BMC is announcing a change in the following products:

- BMC Next Generation Technology Check for DB2 for z/OS (NGT Check)
- BMC Next Generation Technology Load for DB2 for z/OS (NGT Load)
- BMC Next Generation Technology Reorg for DB2 for z/OS (NGT Reorg)
- BMC Next Generation Technology Stats for DB2 for z/OS (NGT Stats)
- BMC Next Generation Technology Unload for DB2 for z/OS (NGT Unload)

**Note**

If you have questions, contact Customer Support at 1 800 537 1813 (United States or Canada) or call your local support center.

### Overview of the enhancement

These products now use the BMCUTIL and BMCSYNC common tables to control concurrent access to the objects on which they operate. The use of these tables does not replace the use of the Matrix and Utility internal databases (IDBs).

The following topics provide additional information about this enhancement.

### Sharing-level access

When using the BMCSYNC table, the registering product assigns a sharing level to each registered object. The sharing level controls access to that object from other BMC products. For partitioned IBM DB2 spaces, registration is performed at the partition level.

The SHRLEVEL column in the BMCSYNC table describes the access level for the object. This column can contain one of the following values:
S indicates shared access. Any other product that registers with shared access (S) can run against the object.

X indicates exclusive access. No other product can run against the object.

A blank indicates that no status is requested, and any other product can run against the object.

The following table describes the level of access that each of the products listed in this technical bulletin allows:

<table>
<thead>
<tr>
<th>Product</th>
<th>SHRLEVEL access</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGT Check</td>
<td>S</td>
</tr>
<tr>
<td>NGT Load</td>
<td>X</td>
</tr>
<tr>
<td>NGT Reorg</td>
<td>X</td>
</tr>
<tr>
<td>NGT Stats</td>
<td>S</td>
</tr>
<tr>
<td>NGT Unload</td>
<td>S</td>
</tr>
</tbody>
</table>

For more information about the BMCSYNC table and concurrent object access, see the reference manual for any of the BMC utility products for DB2.

**Changes to the NGTDISP command**

You can now use the NGTDISP command (formerly called the CDBDISP command) to display information from the BMCUTIL and BMCSYNC tables. For more information about using NGTDISP, see the chapter about CDBDISP in the *BMC Next Generation Technology General User Guide*.

**NGTDISP BMCUTIL**

Use the following NGTDISP syntax to display entries from the BMCUTIL table:

```sql
NGTDISP BMCUTIL
```

---

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The optional utility ID parameters enable you to limit the entries that the utility displays.

The output of this command is a report that contains the utility ID, utility type, execution status, restart option (for a restarted job), user ID, and starting timestamp of the utility.

**NGTDISP BMCSYNC**

Use the following NGTDISP syntax to display entries from the BMCSYNC table:

```
NGTDISP BMCSYNC
```

The optional utility ID parameters enable you to limit the entries that the utility displays.

The output of this command is a report that contains the utility ID, utility type, object names, partition number, object type, and sharing-level access.

**New messages**

The following new messages support this enhancement:

**NGTZ403**

*DB2 SSN ssid ATTACH API ERROR (RETURN CODE=returnCode REASON=reasonCode).*

*Explanation:* The utility encountered an internal error and terminated. Most likely either DB2 Solution Common Code (SCC) is not bound to the NGT plan, or the SCC load library is not included in the STEPLIB.

*User response:* If you understand the reason for the error, correct the problem and resubmit the job. If you need further assistance, contact BMC Customer Support.
NGTZ404  DB2 SSN ssid ATTACH API DB2 ERROR (RETURN CODE=returnCode REASON=reasonCode)

Explanation: The utility encountered a DB2 call attachment facility (CAF) error and terminated. Likely causes are as follows:

■ The plan is not bound on the specified DB2 subsystem.
■ You are not authorized to run the plan.
■ The maximum number of threads has been reached.
■ The CAF release level does not match the release level of the DB2 subsystem.

User response: Check the IBM DB2 messages and codes documentation for an explanation of the indicated reason code. Correct the problem and resubmit the job.

NGTZ405  SERIALIZATION ERROR (RETURN CODE=returnCode REASON=reasonCode).

Explanation: You attempted to run a utility on an object, but the utility encountered a conflict with the object and terminated. Most likely, a utility with exclusive access is already running on that object.

Message lines after the first line provide additional information about the problem, and about the utility ID and object on which the problem occurred.

User response: Determine the cause of the conflict. Resolve the conflict and resubmit the job.

NGTZ406  UTILITY ENTRY CREATED IN BMCUTIL FOR UTILITY ID utilityID.

Explanation: The utility registered the indicated utility ID in the BMCUTIL table for the current execution of that utility.

User response: No action is required.

NGTZ407  UTILITY ENTRY DELETED FROM BMCUTIL FOR UTILITY ID utilityID.

Explanation: When the job with the indicated utility ID completed, the utility removed the entry for that ID from the BMCUTIL table.

User response: No action is required.

NGTZ408  SYNC ENTRIES CREATED IN BMCSYNC FOR UTILITY ID utilityID.

Explanation: In the BMCSYNC table, the utility registered the objects on which it is operating for the indicated utility ID.

User response: No action is required.

NGTZ409  SYNC ENTRIES DELETED FROM BMCSYNC FOR UTILITY ID utilityID.

Explanation: For the indicated utility ID, the utility removed rows from the BMCSYNC table for the objects on which it was operating.

User response: No action is required.
ALL ENTRIES DELETED FROM BMCSYNC FOR UTILITY ID utilityID.

Explanation: The utility removed all rows from the BMCSYNC table for the indicated utility ID. This action usually occurs when you restart a job with NORESTART.

User response: No action is required.

Enabling the enhancement

To enable this enhancement, complete the following steps:

1. Apply PTFs BPU8370, BPU8384, and BPJ1316.

2. If you also use the BMC CATALOG MANAGER for DB2 product, also apply the following PTFs:
   - For version 11.1 of CATALOG MANAGER, apply PTFs BPU8544 and BPU8552.
   - For version 11.2 of CATALOG MANAGER, apply PTFs BPU8543 and BPU8548.

   Note
   Applying these PTFs prevents use of the CATALOG MANAGER TERM UTILITY option to terminate an NGT utility. Attempting to terminate an NGT utility by using that option could produce unexpected results.

3. Ensure that the latest version of the BMC DB2 Solution Common Code (SCC) component is installed, including current maintenance.

4. Rebind your NGT plan to add the SCC packages.

   For the BIND PLAN command for the NGT plan, see the IBNDPLAN member of the NGT CNTL data set.

5. Add the SCC load library to the STEPLIB, JOBLIB, or LINKLIST for your NGT products.

6. Create synonyms for the BMCSYNC and BMCUTIL tables for your NGT products by issuing the following SQL statements:

   ```sql
   SET CURRENT SQLID = 'SYSIBM' ;
   CREATE SYNONYM BMC_BMCUTIL FOR BMCUTIL.CMN_BMCUTIL ;
   CREATE SYNONYM BMC_BMCSYNC FOR BMCUTIL.CMN_BMCSYNC ;
   ```
Where to get the latest product information

To view the latest BMC documents, see the Support Central website at http://www.bmc.com/support.

Notices such as flashes, technical bulletins, and release notes are available on the website. You can subscribe to proactive alerts to receive e-mail messages when notices are issued or updated. For more information about proactive alerts, see the Support Central website.

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