BMC is releasing version 11.2.00 of the BMC Recovery for DB2 solution.

Recovery for DB2 includes the following products:

- APPLICATION RESTART CONTROL for DB2
- CHECK PLUS for DB2
- COPY PLUS for DB2
- Log Master for DB2
- RECOVER PLUS for DB2
- RECOVERY MANAGER for DB2
- SNAPSHOT UPGRADE FEATURE of EXTENDED BUFFER MANAGER (XBM) for DB2
- BMC Workbench for DB2

**Note**

Before you begin installation, BMC recommends that you check the Support Central website at [http://www.bmc.com/support](http://www.bmc.com/support) for:

- Updated product documentation (for example, flashes and technical bulletins)
- Product downloads, patches, and fixes (PTFs)
- Product availability and compatibility data

These release notes supplement and supersede the product documentation and discuss product enhancements.

The following topics are discussed:

What's new ......................................................................................................................... 2
BMC Recovery for DB2 version 11.2.00 ........................................................................ 2
APPLICATION RESTART CONTROL for DB2 version 4.0.00 .................................. 4
CHECK PLUS for DB2 version 11.2.00 ........................................................................ 6
COPY PLUS for DB2 version 11.2.00 ........................................................................... 6
Log Master for DB2 version 11.2.00 ............................................................................. 8
RECOVER PLUS for DB2 version 11.2.00 ..................................................................... 13
RECOVERY MANAGER for DB2 version 11.2.00 ....................................................... 15
What's new

These topics describe the changes or new features in this release.

BMC Recovery for DB2 version 11.2.00

Version 11.2.00 of the BMC Recovery for DB2 solution includes the following changes.

Solution components

This version of the solution includes a new release of the following components:
- CHECK PLUS
- COPY PLUS
- Log Master
- RECOVER PLUS
- RECOVERY MANAGER
- SNAPSHOT UPGRADE FEATURE

In addition, the solution includes APPLICATION RESTART CONTROL for DB2 version 4.0.00, released December 2014, and BMC Workbench for DB2.

End of support for DB2 versions

Starting with this release, the Recovery for DB2 solution does not support Version 9 of the IBM DB2 database management system. In addition, this solution supports DB2 Version 10 only in new-function mode.
Earlier releases will continue to support Version 9 and other modes of DB2 Version 10.

**Extended functionality of Progress Reports**

RECOVERY MANAGER for DB2 version 11.1.00 introduced Recovery Progress Reports and the batch program ARMBRPR. This release adds new functions, which you can access only with a Recovery for DB2 password.

The new functions include:

- ARMBRPR command to externalize real-time statistics
- 'What if’ scenarios for backup elapsed time estimates
- 'What if’ scenarios for recover elapsed time estimates

**Note**

With this release, the online name has changed to Progress Reports.

For more information, see the following chapters in the RECOVERY MANAGER for DB2 User Guide:

- "Accessing online Progress Reports"
- "ARMBRPR—Progress Reports"

**Documentation changes**

This release includes the following documentation changes:

- The name of the BMC Global Infrastructure Administration Guide has changed to BMC Infrastructure Components Administration Guide.

- The name of the BMC Products and Solutions for DB2 Configuration Guide has changed to BMC Products and Solutions for DB2 Customization Guide.

- In addition to the Installation System Reference Manual, BMC now provides the Installation System Quick Start, which enables you to quickly install the product with the Installation System.

**BMC Documentation Center changes**

The primary BMC Documentation Center is now available without a support login. This center offers:

- Documentation and Quick Courses for all products except Cost Optimization products
Messages for all products, including Cost Optimization products

A new, secured Cost Optimization Documentation Center offers documentation and Quick Courses for the following products:

- BMC Application Accelerator for IMS
- BMC Cost Analyzer for zEnterprise (CAzE)
- BMC Intelligent Capping for zEnterprise (iCap)
- BMC Subsystem Optimizer for zEnterprise (Subzero)

**Note**

You must log in using your BMC Support ID to access the Cost Optimization Documentation Center.

To access the Documentation Centers, go to:

- BMC Documentation Center
- BMC Cost Optimization Documentation Center

## APPLICATION RESTART CONTROL for DB2 version 4.0.00

Version 4.0.00 of the APPLICATION RESTART CONTROL (AR/CTL) product, released December 2014, includes the following changes.

### IBM DB2 two-phase commit

AR/CTL now allows you to enable two-phase commit processing with IBM DB2 and MQ by using the Resource Recovery Services Attachment Facility (RRSAF). If you use RRSAF to attach to DB2, you can now specify the RRSAF method (RRS) on the DB2 attach type option.

With this enhancement, AR/CTL can now perform the following actions:

- Calls DSNRLI, with the appropriate functions, to establish a connection to the DB2 subsystem
- Passes EXEC SQL requests to DB2
- For normal termination, calls RRS and DSNRLI as follows:
  - Calls RRS to commit the unit of work (if required)
  - Calls DSNRLI, with the appropriate functions, to terminate the connection with the DB2 subsystem
For abnormal termination, calls RRS and DSNRLI as follows:

— Calls RRS to back out any unit of work that is in progress (if required)

— Calls DSNRLI, with the appropriate functions, to terminate connection with the DB2 subsystem

**New default for DB2 attach type option**

CAF is now the default value for the DB2 attach type option on the DB2 Options panel.

**ARCINFO0 API**

AR/CTL provides the new ARCINFO0 application programming interface (API) to retrieve job-related information. When AR/CTL is present in your environment (IBM IMS or non-IMS), you can use the ARCINFO0 API to return AR/CTL job information.

To execute the API, add a call to ARCINFO0 in your application program.

The ARCINFO0 API can return the following job information:

- Job name
- Step name
- Procedure step name
- Application program name
- IMS subsystem identifier
- PSB name
- DB2 subsystem name
- DB2 plan name

For more information, see the *APPLICATION RESTART CONTROL Reference Manual*.

**Documentation correction**

You are *not* required to perform an IPL each time you install or update BCF. In the *APPLICATION RESTART CONTROL Reference Manual: BATCH CONTROL FACILITY*, the "Enhanced processing" topic states that you must run the AESENH00
A maintenance program after each IPL. (AESENH00 removes and installs the enhanced processing routines.) However, this statement is not meant to imply that an IPL is required each time you install or update BCF. Whenever an IPL is required, BMC will explicitly state the requirement in the associated release notes, technical bulletin, flash, or PTF.

*Note*
BMC plans to update this information in the next release of the reference manual.

---

**CHECK PLUS for DB2 version 11.2.00**

Version 11.2.00 of CHECK PLUS includes the following changes.

**RREPL status**

CHECK PLUS now supports read-or-replication-only (RREPL) status.

**Updated indexes**

CHECK PLUS now supports indexes in which updated entries remain in their original position on the page.

**System and software requirements**

This version of CHECK PLUS has the following changes to minimum requirements from version 11.1.00:

- DB2 Solution Common Code (SCC) version 11.1.00 with current maintenance
- DB2 Utilities Common Code (D2U) version 11.2.00

---

**COPY PLUS for DB2 version 11.2.00**

Version 11.2.00 of COPY PLUS includes the following changes.

**Native support for SHRLEVEL CHANGE RESETMOD YES copies**

Previous releases of COPY PLUS called DSNUTILB to make SHRLEVEL CHANGE RESETMOD YES copies. COPY PLUS can now make these copies natively with the new SLCHRESET option.
Online consistent copies for LOBs

Starting with this release, COPY PLUS can make online consistent copies of large object (LOB) spaces.

Tagged copies for migration

In the previous release, running EXPORT to identify copies for migration did not always clearly identify which copies were exported, especially if the copies were made in multiple jobs. With the new TAG and TAGSET options, this release allows you to "tag" copies for migration to simplify selecting copies for migration.

Support for migrating XML spaces

This release adds support for migrating XML spaces by using image copies.

Support for migrating statistics

This release adds support for migrating statistics with the new EXPORT STATS option.

EXPORT file for MIGRATE without copies on the target

In the previous release, when creating an EXPORT file for MIGRATE, COPY PLUS required that copies exist on the target system for the spaces to be migrated, even though those copies would not be used. This release allows EXPORT for MIGRATE without requiring copies on the target.

Incremental copies with Instant Snapshots

This release adds support for making incremental copies based on full Instant Snapshot copies.

Ability to register LP Instant Snapshots like DB2 FlashCopies

In previous releases, COPY PLUS registered Instant Snapshot copies in BMCXCOPY. Starting with this release, COPY PLUS registers LP Instant Snapshots in SYSCOPY to enable use by either RECOVER PLUS or the DB2 RECOVER utility.
COPY IMAGE COPY of LOBs from system backups

This release adds support for making standard copies of LOB spaces from system backups.

Use of real-time statistics to size objects and estimate changed pages

This release uses DB2 real-time statistics to size objects to be copied and to estimate the number of changed pages.

Instant Snapshots of DB2 catalog

This release adds support for making Instant Snapshot copies of the DB2 catalog.

Replacement of NSCMAIN by the CONSISTENT YES option

In previous releases, you had to execute the NSCMAIN program to make online consistent copies. Now, you can make online consistent copies by executing ACPMAIN with the CONSISTENT YES option. This release continues to support NSCMAIN, but BMC plans to deprecate NSCMAIN in the next release.

New AUX ALL option

In previous releases, AUX YES copied history tables and auxiliary spaces. This release uses the HISTORY option to copy history tables and adds AUX ALL to copy all of the auxiliary spaces.

Support for persistent read only (PRO) and read-or-replication-only (RREPL) statuses

This release adds support for PRO and RREPL statuses.

Log Master for DB2 version 11.2.00

Version 11.2.00 of Log Master includes the following changes.

New reports and report enhancements

This release adds several new reports and report enhancements:
Enhancements to quiet-point reporting

This release offers enhancements to quiet point reporting through new batch syntax:

— You can define a log mark to be updated with the quiet point RBA/LRSN. Subsequently, you can use the log mark instead of the RBA/LRSN value in product syntax.

Note

The Log Master repository stores information about log marks in the Log Master repository.

— With the NOQUIETPOINTRC option, you can specify a return code (RC) that Log Master will terminate with if no quiet points are found. NOQUIETPOINTRC also lets you control the severity code (I, W, E, S, or U) of the message that is displayed when no quiet points are found (BMC097547).

Ability to set time intervals for control breaks

You can now select a time interval to control how frequently Log Master reports information related to transaction volume (for example, logged time, commit time, and URID time). You can specify any interval from 1 second to 24 hours.

Ability to see WHERE clauses in report output

You can now include the LOGSCAN filter in report output and specify where you want the filter to be displayed (for example, in the report header or the page header).

Ability to see a changed-column indicator in Detail reports

You now have the option of seeing a changed-column indicator in Detail reports that use horizontal format (similar to vertical format).

Note

By default, "*" defines vertical format and a blank defines horizontal format, but you can change these definitions.

New report showing the column update frequency

This new summary report can help you determine whether placing an index on columns could be detrimental when the table is updated. The column detail includes the:

— Column name

— Column number

— Column type
— Indexed column

— Frequency with which the column has been updated

— Total number of column updates

- **Ability to report Database Exception (DBE) records and status changes**

  Log Master can now report on the Database Exception (DBE) records that are logged by DB2 utilities such as REORG and REPAIR. This information can be especially useful in recovery situations.

  This enhancement also includes a new LLOG option that can report status changes in logical log output.

- **Support for MIGRATE and UNDO COMMAND output**

  You can now include the COMMAND output in the same LOGSCAN statement as DDL, CATALOG ACTIVITY, or REPOS UPDATE (but not with other forms of output, such as SQL or LOAD). The commands generated include:

  — FREE PLAN
  — FREE PACKAGE
  — BIND PLAN
  — BIND PACKAGE
  — REBIND PLAN
  — REBIND PACKAGE

  You can apply the following filters:

<table>
<thead>
<tr>
<th>Filter</th>
<th>Selects log records based on a specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSPLAN</td>
<td>Plan name</td>
</tr>
<tr>
<td>SYSPACKAGE</td>
<td>Package collection ID and package name</td>
</tr>
<tr>
<td>SYSPACKAGE LOCATION</td>
<td>Package location</td>
</tr>
<tr>
<td>SYSPACKAGE COLLECTION</td>
<td>Package collection ID</td>
</tr>
<tr>
<td>SYSPACKAGE NAME</td>
<td>Package name</td>
</tr>
<tr>
<td>SYSPACKAGE VERSION</td>
<td>Package version</td>
</tr>
</tbody>
</table>

- **New symbolic variables for use with LOAD SEPARATE DATASET YES**

  This release provides the following new symbolic variables:

  — &DBNAME
— &TSNAME
— &DBID
— &PSID
— &OBID

■ Ability to delimit column names and keywords in the control file
You can use the following new LOAD CONTROL FILE options to control how Log Master delimits column names and keywords in the control file:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONLY</td>
<td>Delimits keywords and column names that require delimiters</td>
</tr>
<tr>
<td>NONE</td>
<td>Does not delimit any keywords or column names</td>
</tr>
<tr>
<td>ALL</td>
<td>Delimits all keywords and column names</td>
</tr>
</tbody>
</table>

■ New CSV format options
This release offers new syntax for controlling how LOAD Comma Separated Value (CSV) data is formatted. The new syntax options are as follows:

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELIMIT[CONTROL]COLUMN NAME {ONLY</td>
<td>NONE</td>
</tr>
<tr>
<td>Syntax</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| **ENCLOSED[BY]delimiter[AND delimiter]** | — The **ENCLOSED** option specifies the delimiters used to enclose your string/text fields data. The default is a double quotation mark ("). If the **AND** option is provided, the delimiter is only used to enclose the left side of data; otherwise it is used to enclose both sides of your data (left and right).  
— The **AND delimiter** option specifies the delimiter used to enclose the right side of your string/text data. The default is a double quotation mark ("). If you do not specify a value for this option, the value specified for the **ENCLOSED** option will be used.  
**Note:** You must ensure that the multiple-character delimiter that you specify is not contained in your column data. |
| **TERMINATED[BY] delimiter** | Specifies which character (or characters) to use to delimit field data  
You can specify up to eight characters. The default is a comma (,). The delimiters can be represented in hexadecimal. |
| **DECIMAL POINT {char | COMMA | PERIOD}** | Specifies which character to use for decimal points  
You can specify one character. The default is a period (.).  
**Note:** You can also specify the keyword COMMA or PERIOD. |
| **TRANSLATE char1 TO char2** | Defines translation rules  
If *char1* is found in a column string, Log Master will replace it with *char2*. The characters can be represented in hexadecimal. |

**Enhancements involving compression dictionaries**

Log Master now uses incremental copies to obtain compression dictionaries and also accounts for compression dictionaries rebuilt because of LOAD or REORG utilities running during Log Master execution.
RECOVER PLUS for DB2 version 11.2.00

Version 11.2.00 of RECOVER PLUS includes the following changes.

Tagged copies for migration

In the previous release, running EXPORT to identify copies for migration did not always clearly identify which copies were exported, especially if the copies were made in multiple jobs. With the new TAG option, this release allows the user to "tag" output copies to simplify selecting copies for migration.

Support for migrating XML spaces

This release adds support for migrating XML spaces by using image copies.

Support for migrating statistics

This release adds support for migrating statistics with the new IMPORT STATS option.

New options for making output copies

With this release, you can make output copies by using inline input copies or Instant Snapshot input copies.

Rebuilding indexes with SHRLEVEL CHANGE

You can now use SHRLEVEL CHANGE to rebuild indexes.

Incremental copies with Instant Snapshots

This release adds support for using incremental copies based on full Instant Snapshot copies for recovery.

Online consistent copies for LOBs

RECOVER PLUS can now recover large object (LOB) spaces using online consistent copies.
Support for CHANGE ACCUM on DB2 Version 11

This release of RECOVER PLUS supports CHANGE ACCUM on Version 11 of the IBM DB2 database management system.

Recovery of individual spaces using system backups

This release adds support for recovering individual spaces by using system backups.

Instantiated data sets for DEFINE NO

When migrating data to a space that is DEFINE NO, RECOVER PLUS now updates the DB2 catalog and creates the cluster if it does not exist.

Migration of partition-by-growth (PBG) spaces with more than one data set

The new MIGRATE TOLOCATION option improves the handling of partition-by-growth spaces with more than one data set. The new option allows RECOVER PLUS to alter the number of data sets on the target system automatically.

Support for not indexing keys that are NULL

Starting with this release, RECOVER PLUS can omit null keys during REBUILD INDEX operations.

Support for RBA/LRSN conversion during REBUILD INDEX

RECOVER PLUS can now convert the RBA/LRSN format (basic-extended) during REBUILD INDEX operations.

Support for RBA/LRSN conversion for point-in-time recovery

RECOVER PLUS allows recovery to a point in time where the RBA/LRSN format for the partition is different from the current RBA/LRSN format.

Prevention of recovery to a point in time before dropped columns

This release of RECOVER PLUS checks for dropped columns and disallows recovery to a point in time before a DROP COLUMN operation.
Recovery to a point in time before materializing changes

RECOVER PLUS now allows recovery to a point in time before certain materializing changes (for example, DSIZE, PGSIZE, and SEGSIZE).

INDEP OUTSPACE with OBJECTSET

You can now use INDEP OUTSPACE with the RECOVER and REBUILD commands when an object list is specified via OBJECTSET syntax.

New RICHK option

If RICHK YES is specified and a partial recovery is performed on spaces with referential integrity constraints, RECOVER PLUS now sets check pending on related spaces that were not recovered.

New AUX ALL option

In previous releases, AUX YES would recover history tables and auxiliary spaces. This release uses the HISTORY option to recover history tables and adds AUX ALL to recover all of the auxiliary spaces.

Support for persistent read only (PRO) and read-or-replication-only (RREPL) statuses

This release adds support for PRO and RREPL statuses.

RECOVERY MANAGER for DB2 version 11.2.00

Version 11.2.00 of RECOVERY MANAGER includes the following changes.

DB2 Version 11 support

This release adds support for the following DB2 Version 11 features:

- Persistent read only (PRO) and read-or-replication-only (RREPL) statuses for Exception Groups
- Archive-enabled tables

This release provides an INCLUDE option when creating groups or object sets online and in batch. This option includes related archive tables in the group or object set.
Enhancements and restrictions to point-in-time (PIT) recoveries

RBALRSN_CONVERSION for catalog/directory Rebuild Index

Online creation of groups by INDEXSPACE name

This release adds the option to create groups online by INDEXSPACE name. RECOVERY MANAGER and DASD MANAGER PLUS share the same repository for groups/object sets. Creating groups by index space gives RECOVERY MANAGER the same functionality as the DASD MANAGER PLUS interface.

Method to copy groups from one DB2 subsystem to another

The GA line command on the group list panel generates JCL for the batch program ARMBGRP to create all of the groups in the list. By changing the SSID, you can use this job to create the same groups on another subsystem. You can also use this JCL as a backup, in case one or more groups are inadvertently deleted.

Support for VARBINARY and PENDINGDDL for recoverability

This release adds support for statuses VARBINARY and PENDINGDDL. You can see these statuses on the group object list panel and in the ARMBGPV Exception report.

Enhancements for CHECK DATA after recovery

Table spaces that have parents or hash tables will be selected to have CHECK DATA after they are recovered and when the group option Check Pend Action is CHECK.

ARMBGRP changes

This release includes the following changes for ARMBGRP:

- Adds support for the following additional statuses when creating Exception Groups:
  - ERRORRANGE
  - ADVISORYREORG
  - ADVISORYREBUILD
  - INFORMATIONALCOPY
  - AUXILIARYCHECK
  - AUXILIARYWARN
■ Enables IVP to report synonyms

**ARMBSRR changes**

This release includes the following changes for ARMBSRR:

■ Bypass Quiesce supports VALIDATE FAIL/WARN.

■ New syntax BSDS HOURSLIMIT and BSDS DAYSLIMIT provide alternate methods to specify the maximum number of logs that you want ARMBSRR to process.

■ New syntax LIMIT HOURS and LIMIT DAYS provide alternate methods to specify how many log data sets are to be restored for each recovery-site archive log copy.

■ This release adds the option to initialize active logs with DSNJLOGF. This option improves performance by avoiding initialization overhead the first time the active log is used by DB2.

**New batch program ARMBACT**

The ARMBACT batch program allows you to initialize all active logs for a specified SSID by calling DSNJLOGF.

For more information, see "ARMBACT—Initialize active logs with DSNJLOGF" in the *RECOVERY MANAGER for DB2 User Guide*.

**ARMBRPR and Progress Reports changes**

Recovery Progress Reports and the batch program ARMBRPR were introduced in the last release. This release changes the online name to Progress Reports. The batch program name, ARMBRPR, remains the same.

Additionally, this release extends the functionality of Progress Reports and ARMBRPR. New functions include:

■ ARMBRPR command to externalize real-time statistics

■ 'What if' scenarios for backup elapsed time estimates
'What if' scenarios for recover elapsed time estimates

New functionality requires a BMC Recovery for DB2 password. For more information, see the following chapters in the RECOVERY MANAGER for DB2 User Guide:

- "Accessing online Progress Reports"
- "ARMBRPR—Progress Reports"

Withdrawal of the ARMBREP repository conversion program

The ARMBREP repository conversion program has been withdrawn. Customers running version 9.1.00 or earlier who install version 11.2.00 will need to manually recreate their groups in the new common repository. These customers should contact BMC customer support for assistance.

ANSI printer carriage control characters

RECOVERY MANAGER reports are no longer produced with ANSI printer carriage control characters.

Changes for RECOVER PLUS

RECOVERY MANAGER now supports the following items for the RECOVER PLUS product:

- MAXPRIM and AUTOSIZE for OUTCOPY
- TOTIMESTAMP and TOLOGMARK for OUTCOPY
  TOTIMESTAMP and TOLOGMARK offer more flexibility when specifying OUTCOPY ONLY by allowing you to set a migration point to any point in time, not just the last copy.
- &PART5 Variable for Output Data Set Names
- Alternate Resource SB (System Backup)
  RECOVER PLUS supports recovering individual spaces using system backups. RECOVERY MANAGER adds SB (System Backup) to the Alternate Resource Selection panel (ARMR005C).
Changes for COPY PLUS

RECOVERY MANAGER now supports the following items for the COPY PLUS product:

- &PART5 Variable for Output Data Set Names
- Shrlevel Change Consistent replacing PGM=NSCMAIN
  
  In previous releases, online consistent copies were made by executing the program NSCMAIN. Starting with this release, you can make online consistent copies by executing ACPMAIN with the CONSISTENT YES option.

SNAPSHOT UPGRADE FEATURE of XBM version 6.2.00

Version 6.2.00 of the EXTENDED BUFFER MANAGER (XBM) for DB2 product and its SNAPSHOT UPGRADE FEATURE technology include the following changes.

Space map updates

XBM now provides space map update monitoring by utilizing snapshot technology.

This functionality enables certain features in the utilities that call XBM or SUF. For this release, space map update monitoring enables native support of the SHRLEVEL CHANGE RESETMOD YES option in the BMC COPY PLUS for DB2 product.

Statistics interval

The default statistics interval has been increased to 3600 seconds.

Device support

XBM no longer supports IBM RAMAC Virtual Array (RVA) and Oracle StorageTek Shared Virtual Array (SVA) devices.

ESO hiperspace

Use of ESO hiperspace is now obsolete.

Information about ESO hiperspace in the documentation will be removed in a future release.
BMC Workbench for DB2 version 1.1.00

Version 1.1.00 of BMC Workbench includes the following changes.

Statistics migration

BMC Workbench lets you migrate the access-path statistics for a set of objects from one subsystem to another, or from one schema to another within the same subsystem.

For more information, view the Quick Course "Workbench for DB2 - Migrating Statistics."

Support for IBM DB2 Analytics Accelerator for z/OS

BMC Workbench now lets you view lists of the following IBM DB2 Analytics Accelerator for z/OS objects:

- Accelerators associated with an IBM DB2 subsystem or DB2 data sharing group
- Tables defined to an accelerator
- Packages that have been bound with an accelerator option

Index on expression

When you define a What-If index scenario during the SQL Tuning process, you can now add an index based on an expression.

Summary of enhancements since the BMC Workbench June 2013 release

Following the original release of BMC Workbench in June 2013, some significant features were made available via PTFs accompanying small program enhancements (SPEs).

Version 1.1.0 of the BMC Workbench product now includes all of these additional features:

- Lets you tune a SQL statement, by evaluating the potential performance of a SQL statement by creating an index, dropping an index, or updating index statistics. This feature is available if you have a license for BMC Performance for DB2SQL
Supports the following DML statements:

— SELECT
— INSERT
— UPDATE
— DELETE

- Lets you use a Connection Manager to define a local or a remote DB2 connection via a single User Interface Middleware (UIM) server
- Lets you use the Template Manager to organize templates hierarchically in user-defined folders, making it easier to find the templates that you need
- Lets you use System Authorization Facility (SAF) resources to manage individual user-access to Workbench functions.

Installation

To download the latest version of the Installation System, complete these steps:

1. Go to http://www.bmc.com/support/reg/installation-system.html, or navigate to the “BMC data management for DB2 and IMS, MainView, and cost optimization products installation and maintenance” section of the BMC Support Central website.
   A BMC support user ID and password are required.

2. Click Installation.

3. Follow the procedures.

   **Note**

BMC recommends updating the Installation System each time you use it to ensure that you have the most recent information. To do so, on the Installation System Main Menu, select Check for Installation System Update. For additional information, see the Installation System Reference Manual.

To request physical shipments, contact your BMC sales representative. Contact information is available on the BMC website.

Recovery for DB2 is installed by using the Installation System. This section contains installation information that supplements or supersedes the information in the Installation System documentation.
Requirements

For software, hardware, and other requirements, see the Installation System documentation.

Installation changes

For information about installation changes, see the Installation System release notes.

Migration considerations for SNAPSHOT UPGRADE FEATURE

XBM and its SNAPSHOT UPGRADE FEATURE tolerate interoperation between two consecutive releases (for example, 6.1 and 6.2) for migration purposes.

The following considerations apply to this toleration:

- When operating in a mixed environment, do not attempt to use features that have been added in the latest release. If XBM sends these requests to a subsystem that is using the previous release of XBM, XBM might abend.

- Do not operate long term in a mixed environment. BMC recommends that you migrate your entire environment as soon as you can.

- BMC provides limited support for interoperability problems.

For migration from XBM 6.1 to 6.2, complete the following steps:

1. Install PTF BPE0440 into the XBM 6.1 load library and restart the XBM 6.1 systems as soon as possible.
   After installing this PTF, if XBM 6.1 encounters a request for an XBM 6.2 feature, XBM fails gracefully instead of abending.

2. Ensure that all maintenance has been applied for both releases of XBM.

3. For each XBM in a sysplex group, complete the following steps:
   a. If active snapshots exist, bring XBM 6.2 into the XBM sysplex group on each system before you stop the XBM on that system.
   b. Start the updated XBM 6.2 system.
      Active snapshots will be synchronized with the new XBM version.
c Stop XBM 6.1 on that system.

**FMID and version information**

This release of Recovery for DB2 uses version 2.4.10 of the Installation System.

*Note*

If you have a later version of the Installation System, use that version to install the solution, product, or component.

During installation, the following versions and SMP/E FMIDs are installed:

<table>
<thead>
<tr>
<th>FMID</th>
<th>Product or component</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASAR71C</td>
<td>SAS_C and SAS_C++</td>
<td>7.1.00</td>
</tr>
<tr>
<td>BBASC70</td>
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The preceding table contains the FMIDs for Recovery for DB2 only. You can also obtain product, solution, and component information (FMIDs, codes, and versions) in the following ways:

- View the generated installation JCL member $176APLF.
  
  To search the file, search on the word FORFMID.

- View one of the following reports:
  
  — bxx_ozi_tape_product_list.txt lists FMIDs for cost optimization products, products shared across product lines, and infrastructure products.
  
  — cxx_ozi_tape_product_list.txt lists FMIDs for BMC products for IBM DB2.
  
  — ixx_ozi_tape_product_list.txt lists FMIDs for BMC products for IBM IMS.
  
  — mxx_ozi_tape_product_list.txt lists FMIDs for MainView products.

To access the reports on the BMC electronic software distribution (ESD) site, take the following steps:

1. Go to http://www.bmc.com/support/reg/installation-system.html, or navigate to the “BMC data management for DB2 and IMS, MainView, and cost optimization products installation and maintenance” section of the BMC Support Central website.
2 Click **Product codes and FMIDs**.

3 Click one of the listed reports.

## Maintenance

After you install your software, you can download any additional SMP/E maintenance by using either BMC Internet Service Retrieval (BMC ISR) or eFix PTF Distribution Services (http://apps.bmc.com/support/efix.cgi).

BMC ISR is available for all products that you install by using the Installation System. For more information, see the Installation System documentation.

**Note**

Before applying maintenance, ensure that you have successfully run the $176APLF job to set up your maintenance environment.

BMC provides fixes for Recovery for DB2 at the component level. To apply fixes for this solution, you must apply fixes for each component of the solution.

## Support status

You can find the support status for specific product versions on the Support Central website. Selecting a product from the “A – Z Supported Product List” shows:

- All versions of the product and their current support levels (full or limited)
- Dates on which support ends

For more information about the latest support policies, see the Support Central website at http://www.bmc.com/support.

## Product documentation

From the Support Central website (http://www.bmc.com/support), you can:

- Link to the BMC Documentation Center to browse documentation sets (http://www.bmc.com/available/documentation-center.html) or, for secured

- View Quick Course videos (short overviews of selected product concepts, tasks, or features), which are available from the following locations:
  - Documentation Center (primary center and secured center)
  - Support Central (at http://www.bmc.com/support/mainframe-demonstrations)
  - BMC Mainframe YouTube channel (https://www.youtube.com/user/BMCSoftwareMainframe)

- View individual product documents (books and notices) within the “A – Z Supported Product List” (https://webapps.bmc.com/support/faces/az/supportlisting.jsp)

You can order hardcopy documentation from your BMC sales representative or from the support site. You can also subscribe to proactive alerts to receive e-mail messages when notices are issued.

Customer support

If you have problems with or questions about a BMC product, see the support website at http://www.bmc.com/support. You can view or download product documents, find answers to frequently asked questions, and download products and maintenance. If you do not have access to the web and you are in the United States or Canada, contact Customer Support at 1 800 537 1813. Outside the United States or Canada, contact your local BMC office or agent.

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