IMS BMPs and IMS Batch (DLI or DBB) Jobs Using DB2 in a Parallel Sysplex

Enhancements in IMS Version 7 and DB2 Version 7 add new capabilities which make running IMS BMPs and IMS batch (DLI or DBB) jobs easier in a Parallel Sysplex. The IMS Version 7 enhancement is for IMS dependent regions, such as BMPs. It does not require DB2 Version 7. The DB2 Version 7 enhancement is for IMS batch jobs (DLI or DBB). It does not require IMS Version 7. Both enhancements are for users of DB2 data sharing. They enhancements all users to run the same IMS job on different members of a DB2 data sharing group without making JCL or parameter changes to the job.

IMS Version 7 APAR PQ42180

A BMP which accesses DB2 may be submitted to run on any IMS in a Parallel Sysplex without modifying the SSM parameter or SSM member of IMS PROCLIB. This capability was added to IMS V7 by APAR PQ42180. It does NOT require the use of the enhanced DB2 group attach support introduced in DB2 V7. It works with DB2 V5, V6, and V7.

Without this enhancement, moving a BMP which accesses DB2 from one MVS (OS/390 or z/OS) system to another typically requires a change in the BMP SSM parameter. The change is required to refer to a different IMS PROCLIB member which specifies a different DB2 subsystem. Alternatively, moving the BMP may be done by changing the member to specify a different DB2 subsystem. With this enhancement, the same SSM member referring to the same DB2 may be used by BMPs running with different DB2s in a DB2 data sharing group. The enhancement allows an IMS dependent region to specify a DB2 group attach name instead of a DB2 subsystem name in the SSM member. The IMS Control Region must specify the specific DB2 subsystem name(s) in its SSM member. IMS control regions cannot use the DB2 group attach name.

The use of the DB2 group attach name applies to MPP and IFP regions as well as BMPs.

Illustration

The following tables illustrate a use of the DB2 group attach name in the SSM member. IMSA and DB2A run on MVSA. IMSB and DB2B run on MVSB. Both DB2 systems use DB2 group attach name DB2X.

Before APAR PQ42180:

MVSA

IMS Region	SSM Member
IMSA Control Region	DB2A,SYS1,DSNMIN10,,R,-
IMSA BMP	DB2A,SYS1,DSNMIN10,,R,-

MVSB

IMS Region	SSM Member
IMSB Control Region	DB2B,SYS1,DSNMIN10,,R,-
IMSB BMP	DB2B,SYS1,DSNMIN10,,R,-

Note that the SSM members for the BMPs are different. The BMP on MVSA specifies ‘DB2A’. The BMP on MVSB specifies ‘DB2B’.

After APAR PQ42180:

The group attach name specified by DB2A and DB2B is ‘DB2X**’.**

MVSA

IMS Region	SSM Member
IMSA Control Region	DB2A,SYS1,DSNMIN10,,R,-
IMSA BMP	DB2X,SYS1,DSNMIN10,,R,-

MVSB

IMS Region	SSM Member
IMSB Control Region	DB2B,SYS1,DSNMIN10,,R,-
IMSB BMP	DB2X,SYS1,DSNMIN10,,R,-

Note that the SSM members for the BMPs are the same. Both BMPs specify 'DB2X'.

In-Doubt Resolution by IMS Restarts

When IMS fails, its restart attempts to resolve any in-doubts with DB2. The resolution requires that IMS connect to the same DB2(s) with which it was connected when it failed. IMS resolve in-doubt processing does not use DB2 group attach names. Instead, it uses the specific DB2 subsystem name(s) to ensure that it has connected with the correct DB2(s) for resolution processing.

DB2 Group Attach Names and IMS Use of Them

The group attach name for a DB2 subsystem is specified in an IEFSSNxx member of SYS1.PROCLIB. DB2 installation panel DSNTIPK may be used to make this specification. DB2s which specify the same value for their group attach name are members of the same group. At DB2 initialization, DB2 builds an MVS name/token pair whose name is based on the group attach name. It stores its DB2 subsystem name in the token.

IMS dependent regions examine the subsystem name specified in their SSM member. If the control region is connected to a DB2 with this subsystem name, the dependent region connects to it. If the control region is not connected to it, the dependent region assumes that it might be a DB2 group attach name. It uses this name to access the MVS name/token services to discover any DB2 subsystem on its MVS which is using this group attach name. It then checks to see if its control region is connected to this DB2. If so, it connects to the specific DB2.

It is invalid for an IMS control region to connect to more than one DB2 in the same group. It is valid for different IMS control regions on the same MVS to connect to different DB2s in the same group.

Related Information

Technote TD100192, "Scheduling BMPs on Any IMS in a Parallel Sysplex", provides information on how the IMSGROUP parameter may be used to run BMPs and other IMS dependent regions with any IMS control region without changing the IMSID execution parameter. This capability should be used with the support for DB2 group attach names to avoid either reason for changing JCL when a BMP is moved from system to system.

DB2 Version 7

An IMS batch (DLI or DBB) job which accesses DB2 may be submitted to run on any DB2 in a Parallel Sysplex without modifying the DDITV02 data set or SSM member for the batch job. This capability was added by the enhanced DB2 group attach support in DB2 V7. It does NOT require the use of the IMS V7. It works with IMS V5, V6, and V7

Without this enhancement moving a DLI or DBB job between systems, and therefore, between DB2 subsystems requires changes either in the DDITV02 data set or the SSM member. The changes tell the batch job which DB2 subsystem to access.

With this enhancement the user may specify a DB2 group attachment name instead of a subsystem name in the SSN parameter of the DDITV02 data set or of the SSM member.

Further information on specifying the group attach name in DDITV02 or the SSM member is available in the *DB2 UDB for OS/390 and z/OS V7 Application Programming and SQL Guide*, SC26-9933.