BMC Software is releasing version 5.6.00 of the EXTENDED BUFFER MANAGER (XBM) product and its associated SNAPSHOT UPGRADE FEATURE (SUF) technology.

**NOTE**
Before you begin installation, BMC recommends that you check the Customer Support website at [http://www.bmc.com/support_home](http://www.bmc.com/support_home) 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 and resolved problems:

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What’s new

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

Support for multiple XBM versions in a parallel sysplex environment

XBM version 5.6.00 supports multiple versions of XBM in one coupling facility (CF) group in a parallel sysplex environment. Previously, all XBM subsystems in a CF group had to use the same product version. This change facilitates upgrading to new versions of XBM. You can phase in new versions of the XBM subsystem instead of converting all XBM subsystems at once.

NOTE

If you want to use XBM 5.5.00 in the same environment as 5.6.00, you must download and apply PTF BPE0283 to XBM 5.5.00. The PTF is available on eFix Distribution Services. For more information about downloading maintenance from eFix, see the installation guide.

Support for IBM Extended Address Volumes (EAVs)

XBM now supports IBM® EAV (Extended Address Volumes) storage.

Support for identifying applied PTFs

XBM now provides a way to determine which PTFs have been applied to the product. XBM issues message BMC73165I to the XBM SYSPRINT during startup. This message lists all applied PTFs.
SPE changes

XBM version 5.6.00 incorporates a small programming enhancement (SPE) that was released for version 5.5.00. That SPE provides the following enhancements:

- XBM now provides Storage Systems Integration (SSI) options that you can specify at startup (xbmxinit), or through a console command, if you want to override particular hardware device settings. These commands include:
  - DISPLAY SETTINGS
  - SET DATAMOVER
  - SET ENQWAIT
  - SET EXTALLOC
  - SET MAXTASKS
  - SET MAXVOLS
  - SET NOTIFYWHENCOMPLETE
  - SET OUTDYNAM
  - SET VOLS

  For more information about these options, see the EXTENDED BUFFER MANAGER and SNAPSHOT UPGRADE FEATURE User Guide.

- XBM sometimes generated potentially misleading messages when stopping or starting a component or displaying status. The messages made it difficult to determine whether an entire component or only particular features of that component were affected (for example, the I/O caching features versus the snapshot processing features).

  This problem no longer occurs. XBM issues messages BMC73164I and BMC73055I only when they accurately describe the status of the component within the user environment.

- The SSI component of XBM provides an interface between the BMC snapshot-enabled utilities and hardware devices during Instant Snapshot processing. Hardware devices sometimes return vendor-specific messages about operations and errors to the SSI component. XBM can now pass these messages back to the BMC snapshot-enabled utility so that the utility can display them.

- To improve snapshot performance, XBM uses READ TRACK DATA when the following conditions exist:
  - XBM is running under ESAME.
  - The hardware device supports using READ TRACK DATA.
  - The number of records to be read is at least one track’s worth.
XBM now features improved processing for high-priority commands (such as DISPLAY or STOP) and requests from an ISPF XBM monitor session. This enhancement ensures that higher-priority requests are processed in a timely fashion.

XBM includes new tracing features to facilitate problem diagnosis and resolution. BMC Customer Support might ask you to run these new traces if you encounter an issue and need assistance. The new trace commands are:

- PRINT DTRACE
- PRINT ETRACE
- SET PRINTTRACE
- SET SHUTDOWNTRACE
- SET ABENDTRACE

For more information about these commands, see the EXTENDED BUFFER MANAGER and SNAPSHOT UPGRADE FEATURE User Guide.

XBM can now access data buffers for reads from DASD in memory that resides above the 32-bit boundary. Consequently, XBM and the BMC snapshot-enabled utilities are no longer bound by the 2-GB address limit for hardware snapshots. Also, the ability to retain larger amounts of data in memory accelerates processing time.

Corrected problems

XBM uses the QMnnnnn format to identify defect and request for enhancement (RFE) tracking IDs and xxxnnnn to identify program temporary fixes (PTFs).

In this release of XBM, the following enhancements or corrections have been implemented:

<table>
<thead>
<tr>
<th>Tracking ID</th>
<th>PTF</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>QM000544759</td>
<td>BPE0283</td>
<td>Enhancement: XBM now supports using multiple versions of XBM in the same coupling facility (CF) group in a parallel sysplex environment. To use XBM 5.5.00 and XBM 5.6.00 in the same environment, you must apply BPE0283 to XBM 5.5.00.</td>
</tr>
<tr>
<td>QM001514827</td>
<td>BPE0218</td>
<td>XBM could abend during initialization if hardware devices were not available. XBM now checks during initialization to ensure that devices are available.</td>
</tr>
<tr>
<td>QM001519423</td>
<td>BPE0227</td>
<td>XBM released write-to-operator (WTO) messages with invalid 1-byte console IDs on systems with z/OS® version 1.7 or later if you shut down the system with the MVS® STOP or MODIFY command. XBM now releases the WTO messages correctly.</td>
</tr>
<tr>
<td>QM001520858</td>
<td>BPE0234</td>
<td>SUF could experience an SVC dump with snapshot reason code 2116 (CF cache full). This problem no longer occurs.</td>
</tr>
</tbody>
</table>

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### Corrected problems

<table>
<thead>
<tr>
<th>Tracking ID</th>
<th>PTF</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>QM001526781</td>
<td>BPE0241</td>
<td>After a system IPL, excessive IOS000I messages were sent to the console when the first XBM subsystem was started. This problem no longer occurs.</td>
</tr>
</tbody>
</table>
| QM001536931     | BPE0254 | If you used XBM or SUF with the REORG PLUS for DB2® product to perform an online reorg, the utility job could fail and generate the following message:  
  BMC50276E, XBM 'CHECK' ERROR.  RC=12, REASON=2068,  
  DSN='dataSetName'  
  This failure occurred after XBM or SUF issued reason code 2068 to the utility due to an internal error. This problem no longer occurs. |
| QM001538389     | BPE0258 | XBM could encounter an 0C4 abend after the PTF for issue QM001519423 was applied. This problem no longer occurs.                                                                                           |
| QM001547030     | BPE0276 | Enhancement: XBM now supports the NOTIFYWHENCOMPLETE option when taking a snapshot with EMC hardware devices. This option specifies that EMC devices issue a message when the copy completes. For more information about this option, see the EXTENDED BUFFER MANAGER and SNAPSHOT UPGRADE FEATURE User Guide. |
| QM001555786     | BPE0277 | Enhancement: The Storage Systems Integration (SSI) component of XBM now supports EMC TimeFinder clone devices for hardware snapshots. XBM does not synchronize EMC TimeFinder clone or clone emulation devices during registration. If you attempt to use these devices without manually synchronizing them, unexpected results might occur. You must manually synchronize the clone devices before attempting to use them in hardware snapshots. |
| QM001559189     | BPE0281 | If the following conditions existed, XBM could fail and cause IMS™ region failures:  
  - XBM was processing snapshots of IMS data.  
  - You applied either of the following IBM IMS PTFs to the system:  
    - PTF UK36322 (IMS 9.1)  
    - PTF UK35721 (IMS 10.1)  
  After the IMS maintenance was applied, the DLI job might receive message BMC73659E. Then, XBM would issue an SVC dump. If you started XBM before IMS, the IMS region abended with the message BMC9783.  
  This problem no longer occurs. |
| QM001559293     | BPE0282 | XBM for VSAM encountered security checking issues and generated the following message: BMC73114E XBM for VSAM has detected an inconsistency during security checking. Changes to security checking prevent this problem from occurring. |
| QM001569057     |       | If the XBM snapshot component encountered repeated abends (as caused by an overlay), it might not disable itself and could deplete the common storage area (CSA). XBM now disables this component if a second abend occurs within a given time period. |
**Known issues**

During installation, you have the option to include the XBM authorization modules in the HLQ.BMCP$WD library. When you choose this option, the started task for XBM should include a BMCP$WD statement to specify the location of the XBM authorization modules. However, the Installation System does not currently include the BMCP$WD statement in the started task that it generates.

You must manually add the BMCP$WD statement to the started task for XBM to authorize its components correctly.

The following figure shows an example of the started task for XBM.

```plaintext
//XBM PROC CONFIG='*',MS=,GRP=XBMGRP=,SYS=,XSSI=
//******************************************************************************
//* COPYRIGHT 1993 - 2009 BMC SOFTWARE                                         *
//* AS AN UNPUBLISHED WORK.                                                   *
//*******************************************************************************
//XBM EXEC PGM=XBMXMAIN,REGION=0M,TIME=1440,
// PARM=('CONFIG=&CONFIG MS=&MS GROUP=&GRP ',
// ' XBMGROUP=&XBMGRP SYS=&SYS SSI=&XSSI')
//******************************************************************************
//STEPLIB DD DISP=SHR,DSN=hlq.XBMLINK (xbm/Solution loadlib)
// DD DISP=SHR,DSN=hlq.BBLINK (BMC Security modules)
//BMCP$WD DD DISP=SHR,DSN=securityLibraryName (if used for auth)
//SYSPRINT DD SYSOUT=*,DCB=RECFM=VA
//XBMXINIT DD DUMMY *** XBM.INITIALIZATION.COMMAND.FILE ***
//PROIGN DD DUMMY
//XBMXTASK DD DISP=SHR,DSN=yourlib.SVAA(OR IXFP).SIBLINK
// DD DISP=SHR,DSN=yourlib.SVAA(OR IXFP).SIBLOAD
// DD DISP=SHR,DSN=yourlib.SVAA(OR IXFP).STKLOAD
//XBMREP01 DD DISP=SHR,DSN=hlq.VSAM.XBMREP01
//XBMREP02 DD DISP=SHR,DSN=hlq.VSAM.XBMREP02
```

For more information about the started task, see the *EXTENDED BUFFER MANAGER and SNAPSHOT UPGRADE FEATURE User Guide*.

**Installation**

Installation changes

The Installation System includes the following changes:

- The FTP site address and URL for Electronic Software Distribution (ESD) changed as of November 19, 2008. If you obtain maintenance or base installation libraries from the ESD site, ensure that you make the necessary changes in your download processes:
  
  — If you use version 2.2.45 or later of the Installation System to download sample JCL and base installation libraries, the new version includes the following changes:
    
    - The new FTP site address is epddownload.bmc.com.

  — If you use an earlier version of the Installation System to obtain maintenance from the ESD site, you might need to change your download processes and existing JCL. Ensure that any references to filedownload.bmc.com are changed to epddownload.bmc.com.

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**NOTE**

The user ID and password that you use to access the ESD FTP site are not affected by any of these changes.
The Installation System now offers merged installation and non-merged installation for some products (including XBM):

— Merged installation (available in earlier versions) places product libraries in three collections of data sets. The data set names are prefixed with BB, DB, or XX (such as BBLINK, DBLINK, or XXLINK).

— The new non-merged installation places the product libraries in product-specific data sets that are prefixed by the product code (for example, ACPLINK). For BMC products for DB2, a non-merged installation requires the use of runtime enablement.

Most BMC products for DB2 use a common, shared password library, BMCPSWD.

To avoid updating the SMP/E target libraries outside SMP/E, the BMC license password tables are in the BMCPSWD library, instead of in DBLINK or BBLINK. If concatenated into your STEPLIB, the BMCPSWD library needs APF authorization unless you use runtime enablement (or copy the data to your own runtime data sets).

### Version and FMID information

This release of XBM uses the following versions of the Installation System and installation media:

- version 2.2.50 or later of the Installation System
- version 2.2.50 or later of the B-series 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>Product</th>
<th>Version</th>
<th>FMID</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTENDED BUFFER MANAGER (XBM) and SNAPSHOT UPGRADE FEATURE (SUF)</td>
<td>5.6.00</td>
<td>ZXBM560</td>
</tr>
<tr>
<td>BMC Password Security System</td>
<td>3.2.00</td>
<td>BBAPW32</td>
</tr>
<tr>
<td>SAS/C Resident Library</td>
<td>7.1.00</td>
<td>ASAR71C</td>
</tr>
</tbody>
</table>
Applying passwords

The XBM components that you will authorize and the passwords that you need depend on which features you are implementing. The following table describes how to authorize different features of XBM:

<table>
<thead>
<tr>
<th>Features implemented</th>
<th>Type of password needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot features only</td>
<td>If you received XBM or SUF as part of a solution, use the solution-level password to authorize the XBM components. For more information, see the installation guide for your solution.</td>
</tr>
<tr>
<td></td>
<td>If you received XBM or SUF as a stand-alone product, use a SUF for DB2 (XBS), SUF for IMS (XBU), or SUF for VSAM (XBA) password.</td>
</tr>
<tr>
<td>hardware monitoring features only</td>
<td>Use the solution-level password to authorize the SSI component of XBM.</td>
</tr>
<tr>
<td>all features (including I/O caching, snapshot, and monitoring features)</td>
<td>Use an XBM for DB2 (XBM) or XBM for IMS (XBI) password.</td>
</tr>
</tbody>
</table>

**NOTE**
The SSI component is automatically authorized when you authorize the DB2, IMS, or VSAM component. The Parallel Sysplex System (PSS) component is automatically authorized when you authorize the DB2 or IMS component.

For information about BMC product authorization and how to obtain a password, see the *EXTENDED BUFFER MANAGER and SNAPSHOT UPGRADE FEATURE Installation Guide*.

Maintenance

**NOTE**
Before you apply maintenance, ensure that you have run the $B90SMPE job (Express installation) or the $B76APLY job (Custom installation). These jobs set up the SMP/E environment for XBM.

After installation, you can download any additional maintenance for XBM by using eFix PTF Distribution Services (eFix). To access eFix and download PTFs, go to [http://www.bmc.com/support/efix.cgi](http://www.bmc.com/support/efix.cgi).
Support status

BMC supports the following versions of XBM and SUF:

<table>
<thead>
<tr>
<th>Version</th>
<th>Level of support</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.6.00</td>
<td>full</td>
</tr>
<tr>
<td>5.5.00</td>
<td>full</td>
</tr>
<tr>
<td>5.4.00</td>
<td>limited</td>
</tr>
<tr>
<td>5.3.00</td>
<td>none</td>
</tr>
</tbody>
</table>

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

Product documentation

BMC provides a documentation CD in product shipments and offers a link to the CD image on the EPD page of the Customer Support website. Individual product documents (books and notices) are also available on the website. You can order hardcopy documentation from your BMC sales representative or from the website. You can also subscribe to proactive alerts to receive e-mail messages when notices are issued or updated.

Customer support

If you have problems with or questions about a BMC product, see the Customer Support website at http://www.bmc.com/support_home. 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 800 537 1813. Outside the United States or Canada, contact your local BMC office or agent.