BMC is releasing version 3.0.00 of the following BMC Subsystem Optimizer for zEnterprise (Subzero) products for the IBM zEnterprise environment:

- BMC Subsystem Optimizer for DB2
- BMC Subsystem Optimizer for IMS
- BMC Subsystem Optimizer for MQ

**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
- IBM MQ redirection
- Alternative targets
- PTF-released enhancements
- Support for DB2 Version 12
- Installation system changes
- Installation and maintenance
- Installing the Installation System or a product
- Maintaining the Installation System or a product
- FMID and version information
- Subzero installation and implementation notes
- Support status
- Product documentation
- Customer support
What's new

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

IBM MQ redirection

In this release, Subzero enables you to configure remote connectivity between MQ, CICS, IMS, and DB2 subsystems. IMS, CICS, DB2, and MQ can now run on separate LPARs and communicate seamlessly with each other, without requiring application program changes. This feature is available to users with a license for BMC Subsystem Optimizer for MQ.

You can see a full list of supported MQI calls in the BMC Subsystem Optimizer for zEnterprise Administration Guide.

Subzero supports MQ Versions 7.00, 7.10, 8.00, and 9.00.

Limitations

MQ redirection currently has the following limitation:

- BMC Subsystem Optimizer for MQ does not support message handle calls and does not support the message property calls that are based upon the message handle.

Alternative targets

You can now configure Subzero to connect to alternative target subsystems (up to two), if the primary target LPAR is unavailable.

You configure alternative targets in the DB2 Product Configuration (LGC). You enable or disable this feature by using the BRD, ALTS command.

PTF-released enhancements

This release includes the following significant enhancements, which BMC made available via PTFs following the Subzero 2.0 release in September 2015:

- Subzero lets you redirect SQL calls issued by IBM DB2 batch jobs running on a local LPAR. You can redirect the calls to a DB2 subsystem that resides on a remote
LPAR within the same sysplex. You can also run the DB2 job steps on the same remote LPAR, which reduces latency for very large data requests.

BMC made this feature available via Subzero Bundle 2 (BPJ1253), which accompanied a small program enhancement (SPE) in December 2015. For implementation details, restrictions, product requirements, and legal limitations, see the technical bulletin released on December 4, 2015.

Subzero lets you redirect IMS DL/I calls issued by batch jobs running in a Subzero environment on a local LPAR. You can redirect the calls to an IBM IMS subsystem that resides on a remote LPAR within the same sysplex. With this new feature, Subzero can:

— Support batch jobs that issue both IMS DL/I calls to IMS subsystems and SQL calls to DB2 subsystems

— Reduce latency for very large data requests by directing the IMS batch job steps to run on the same remote LPAR where the IBM IMS subsystem resides

— Redirect DL/I calls from IMS BMP and DLI Batch (DBB and DLI) jobs.

BMC made this feature available via Subzero Bundle 5 (BPJ1478), which accompanied a small program enhancement (SPE) in August 2016. For implementation details, restrictions, product requirements, and legal limitations, see the technical bulletin released on August 26, 2016.

Now, when you define Subzero in the DB2 Product Configuration (LGC), you can optionally create a customized naming pattern that uses system and Subzero proprietary symbols based on the source application job name. If no Subzero subsystem server matches the pattern, a new Subzero subsystem server is started that matches your naming pattern.

BMC made this feature available via Subzero Bundle 4 (BPJ1376), which accompanied a small program enhancement (SPE) in May 2016.

The number of threads is no longer limited to 8,192. Subzero can now run an unlimited number of threads that are dynamically defined according to system requirements.

BMC made this feature available via Subzero Bundle 4 (BPJ1376), which accompanied a small program enhancement (SPE) in May 2016.

Support for DB2 Version 12

Subzero now supports the following versions and modes of DB2:

— DB2 Version 12 function level 100

— DB2 Version 12 function level 500
Installation system changes

Beginning with version 3.1.00 of the Installation System, new product releases necessitate a new Installation System FMID. Before installing any products, always ensure that you have the most recent version of the Installation System installed and that you have refreshed its runtime environment.

This change enables PTF maintenance for individual levels of the Installation System. The change also eliminates the requirement to provide the Installation Maintenance Value, which simplifies the installation process.

For more information, see the release notes for the most current version of the Installation System.

Installation and maintenance

You install Subzero by using the Installation System.

Installing the Installation System or a product

The Installation System is installed and maintained by using SMP/E. Installing the Installation System creates the required SMP/E environment. Use the following procedures to install the Installation System or products.

Before you begin

If you need more information, see these sources:

- For software, hardware, and other requirements, see the Installation System documentation.
For information about installation changes, see the Installation System release notes.

If you prefer physical installation media instead of downloaded images, request physical media from your BMC sales representative. Contact information is available on the BMC website.

**To install the Installation System**

1. Review the most recent Installation System release notes on any product page from the A-Z Supported Product List on Support Central.


3. Click Installation System.

4. Click the method you want to use to obtain the Installation System, and follow the provided procedures.

   **WARNING**

   The Installation System must be installed into its own SMP/E zone. You should not install anything else into this zone.

**To install a product**

1. Ensure that you have the most recent version of the Installation System installed and that it has any required PTFs applied.

   To determine the most recent version number, see the most recent Installation System release notes on any product page from the A-Z Supported Product List on Support Central. To determine the version number of your current Installation System, see the title line on the Installation System Main Menu. Required PTFs are announced in technical bulletins.

2. Start the Installation System.

3. Follow the on-screen prompts.

   For more information, see the Installation System documentation.
After installing version 3.0.00 of Subzero, verify that bundle 1 (PTF BPJ1618) has been applied.

BMC recommends using BMC Internet Service Retrieval (BMC ISR) to obtain PTFs. For information about BMC ISR, see the maintenance information in the Installation System Reference Manual.

You can also obtain PTFs from eFix PTF Distribution Services (eFix). You can access eFix directly at http://efix.bmc.com or from the support site. For information about eFix, see the online Help.

**Maintaining the Installation System or a product**

Use the following procedures to maintain the Installation System or products.

**To maintain the Installation System**

1. Perform one of the following actions:
   - If you have the most recent version of the Installation System installed, apply any required PTFs.
   - Install the most recent version of the Installation System, and apply any required PTFs.

   To determine the most recent version number, see the most recent Installation System release notes on any product page from the A-Z Supported Product List on Support Central. To determine the version number of your current Installation System, see the title line on the Installation System Main Menu. Required PTFs are announced in technical bulletins.

2. Refresh the Installation System runtime data sets by running the $205RTEC and $206RTEC jobs (in order).

3. Restart the Installation System.

**To maintain a product**

1. Check Support Central for product notices, such as technical bulletins about fixes and Recommended Service Level (RSL) availability.

2. Use BMC ISR (recommended) to obtain product PTFs and RSLs.

3. Run the $176APLF installation job to ensure that all required FMIDs are applied.
4 Apply the product maintenance to the product's SMP/E environment.
For more information, see *Installation System Reference Manual*.

**FMID and version information**

Subzero uses version 3.1.00 (or more recent) of the Installation System.

*Note*
Always use the most recent version of the Installation System and ensure that it has any required PTFs applied.

To determine the most recent version number, see the most recent Installation System release notes on any product page from the *A-Z Supported Product List* on Support Central. To determine the version number of your current Installation System, see the title line on the Installation System Main Menu. Required PTFs are announced in technical bulletins.

Installation installs the following versions and SMP/E FMIDs:

<table>
<thead>
<tr>
<th>FMID</th>
<th>Description</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASAR71C</td>
<td>SAS C and SAS C++ modules</td>
<td>7.1</td>
</tr>
<tr>
<td>BBASC70</td>
<td>SAS C modules</td>
<td>7.0</td>
</tr>
<tr>
<td>LOSZ120</td>
<td>Runtime Component System (RTCS) C library</td>
<td>2.0</td>
</tr>
<tr>
<td>ZBMR15E</td>
<td>ISR external routines</td>
<td>1.5</td>
</tr>
<tr>
<td>ZBRD300</td>
<td>BMC Subsystem Optimizer for zEnterprise (Subzero) modules</td>
<td>3.0</td>
</tr>
<tr>
<td>ZBST100</td>
<td>BMC Support Tool</td>
<td>1.0</td>
</tr>
<tr>
<td>ZDBC10</td>
<td>DB2 Component Services (DBC) modules</td>
<td>10.1</td>
</tr>
<tr>
<td>ZDHS053</td>
<td>DNA Host Services modules</td>
<td>5.3</td>
</tr>
<tr>
<td>ZDIG190</td>
<td>DIGNUS C runtime modules and C++ objects</td>
<td>1.9</td>
</tr>
<tr>
<td>ZDIG1A0</td>
<td>DIGNUS C runtime modules and C++ objects</td>
<td>1.98</td>
</tr>
<tr>
<td>ZLGCA10</td>
<td>DB2 Product Configuration (LGC) modules</td>
<td>10.1</td>
</tr>
<tr>
<td>ZOSZ120</td>
<td>RTCS kernel library</td>
<td>2.0</td>
</tr>
<tr>
<td>ZPWD330</td>
<td>BMC Password Security System</td>
<td>3.3</td>
</tr>
<tr>
<td>ZSCCB10</td>
<td>DB2 common-code modules</td>
<td>11.1</td>
</tr>
<tr>
<td>ZSMF540</td>
<td>SmartDBA Mainframe modules</td>
<td>5.4</td>
</tr>
<tr>
<td>ZUIM540</td>
<td>User Interface Middleware (UIM) modules</td>
<td>5.4</td>
</tr>
<tr>
<td>ZUSCS40</td>
<td>UIM common services modules</td>
<td>5.4</td>
</tr>
</tbody>
</table>
The preceding table contains the FMIDs for Subzero 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:
  - Optimization products, common products, and common components
  - BMC products for IBM DB2
  - BMC products for IBM IMS
  - MainView products

To access the reports on Support Central, take the following steps:


2. Click Product codes and FMIDs.

3. Click one of the listed reports.

Subzero installation and implementation notes

As you install and implement Subzero, consider the following information:

- You can select BMC Subsystem Optimizer for zEnterprise for installation from the BMC Mainframe Cost Optimization list or from the All Products list.

- When the Install System RTCS Deselection pop-up is displayed, choose to install the Runtime Component System (RTCS) unless it is already installed on this LPAR at the minimum required version and maintenance level displayed in the
A pop-up. Unless otherwise indicated in the pop-up, the minimum required version of RTCS is 1.2.00 with PTF BP00181.

- If DB2 Component Services (DBC) and DB2 Product Configuration (LGC) are already installed on this LPAR, BMC recommends that you upgrade and use the existing address spaces, instead of installing new ones:

  — The minimum required version of DBC is 10.1.00 with PTF BPU8577.
  
  — The minimum required version of LGC is 10.1.00 with PTF BPJ1179.

- If one or more IMS subsystems will participate in Subzero redirection, ensure that Subzero can access the DFSPZPxx module. For more information, see the topic about IMS requirements in the BMC Subsystem Optimizer for zEnterprise Administration Guide.

- The Installation System Reference Manual provides a procedure for starting DBC product agents. Before beginning that procedure, modify your system PROCLIB to include the BRDPROC procedure (located in member BRDPROC of the INSTALL data set).

  **Note**

  The procedure for starting DBC product agents instructs you to submit the $495SBRD job. When DBC restarts, this job starts the Subzero address spaces automatically.

- The following table lists three-character product codes for CPU authorization of Subzero products. You use these codes when installing passwords.

<table>
<thead>
<tr>
<th>Licensed product</th>
<th>Product code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC Subsystem Optimizer for DB2</td>
<td>T1A</td>
</tr>
<tr>
<td>BMC Subsystem Optimizer for IMS</td>
<td>T1B</td>
</tr>
<tr>
<td>BMC Subsystem Optimizer for MQ</td>
<td>T1C</td>
</tr>
</tbody>
</table>

- BMC recommends that you establish a Workload Manager (WLM) service policy for Subzero servers. Subzero WLM classification uses the following parameters to define the WLM service policy:

  - Subsystem (BMCI)
  - Subsystem Name (SUBZERO)
  - Transaction Class (ONLINE)
  - Transaction Name (CLIENT)

  These parameters are generic, and not all of them are required; you can establish the service policy by specifying only the Subsystem and Subsystem Name.
parameters. However, the Transaction Class and Transaction Name parameters can be useful for WLM performance monitoring and reporting.

Subzero servers provide services to multiple client address spaces (CICS regions) on an LPAR. As such, the WLM service policy should place Subzero servers in a WLM service class that is the same or higher than the client address spaces that servers are servicing.

If you do not establish a WLM service policy for Subzero, in-house WLM configurations might force the use of a default policy for Subzero servers. The default service class is usually assigned a low performance priority. Using the default policy might result in poor Subzero performance and extended transaction response times.

Message BMCBRD0012I, in the Subzero BRDSVLOG JES output data set, indicates the WLM service class that is assigned to the Subzero address space.

- Subzero version 3.0.00 is not backward compatible with earlier versions of Subzero. You must specify a Subzero Product Options XCF Group Name that is different than any Subzero version 1 or Subzero version 2 XCF Group Name already in use.

**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](http://www.bmc.com/support).

**Product documentation**

From the Support Central website ([http://www.bmc.com/support](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](http://www.bmc.com/available/documentation-center.html) or, for secured documentation sets, [http://www.bmc.com/available/documentation-center-secure.html](http://www.bmc.com/available/documentation-center-secure.html))

- 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.