BMC originally issued these release notes on June 25, 2013. They are being reissued to reflect new support for the IBM® DB2® Version 11 system. Revision bars denote differences from the previous edition.

BMC Software is releasing version 11.1.00 of the RECOVER PLUS for DB2 product.

RECOVER PLUS is also a component of the following BMC solutions:

- Administrative Assistant for DB2
- Database Administration for DB2
- Recovery Management 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 (PAC) data

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

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

For a short demo describing what’s new in this release, see https://webapps.bmc.com/infocenter/index.jsp. In the BMC Documentation Center, you can access the demo library via BMC Quick Course Demo Library in the Contents pane on the left.

**DB2 Version 11 support**

RECOVER PLUS now supports the following features of the IBM DB2 Version 11 system.

**Mode and extended RBA and LRSN support**

RECOVER PLUS supports DB2 Version 11 in all modes (CM, ENFM, and NFM) and includes support for extended RBAs and LRSNs in the following items:

- BSDSs
- Logs
- Table spaces
- Index spaces
**Pseudo-deleted index support**

RECOVER PLUS supports pseudo deletes and automatic cleanup of pseudo-deleted index entries for DB2 Version 11.

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**End of support for DB2 Version 8**

Starting with this release, RECOVER PLUS does not support IBM DB2 Version 8. Earlier releases will continue to support Version 8.

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**Extended RBA and LRSN support**

All RECOVER PLUS output (such as the output in Chapter 5, “Examples of RECOVER PLUS jobs” in the RECOVER PLUS for DB2 Reference Manual) has been converted to show 10-byte RBAs and LRSNs. The BMC utilities database has also changed to support extended RBAs and LRSNs.

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**New IMPORT and MIGRATE commands for migrating data**

New IMPORT and MIGRATE commands allow you to move data from one or more table spaces to another via a migration file that the COPY PLUS EXPORT command creates. The IMPORT command uses copies as input; the MIGRATE command uses copies and log. For more information, see the IMPORT and MIGRATE command descriptions in the RECOVER PLUS for DB2 Reference Manual.

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**NOTE**

This feature requires one of the following valid passwords:

- Recovery Management solution password
- Database Administration solution password

This release also includes the following changes:

- Adds new EXPSSID, EXPSLRSN, and EXPTLRSN columns to the BMCXCOPY table to accommodate the EXPORT, MIGRATE, and IMPORT commands
- Adds ICTYPE column value m, and COPY_TYPE column values X and I
Transformation restrictions removed

Transformation restrictions have been removed from High-speed Structure Change, as follows:

- Multi-table table space transformations are now allowed. Previously, the source table space could contain only one table.

- BRF to RRF and RRF to BRF transformations are now allowed. Previously, the source and target table space had to have the same row format. You could not transform a table space with basic row format (BRF) into a table space that had reordered row format (RRF), or vice versa.

**NOTE**
The rows are not transformed, but the DB2 catalog is changed to reflect the row format from the source.

- Transformations to and from MEMBER CLUSTER are now allowed. Previously, Recovery Management was unable to handle transformations related to the MEMBER CLUSTER attribute.


Additional DSSIZE values

The following values are now valid for DSSIZE:

- 128G
- 256G
Estimation improvements

Estimation has been improved to better account for current hardware and multitasking. Additionally, the following new installation options accommodate estimation:

- **DISKIORATE** specifies the number of megabytes per second that RECOVER PLUS reads from disk. The default value is 100.

- **CPUMIPS** specifies the rate at which a CPU executes instructions, in millions of instructions per second (MIPS). The default value is 200.

Many of the performance factors used in estimation are derived from DISKIORATE and CPUMIPS.

Estimation requires a Recovery Management for DB2 solution password. For more information, see Chapter 8, “Recovery simulation and estimation,” in the *Recovery Management for DB2 User Guide*.

Use of symbolics in INCOPY MODEL *dataSetName* syntax

The data set specified with INCOPY MODEL syntax supports the use of symbolics.

New symbolic variables

RECOVER PLUS adds the &UNIQ (or &UQ) symbolic variable to generate unique data set names. For example, you can use this variable with the DSNNAME parameter on the OUTPUT command.

If you use &UNIQ, RECOVER PLUS generates a 1- to 8-character value that is based on the system clock. The first character is always an uppercase letter. Each remaining character is either an uppercase letter or a numeral from 0 through 9.

RECOVER PLUS also adds the &PART5 symbolic variable that you can use for any data set. RECOVER PLUS generates 5-character partition numbers as follows:

- Partition 1 = 00001
- Partition 10 = 00010
- Partition 100 = 00100
- Partition 1000 = 01000
- Nonpartitioned = 00000
Allow INCOPY with OBJECTSET

The restrictions that did not allow INCOPY with OBJECTSET have been removed.

Automatic sizing of dynamically allocated output copies on DASD

RECOVER PLUS now automatically sizes dynamically allocated output copies on DASD when the primary allocation quantity is not specified by the SPACE option.

To accomplish automatic sizing, RECOVER PLUS adds the MAXPRIM option to the OUTPUT command. MAXPRIM lets you set a maximum amount of disk space (in the units specified by SPACE) to allocate as primary space. Valid values are 0 through 65535. A nonzero value for MAXPRIM establishes an upper limit for primary space allocation; 0 specifies no limit.

New EXCLUDE clause for OBJECTSET

For the RECOVER and REBUILD INDEX commands, RECOVER PLUS adds the EXCLUDE option to the OBJECTSET specification.

Support for VSAM data sets on nonsnappable disks

When you use the new installation option SNAP, RECOVER PLUS can now recover VSAM copies, even if the data set is not on a snappable disk. SNAP is also available on the OPTIONS command.

When the SNAP=VSAM and the data set is not on a snappable disk, RECOVER PLUS uses the following syntax to read a VSAM data set:

```
INCOPY FULL SNAPSHOT DSNAME dataSetName
```

RECOVER PLUS can also recover by using a VSAM data set registered in BMCXCOPY or SYSCOPY.

Additionally, RECOVER PLUS adds the FCPPRC installation option. You can use FCPPRC to control what happens if you specify VSAM=SNAP and the data sets are on a disk that is capable of using IBM FlashCopy®.
New AFRPRnnn data sets to eliminate deferred messaging

This release removes deferred messaging for subtasks. Now, each execution phase has its own AFRPRnnn print file, and messages are displayed in the print file as soon as they are issued. The maximum number of print files allowed by RECOVER PLUS is calculated by the following formula:

\[
\text{value of MAXKSORT} + \text{value of MAXLSORT} + 1 = \text{maximum number of AFRPRnnn files}
\]

The print files are named AFRPR001, AFRPR002, AFRPR003, and so on. AFRPRINT now displays the name of the AFRPRnnn file used by each phase for each object.

New USELOGS installation option

The new USELOGS installation option lets you specify the order in which to read active and archive log files. USELOGS=(ACT1,ACT2,ARC1,ARC2) is the default value.

You can override this installation option by using the RESOURCE SELECTION LOGS syntax on the OPTION command.

Better handling of partition-by-growth migrations

This release provides better handling for partition-by-growth (PBG) migrations. This release removes the warning against PBG migrations that have a different number of source and target data sets.

Recovery of an individual space from a system-level volume backup

To recover an individual space from a system-level volume backup, you can use COPY IMAGECOPY in the BMC COPY PLUS product to make a standard copy of the space. Then use RECOVER PLUS to recover the space from the standard copy.
Documentation changes

This release includes the following documentation changes:

- In the syntax diagrams in the RECOVER PLUS for DB2 Reference Manual, the Point-in-time recovery specification has been renamed to the TORBA/TOLOGPOINT specification.

- All messages are now available in the BMC Documentation Center, which is accessible from the BMC Support Central site (http://www.bmc.com/support). A separate messages manual is no longer available.

- Installation and configuration information is now located in the following books:
  
  — Installation System User Guide
  — BMC Products and Solutions for DB2 Configuration Guide

Installation

Download the latest version of the RECOVER PLUS by using the Electronic Product Distribution (EPD) facility. You can navigate to the EPD page from the Support Central website at http://www.bmc.com/support.

NOTE

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

RECOVER PLUS is installed by using the BMC Installation System. This section contains installation information that supplements or supersedes the information in the Installation System User Guide and the BMC Products and Solutions for DB2 Configuration Guide.

Requirements

For software, hardware, and other requirements, see the Installation System User Guide.
Installation changes

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

FMID and version information

This release of RECOVER PLUS uses version 2.3.60 of the Installation System and installation media.

**NOTE**

If you have a later version of the Installation System or the installation media, 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>BBAPW32</td>
<td>BMC Password Security System</td>
<td>3.2.00</td>
</tr>
<tr>
<td>ZAFRB10</td>
<td>RECOVER PLUS</td>
<td>11.1.00</td>
</tr>
<tr>
<td>ZAIN031</td>
<td>Install Execution Code</td>
<td>3.1.00</td>
</tr>
<tr>
<td>ZAUP241</td>
<td>BMCSORT</td>
<td>2.4.01</td>
</tr>
<tr>
<td>ZBMR15E</td>
<td>ISR External Routines</td>
<td>1.5</td>
</tr>
<tr>
<td>ZDIG190</td>
<td>Dignus C runtimes and C++ objects</td>
<td>1.9</td>
</tr>
<tr>
<td>ZSCCB10</td>
<td>DB2 Solution Common Code (SCC)</td>
<td>11.1.00</td>
</tr>
<tr>
<td>ZZIO160</td>
<td>Option value migration (ZIO)</td>
<td>1.6.00</td>
</tr>
</tbody>
</table>

The preceding table contains the FMIDs for RECOVER PLUS only. You can also obtain product, solution, and component information (FMIDs, codes, and versions) in the following ways:

- View the $B76APLF JCL member.

To search the file, search on the word *FORFMID*. 
View one of the following reports:

- `bxx_ozi_tape_product_list.txt` lists products and components for the B-series installation (shared and infrastructure products).
- `cxx_ozi_tape_product_list.txt` lists products and components for the C-series installation (BMC products for DB2).
- `ixx_ozi_tape_product_list.txt` lists products and components for the I-series installation (BMC products for IBM IMS™).
- `mxx_ozi_tape_product_list.txt` lists products and components for the M-series installation (MainView products).

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

2. Click Electronic Downloads.
3. Click readme.
4. In the “Before you begin” section, click a product media listing.

**Maintenance**

After you install RECOVER PLUS, BMC strongly recommends that you apply all available maintenance for the product and for the components and associated products that you installed with it. You can download any additional SMP/E maintenance by using either BMC Internet Service Retrieval (ISR) or eFix PTF Distribution Services (http://apps.bmc.com/support/efix.cgi). BMC ISR is available for all products that you install via the Installation System. For more information, see the *Installation System User Guide*.

**NOTE**

Before applying maintenance, ensure that you have completed the $B76APLF job to set up your maintenance environment.
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 (https://webapps.bmc.com/infocenter/index.jsp) to browse documentation sets
- View BMC Quick Course Demos (short overviews of selected product concepts, tasks, or features), which are included in the BMC Documentation Center
- View individual product documents (books and notices) within the “A – Z Supported Product List”

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.