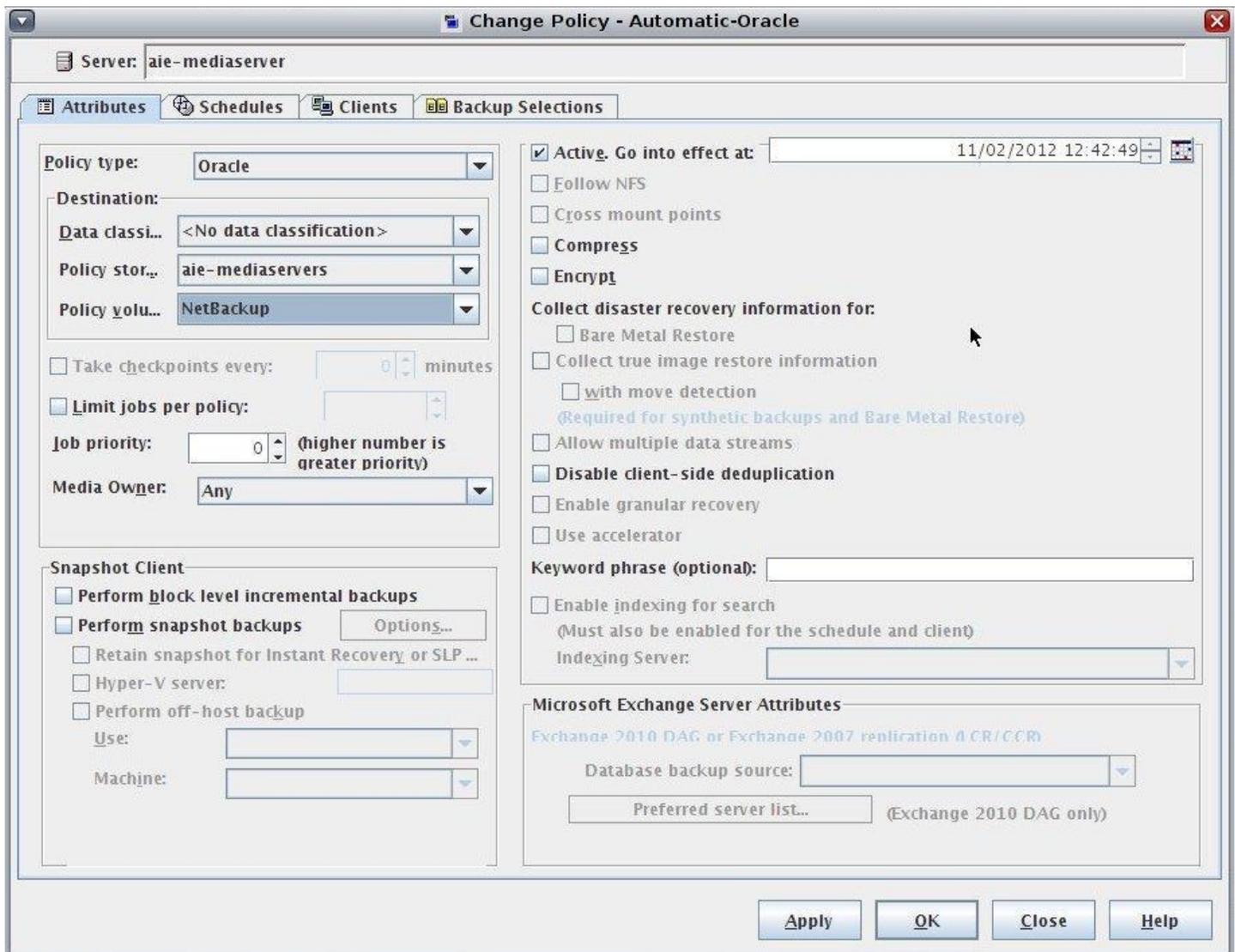
In order to load balance between NetBackup Media Servers users must configure a NetBackup Storage Unit Group. Navigate to NetBackup Management->Storage->Storage Unit Groups->, right click and select "New Storage Unit Group." From the "New Storage Unit Group" screen, enter a name and select the Storage Units to be added to the group. Under the "Storage Unit Selection" section, choose the radio button for "Media Server Load Balancing."



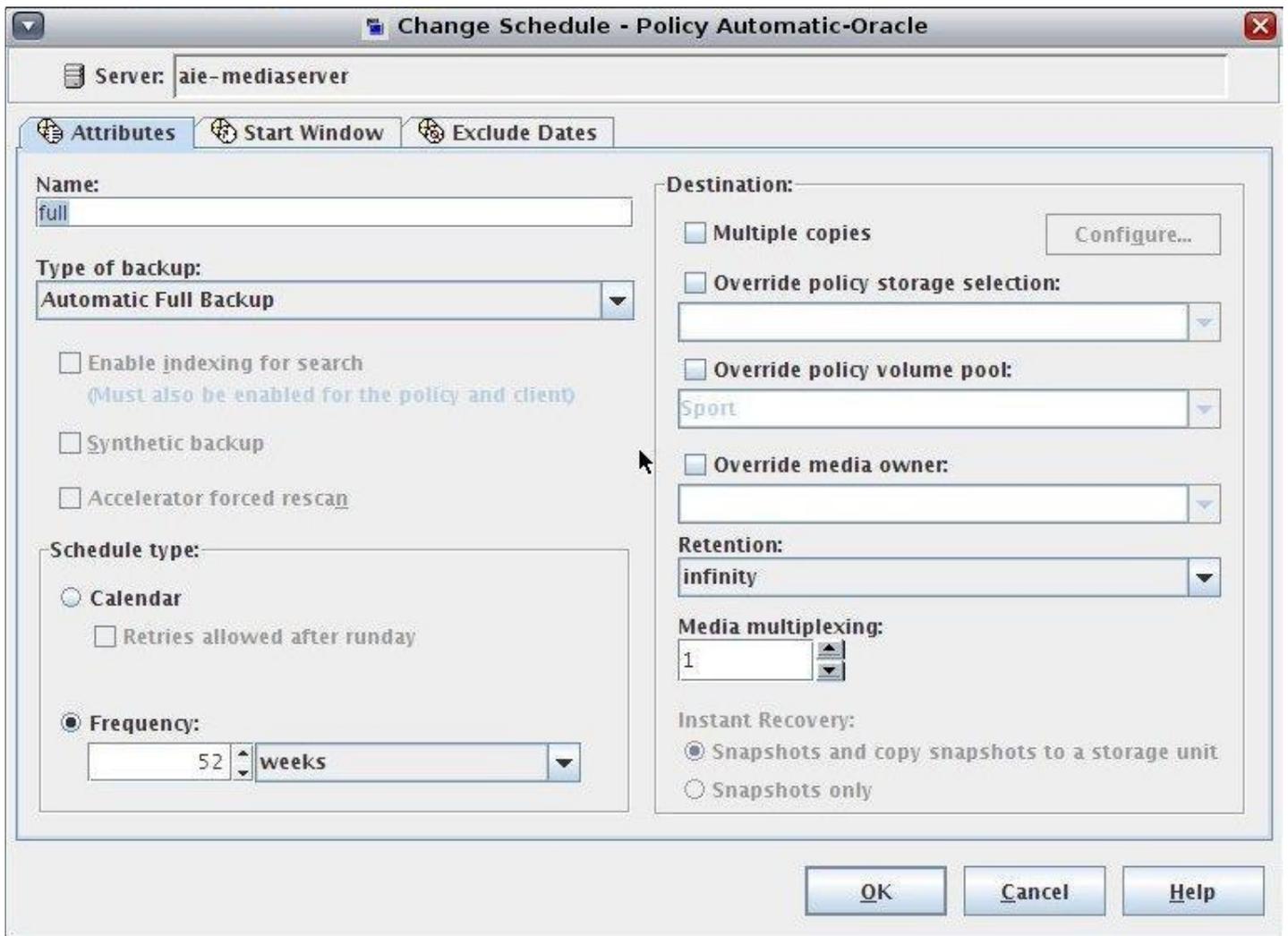
Create NetBackup Policies

For this configuration, two NetBackup policies are setup for Oracle RMAN operations. The first policy which will be called Automatic-Oracle is set up to control scheduled execution of the Oracle RMAN script. A defined schedule is created in the policy (daily full for example), the client which will execute the script is selected, and the path to the Oracle RMAN script on the selected database node (users can set up multiple nodes for script execution in case one is down, but that is not covered in this document) is supplied as the backup selection. The only purpose of the first policy is to execute the Oracle RMAN script on the defined schedule. The second policy, which will be called OracleAppPolicy, contains a Default Application Schedule and the names of each node in the Oracle Real Application Clusters (Oracle RAC). This policy is required to allow access to the NetBackup server from the Oracle RAC nodes as well as defining which storage resources are available to the Oracle RAC nodes. Since the Oracle RMAN script is executed on one of the Oracle RAC nodes, it is considered a user-defined backup and NetBackup needs a method to authorize the nodes to access the NetBackup server resources for backup jobs. The authorization is accomplished via this policy. In the OracleAppPolicy policy users specify a storage unit, define the backup window and specify the clients (the database nodes). No backup selection is specified as that is controlled by the Oracle RMAN script. It is possible to have both schedules in the same policy, but they are set up separately here for a better illustration. Please consult the NetBackup for Oracle Administrator's Guide linked in the Appendix for further details.

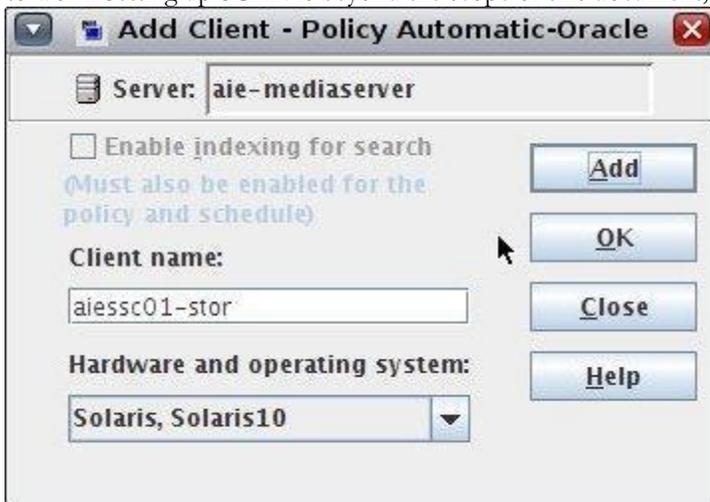
1. **Policy 1:** Name = Automatic-Oracle – This policy is the schedule policy that will execute the Oracle RMAN script to initiate the backup jobs
2. Set policy type to **Oracle**
3. Set Policy Storage to Storage Unit Group **aie-mediaservers**
4. Set Policy Volume Pool to the pool in use



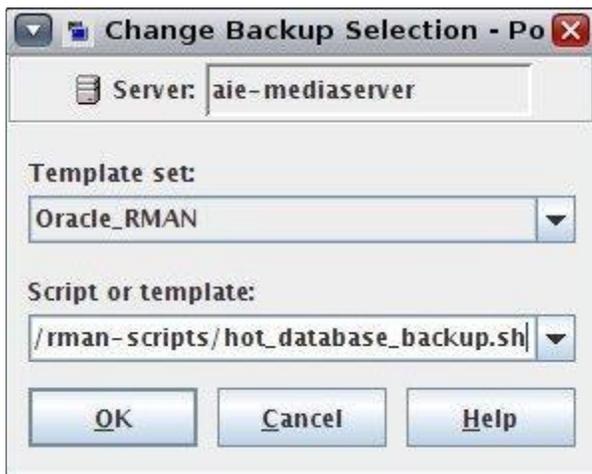
Create schedules for backups. In this example we are creating a full backup with the **Automatic Full Backup** Type:



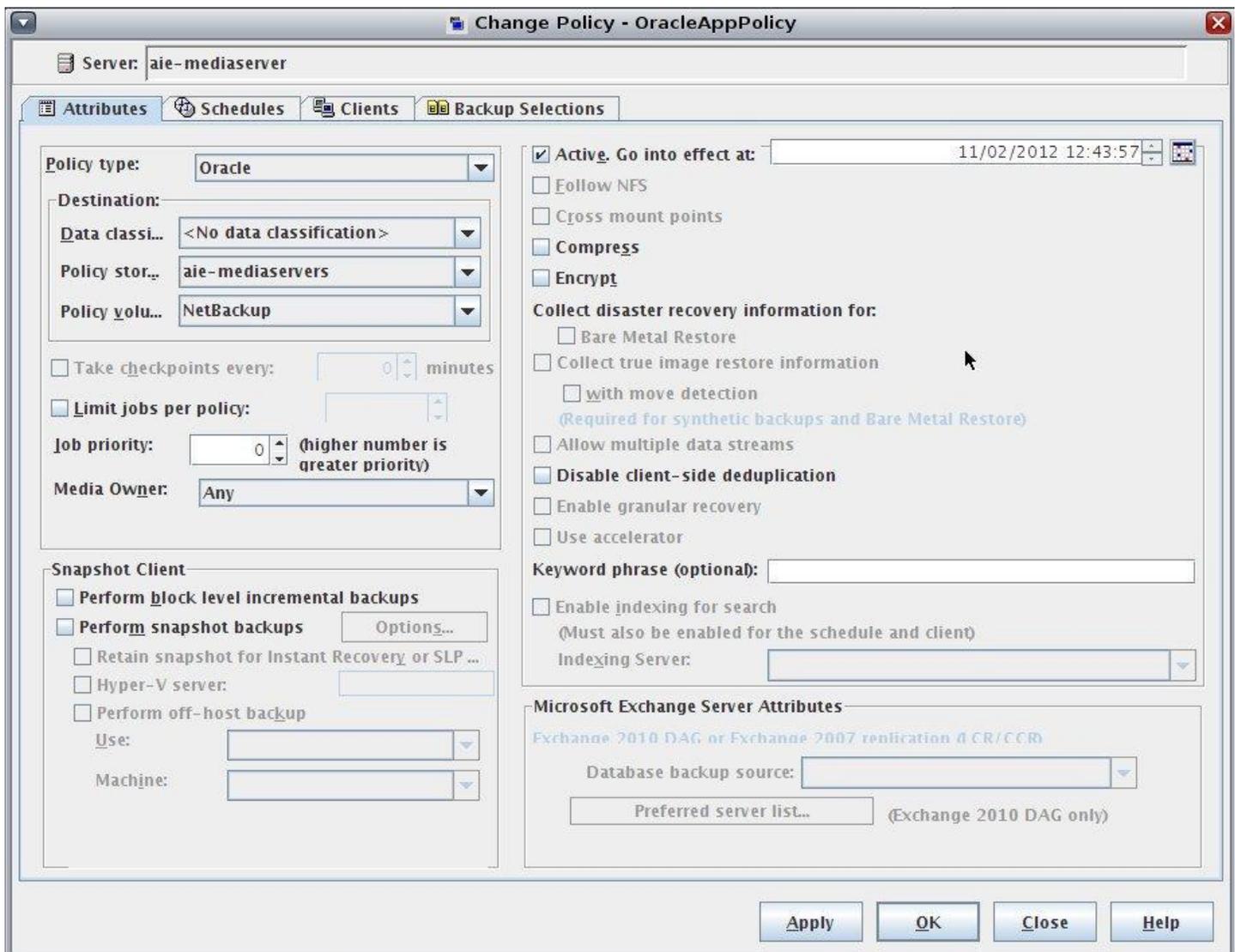
On the Start Window tab, define the **Start Window** to the time frame that is desired for backups to run (not pictured). Define the clients. This is the host which will execute the Oracle RMAN script. In this example, **aiessc01-stor** is used to execute the Oracle RMAN script. If redundancy is desired, users can set up this entry using the SCAN name, and specify the SCAN address here. Note that other setup is also required in hosts files, bp.conf files, and specific Oracle Database files to allow the SCAN address to work. Setting up SCAN is beyond the scope of this document; please refer to Oracle documentation.



Note: **aiessc01-stor** is the only client being added to the Clients tab in this example. Define the backup selection to include the path to the Oracle RMAN script on **aiessc01-stor**:



1. **Policy 2:** Name = OracleAppPolicy – This is the policy that allows Oracle RMAN to execute jobs on the NetBackup server for the specified clients
2. Set policy type to **Oracle**
3. Set Policy Storage to Storage Unit Group **aie-mediaserver2**
4. Set Policy Volume Pool to the pool in use



Create an application backup schedule for the backups. Type **Application Backup** for Oracle RMAN must be used for this to work successfully.

The screenshot shows a dialog box titled "Change Schedule - Policy OracleAppPolicy". At the top, the "Server" is set to "aie-mediaserver". There are two tabs: "Attributes" (selected) and "Start Window".

Attributes Tab:

- Name:** Default-Application-Backup
- Type of backup:** Application Backup (dropdown menu)
- Enable indexing for search (Must also be enabled for the policy and client)
- Synthetic backup
- Accelerator forced rescan
- Schedule type:**
 - Calendar
 - Retries allowed after runday
 - Frequency:
 - Unit: weeks (dropdown menu)

Destination:

- Multiple copies (with "Configure..." button)
- Override policy storage selection: (dropdown menu)
- Override policy volume pool: Sport (dropdown menu)
- Override media owner: (dropdown menu)

Retention: 1 month (dropdown menu)

Media multiplexing: 1 (spinners)

Instant Recovery:

- Snapshots and copy snapshots to a storage unit
- Snapshots only

Buttons at the bottom: OK, Cancel, Help.

On the Start Window tab, define the start window for seven days (always open). The primary schedule is controlled by the first policy created (Automatic-Oracle), but this one should be always open to ensure it covers any time frame set in the other policy.

Change Schedule - Policy OracleAppPolicy

Server:

Attributes | **Start Window**

	2	4	6	8	10	12	14	16	18	20	22	24
Sun	[Dark Blue Bar]											
Mon	[Dark Blue Bar]											
Tue	[Dark Blue Bar]											
Wed	[Dark Blue Bar]											
Thu	[Dark Blue Bar]											
Fri	[Dark Blue Bar]											
Sat	[Dark Blue Bar]											

Buttons: **Delete**, **Clear**, **Duplicate**, **Undo**

To define a time window during which jobs can start, select a day, and enter a start time. Then enter either the end day and time, or the duration.

To select an existing time window, move your mouse over the time window and click to select it, or select the day from the 'Start Day' list.

Start day: Start time:

End day: End time:

Duration (days hours:minutes): Resolution:

Buttons: **OK**, **Cancel**, **Help**

Define the clients. Each compute node needs to be defined as a client in this policy:

Add Client - Policy OracleAppPolicy

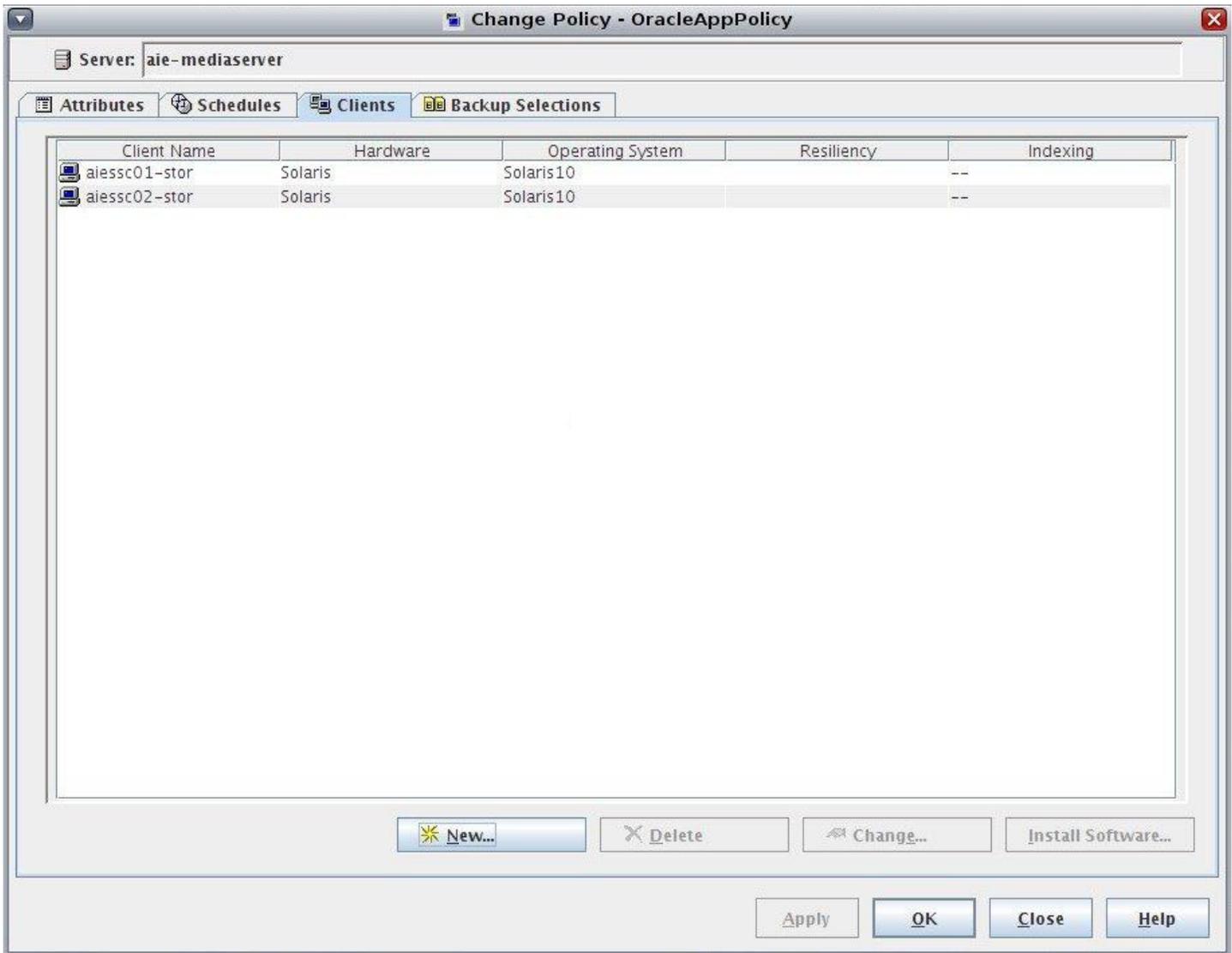
Server:

Enable indexing for search
(Must also be enabled for the policy and schedule)

Client name:

Hardware and operating system:

Buttons: **Add**, **OK**, **Close**, **Help**



The Backup Selections section is left blank, as Oracle RMAN controls what is being backed up based on the settings in the Oracle RMAN script.

Verify NetBackup Clients

Navigate to the client list: NetBackup Management->Host Properties->Clients

aiesc01-stor and aiesc02-stor should be visible. Select each one and a green check box should appear indicating the connection to each client.

Host Properties - aie-mediaserver - NetBackup Administration Console [logged into aie-mediaserver]

Symantec NetBackup™

File Edit View Actions Help

Navigation icons: Home, Back, Forward, Stop, Refresh, Print, Help, etc.

aie-mediaserver (Master Server)

- aie-mediaserver (Master Server)
 - Backup, Archive, and Restore
 - Activity Monitor
 - NetBackup Management
 - Reports
 - Policies
 - Storage
 - Catalog
 - Host Properties
 - Master Servers
 - Media Servers
 - Clients**
 - Indexing Servers
 - Media and Device Management
 - Access Management
 - Vault Management
 - Bare Metal Restore Management

2 Clients for aie-mediaserver (1 selected)

Host	Operating Syst...	OS Type	Host Type	Version	Conn
aiessc01-stor	SunOS(5.11)	UNIX	Client	7.5	Conn
aiessc02-stor	SunOS(5.11)	UNIX	Client	7.5	Conn

Alert Notification