Pre-upgrade resource adjustments to avoid out-of-memory issues and optimize performance

When you upgrade to IBM Spectrum Copy Data Management (CDM) version 2.2.13.0 or later from a previous version, there is a new minimum memory requirement of 48 GB. The memory that is available for Virgo should be set to one quarter of the total memory available. For example, if you use the minimum memory requirement of 48 GB, then 12 GB should be used for Virgo. Follow the steps in this topic to avoid running into any Java out-of-memory (OOM) issues and to optimize performance.

About this task

The minimum memory requirements for IBM Spectrum Copy Data Management (CDM) version 2.2.13.0 and later have increased. Any Java out-of-memory (OOM) issues should be addressed by following the subsections in the procedure until the issue is resolved.

Procedure

Sub-procedure

The IBM Spectrum Copy Data Management (CDM) heap size of 1024 MB may need to be increased to 4096 MB for virtual machine (VM) copy policy catalog browsing. This can be increased by following these steps:

1. Log in to the IBM Spectrum Copy Data Management (CDM) virtual appliance through the virtual console or using Secure Shell (SSH) as the **root** user.
2. Using a text editor, edit the file `startup.sh` file:

   ```
   # vi /opt/virgo/bin/startup.sh
   ```

3. Locate the line that begins with `export JAVA_OPTS="-Xms512m -Xmx1024m…"` and change it so that it appears as follows:

   ```
   export JAVA_OPTS="-Xms2048m -Xmx4096m -XX:PermSize=256m -XX:MaxPermSize=256m"
   ```

4. Save the file.
5. Reboot the IBM Spectrum Copy Data Management (CDM) virtual appliance.

Sub-procedure

If the steps taken in the first sub-procedure do not resolve OOM issues, proceed with the steps in this sub-procedure. To ensure optimal performance, you can optimize the number of concurrent processes within the IBM Spectrum Copy Data Management (CDM) virtual appliance by changing the content of the configuration file and restarting Virgo.

1. Log in to the IBM Spectrum Copy Data Management (CDM) virtual appliance through the virtual console or using Secure Shell (SSH) as the **root** user.
2. Using a text editor, edit the file `com.syncsort.dp.xsb.service.jobmanager.properties` file:

   ```
   # vi /opt/virgo/repository/ecx-usr/com.syncsort.dp.xsb.service.jobmanager.properties
   ```

3. Edit the settings in the file so that they match the values defined below:

```
jobmanager.taskExecutorPoolSize=500
jobmanager.maintenanceTaskExecutorPoolSize=2
jobmanager.threadsPerNode=100
jobmanager.threadsPerJob=100
jobmanager.skipLimit=100
```

4. Save the file.
5. Stop the Virgo service by issuing the stop command:
```
# service virgo stop
```
6. After the service stops, restart it by issuing the start command:
```
# service virgo start
```

Results

The heap of the Virgo component in IBM Spectrum Copy Data Management (CDM) virtual appliance is updated to take advantage of increased memory and the number of concurrent processes is updated to optimize performance.