BMC is releasing version 11.2.00 of the APPTUNE for DB2 product.

APPTUNE for DB2 is available as a stand-alone product and as a component of the following solutions:

- BMC Performance for DB2 SQL
- SQL Performance for DB2

Note
Before you begin installation, BMC recommends that you check the Support Central website at 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:

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What's new

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

End of support for IBM DB2 Version 9 systems

Starting with this release, APPTUNE for DB2 does not support Version 9 of the IBM DB2 database management system. Earlier releases continue to support Version 9.

MainView APPTUNE

MainView APPTUNE provides a comprehensive, cost-effective tool for DB2 application performance and resource analysis. MainView APPTUNE gathers and displays SQL performance data in either an ISPF or a web browser interface.

MainView APPTUNE uses the MainView Explorer platform to display in a web browser the data that APPTUNE collects. Use MainView APPTUNE to access and display APPTUNE data in the MainView Explorer graphical user interface (GUI).

MainView APPTUNE displays the state of applications’ overall health in easy-to-read color graph format.
**Note**

This feature requires version 11.2 of APPTUNE for DB2. The feature also requires you to activate:

- MainView coordinating address space (CAS)
- MainView Explorer host server
- MainView APPTUNE product address space (PAS)

*If you configured MainView as part of the installation process, the locations of the required data sets are as follows:*

- The JCL for PAS is in member AMVPAS of your UBBSAMP library.
- The AMVDOMC CLIST is in your SBBCLIB library.

*If you bypassed the MainView configuration step, you must perform the following steps:*

- **AM0DPROC**
  1. Manually copy member AM0DPROC from BBSAMP into your PROCLIB. Use a name of your choice.
  2. Edit AM0DPROC as described in the member.

- **ASQDOMC**
  1. Manually copy member ASQDOMC from BBSAMP into a CLIST library concatenated in the MAINVIEW CLIST.
  2. Rename the member as AMVDOMC.
  3. Edit AMVDOMC as described in the member.

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**IBM DB2 Analytics Accelerator (DAA) support in APPTUNE for DB2**

APPTUNE now provides IBM DB2 Analytics Accelerator for z/OS (DAA) usage and modeling statistics.

New expands and zooms (included in all Workload Analysis tabular reports) let you identify statements that:

- Used the accelerator
- Could benefit from using the accelerator

The data displayed includes:
Accelerator activity metrics, such as:
- CPU and elapsed time in the accelerator
- Rows returned from the accelerator
- Error conditions (such as timeouts and failures)

Accelerator modeling metrics showing CPU and elapsed time that could be saved if the statement used the accelerator

**Note**
To view accelerator modeling data, you must set certain DB2 ZPARM keywords.

The **Workload Focus** option lets you zoom quickly to statements with accelerator usage or modeling data.

**Enhancements to APPTUNE filter options**

APPTUNE filters provide the following new capabilities:
- Assignment of default application groups (also used by MainView APPTUNE)
- Ability to monitor only dynamic or only static SQL executions
- New collection key for the client correlation token
- Separate exception thresholds at the warning and critical levels
- Separate thresholds for efficient statement processing
- Ability to capture host variable values for negative SQL codes without also generating exceptions

**Efficient SQL statement processing**

This processing (formerly known as *Efficiency Filtering*) uses new thresholds in the APPTUNE filter to determine which static statements are deemed efficient, based on performance characteristics at the beginning of each APPTUNE interval.

For statements identified as efficient, APPTUNE continues to count executions and monitor for negative SQL codes if requested; however, APPTUNE extrapolates performance metrics based on monitored executions (rather than continuing to monitor each execution). This processing is in effect by default in APPTUNE filters that BMC provides, and in any new filter specifications. For filters migrated from an earlier release that did not specify Efficiency Filtering, this processing is not in effect.
Enhanced client reporting

This release lets you view full end-user identification, transaction, and workstation names with longer values (a DB2 Version 11 feature). For exceptions and errors, APPTUNE reports the client accounting string.

Conditional header display in workload reports

To maximize the space available for workload data, header lines at the top of workload reports are conditionally displayed, depending on the filters in effect for the report. Header lines for filters that are not in effect (that would display as blank values) are not displayed.

Terse operation

The TERSE command suppresses some header lines to maximizes the amount of data that APPTUNE online reports display.

This release lets you use the TERSE command to suppress the header lines that describe the zoom and expand codes. TERSE is a toggle command. Issue the command again to display the header lines.

Enhanced host variable collection

This release provides broader coverage for capturing host variable and parameter marker values, particularly for distributed applications.

APPTUNE identifies the source for these values as follows:

- **APP**—if APPTUNE is able to capture the values from the allied address space
- **DB2**—if APPTUNE captures the values from the DB2 DBM1 address space (typically the case for distributed applications)

APPTUNE reports the numeric values corresponding to the data types. The source might affect the reported data type.

Using APPTUNE filter settings, you can now report host variables for negative SQL codes without generating an exception.
Enhancements to Explain

This release includes the following changes to the Common Explain component:

- The expert rules have been upgraded:
  — Obsolete rules have been removed.
  — The remaining rules are consistent with updates to the DB2 optimizer.

- The Explain component now reports SQL statements' eligibility to run on an IBM DB2 Analytics Accelerator (DAA):
  — The Explain component displays rules containing details relating to query acceleration.
  — If a query is accelerated, Explain displays the accelerator name.
  — If acceleration modeling is in effect, Explain indicates whether a statement is a candidate for acceleration, and if not, why not.

- In the Table, Index, and Column sections of the Explain report, the PSSREPA layout data set now includes a STATFDBK column.

In IBM DB2 Version 11, the optimizer provides feedback on missing or conflicting statistics. The Explain component creates a DSN_STAT_FEEDBACK table and displays optimizer recommendations in the table's REASON column. The new Workload Statistics Advisor component (included in the BMC Performance for DB2SQL solution) can exploit this data.

Performance Advisor Database (PADB) starter JCL dialog

You can use the PADB starter JCL dialog to customize JCL that is necessary to create and maintain the PADB. The dialog is available under the Administration option on the APPTUNE Main Menu.

Statement cache reporting

The statement cache reporting now includes static SQL statements and metrics.

Deprecation of DB2 status reporting

Version 11.2 of APPTUNE for DB2 still supports the DB2 Status option (option 2 on the APPTUNE Main Menu). BMC plans to make this option unavailable in future releases.
Deprecation of Exception-only roll-ups

Version 11.2 of APPTUNE for DB2 still supports Exception-only roll-up processing as an APPTUNE filter option. BMC plans to make this option unavailable in future releases.

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*.

- 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.

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

- Revision bars in the documentation denote differences from the previous edition.

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

**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](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.

APPTUNE 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.
**FMID and version information**

This release of APPTUNE 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++ V71</td>
<td>7.1</td>
</tr>
<tr>
<td>BBASC70</td>
<td>SAS_C V70B</td>
<td>7.0</td>
</tr>
<tr>
<td>LOSZ120</td>
<td>RTCS C Library</td>
<td>2.0</td>
</tr>
<tr>
<td>ZAIN031</td>
<td>Install Execution Code</td>
<td>3.1</td>
</tr>
<tr>
<td>ZBMRI5E</td>
<td>ISR External Routines</td>
<td>1.5</td>
</tr>
<tr>
<td>ZBST100</td>
<td>BMC Support Tool</td>
<td>1.0</td>
</tr>
<tr>
<td>ZDASB20</td>
<td>DB2 Assist component</td>
<td>11.2</td>
</tr>
<tr>
<td>ZDBCIA0</td>
<td>DB2 Component Services</td>
<td>10.1</td>
</tr>
<tr>
<td>ZDIG190</td>
<td>Dignus C runtimes and c++ objects</td>
<td>1.9</td>
</tr>
<tr>
<td>ZDOMB20</td>
<td>Common Infrastructure component</td>
<td>11.2</td>
</tr>
<tr>
<td>ZIODB20</td>
<td>APPTUNE component</td>
<td>11.2</td>
</tr>
<tr>
<td>ZLGCIA10</td>
<td>DB2 Product Configuration</td>
<td>10.1</td>
</tr>
<tr>
<td>ZMREI10</td>
<td>Rules Engine &quot;&quot;c&quot;&quot; code</td>
<td>1.1</td>
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<tr>
<td>ZNGLA20</td>
<td>NGL Common Code</td>
<td>10.2</td>
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<td>RTCS Kernel</td>
<td>2.0</td>
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<td>ZPSSB20</td>
<td>SQL Explorer</td>
<td>11.2</td>
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<td>ZPWD330</td>
<td>BMC Password Security System</td>
<td>3.3</td>
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<tr>
<td>ZSCCB10</td>
<td>DB2 COMMON CODE</td>
<td>11.1</td>
</tr>
<tr>
<td>ZUSC540</td>
<td>UIM Common Services</td>
<td>5.4</td>
</tr>
</tbody>
</table>

The preceding table contains the FMIDs for APPTUNE 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](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](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.

**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 documentation sets, 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.