

MAINVIEW[®] for DB2 Customization Guide

**Component of
SmartDBA System Performance for DB2**

Version 7.2

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Before you contact BMC Software, have the following information available so that Customer Support can begin working on your problem immediately:

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 - product name
 - product version (release number)
 - license number and password (trial or permanent)
- operating system and environment information
 - machine type
 - operating system type, version, and service pack or other maintenance level such as PUT or PTF
 - system hardware configuration
 - serial numbers
 - related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
 - product error messages
 - messages from the operating system, such as `file system full`
 - messages from related software

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About This Book

This book contains procedures for customizing the MAINVIEW for DB2 product to your site's needs. The MAINVIEW for DB2 product is integrated with the basic MAINVIEW architecture that allows authorized users to interrogate any MVS, CICS, IMS, or DB2 subsystem in a VTAM network from a single terminal.

This book is intended for the system programmer who needs to know how to modify the basic MVDB2 product installation to include more functions or site-specific changes.

To install and customize MAINVIEW for DB2, follow the instructions in the

1. *OS/390 and z/OS Installer Guide* and *MAINVIEW Installation Requirements Guide* to load the product libraries.
2. *MAINVIEW Common Customization Guide* to tailor BBI-based functions for MAINVIEW for DB2.
3. *MAINVIEW for DB2 Customization Guide* to tailor MAINVIEW for DB2 to your site's requirements.

Note: You *must* customize the BBI subsystem prior to customizing MAINVIEW for DB2.

Throughout the body of this book, occurrences of MVDB2 refer to MAINVIEW for DB2 and MVDB2/DC refers to MAINVIEW for DB2 – Data Collector. The DMR acronym for the product is used occasionally in this book and in many online panels and messages.

How This Book Is Organized

This book is organized as follows:

- [Chapter 1, “Preparing for Customization” on page 1](#), contains release updates that must be considered before using the current release of the product.
- [“Navigating through the MAINVIEW for DB2 Installation Process” on page 13](#), contains road maps to assist you when you install the selectable components with MAINVIEW for DB2.
- [Chapter 3, “Customizing MAINVIEW for DB2 Functions” on page 23](#), contains the instructions for changing the basic product installation to suit your site's needs.
- [Chapter 4, “Implementing Product Security” on page 63](#), contains the instructions for allowing user access to MVDB2 product services.
- Appendixes begin on page [69](#), and they contain instructions for receiving help from Customer Support. It also contains tables describing the BBSAMP and BBPARM data set members and guidelines to estimate storage for Performance Reporter data.

An index is also included. A glossary of terms is included in the *Using MAINVIEW* book.

Conventions Used in This Book

The following syntax notation is used in this book. Do not type the special characters.

- Brackets [] enclose optional parameters or keywords.
- Braces { } enclose a list of parameters; one must be chosen.
- A vertical line | separates alternative options; one can be chosen.
- An underlined parameter is the default.
- AN ITEM IN CAPITAL LETTERS indicates exact characters; usage can be all uppercase or lowercase.
- Items in lowercase letters are values that you supply.

Recommended Reading

Before using this customization guide, the product must be installed as described in the *OS/390 and z/OS Installer Guide*. The *MAINVIEW Installation Requirements Guide* and *MAINVIEW Common Customization Guide* also should be used in conjunction with this customization guide.

To install the selectable components of MAINVIEW for DB2, see the *System and SQL Performance for DB2 Administrator Guide*, *System and SQL Performance for DB2 Customization Guide*, and *Administrative Products for DB2 Customization Guide*.

Related Reading

This book is included as part of the MAINVIEW library, which documents all your MAINVIEW products and the tasks associated with using these products.

Several books from the DB2 Performance products and DB2 Administration products libraries are also included to help you install the selectable components of MAINVIEW for DB2. These components are also used by other DB2 Performance products provided by BMC Software.

See the “About This Book” section of Volume 1 of the *MAINVIEW for DB2 User Guide* for more information on

- The MAINVIEW library
- The DB2 Performance products and DB2 Administration products libraries
- The MAINVIEW for DB2 Library
- Other recommended reading

Chapter 1. Preparing for Customization

This chapter discusses preparations for customization. It describes customization considerations, installation considerations, release and product compatibility, and update considerations for existing users moving from MAINVIEW for DB2 Release 7.1.0 to Release 7.2.0.

Customization Considerations

Release 7.2 of MAINVIEW for DB2 is packaged with BBI 2.6 and/or MVI 4.1. Release 7.2 is compatible with other products packaged with BBI 2.6.

MAINVIEW for DB2 is a group 3 MAINVIEW product. For a discussion of MAINVIEW product groups, see the *MAINVIEW Common Customization Guide* and the *MAINVIEW Administration Guide*.

MAINVIEW for DB2 now includes two selectable components that provide additional functionality: MAINVIEW for DB2 – Data Collector and CATALOG MANAGER for DB2 Browse. These components are described in [“MAINVIEW for DB2 Selectable Components” on page 5](#). Online customization options are available under OZI Customization for the selectable components as well as other DB2 products, in addition to MAINVIEW AutoCustomization.

[“Navigating through the MAINVIEW for DB2 Installation Process” on page 13](#) provides a roadmap for the installation and customization of MVDB2 with its selectable components. It also describes the changes made to AutoCustomization to activate the interfaces to these components. If you want to perform manual customization, a description of these changes is available in [“Defining the Connection to the MAINVIEW for DB2 – Data Collector” on page 26](#) and [“Defining the Connection to CATALOG MANAGER for DB2” on page 27](#).

Installation Considerations

While the base functions of MAINVIEW for DB2 are still installed and maintained with SMP/E, the selectable components are not. By using the Standard installation method you can install all the components of MAINVIEW for DB2 together. In this case, the base functions are installed into the usual MAINVIEW libraries, and the SMP/E zones are downloaded in a separate step. The selectable components are downloaded into separate libraries that might be shared with other BMC Software DB2 products. A Standard installation is the recommended method, because all components are immediately available for selection.

However, you can choose to install the base functions separately from the selectable components. Some of the reasons you might want to perform two separate installations are as follows:

- If you have existing MAINVIEW SMP/E zones with multiple products, you might want to perform an SMP/E upgrade installation of the MAINVIEW for DB2 base functions and perform a separate Standard installation of the selectable components.
- You might want to install the MAINVIEW for DB2 base functions now, and defer the installation of the selectable components until later.
- If other BMC Software DB2 products are licensed, a separate group might be responsible for installing and maintaining them in your company. In this case, the installation of the selectable components might need to be managed by a group different from the group responsible for MAINVIEW. The installation of the components should be coordinated with that of other related products, such as
 - the System Performance for DB2 solution and its other component products, Pool Advisor for DB2 and OPERTUNE[®] for DB2
 - the SQL Performance for DB2 solution and its component products, APPTUNE for DB2 and SQL Explorer for DB2
 - CATALOG MANAGER for DB2

Note: MAINVIEW for DB2 7.2.00 is only compatible with MAINVIEW for DB2 – Data Collector version 4.0.00 or later.

You must follow additional customization instructions if you perform two separate installations.

Selecting MAINVIEW for DB2 Components for Installation

The MAINVIEW for DB2 base functions are included in the M-series tape set with the other MAINVIEW products, while the selectable components are included in the C-series tape set with the other BMC Software DB2 products.

When you specify the M-series tapes in the installation panels, for either a Standard or an SMP/E installation, you can select the product entry for MAINVIEW for DB2:

MAINVIEW[®] for DB2[®]

Note: MAINVIEW for DB2 requires MAINVIEW Infrastructure 4.1. If you plan an SMP/E upgrade, you must also upgrade to MVI 4.1 if necessary. This upgrade requires that existing CASs also be upgraded, and that PAS history data sets be reallocated.

When you specify the C-Series tapes in the installation panels (only available for a Standard installation), you can select the following new entry and one or both of the MAINVIEW for DB2 selectable components:

MAINVIEW for DB2 Selectable Components

- MAINVIEW for DB2 – Data Collector
(the data collector component shared with other DB2 Performance products)
- CATALOG MANAGER for DB2 (Browse Only)
(the CATALOG MANAGER product, but only enabled for browse access from MAINVIEW for DB2, with no CATALOG MANAGER password required)

Note: If you own the full CATALOG MANAGER product, you can use your installed version or choose the separate product entry for CATALOG MANAGER for DB2. Do not select the Browse option.

Installing the Components Together

It is only possible to install the components together with a Standard installation. You must specify both the M-series and C-series tapes.

When you have completed the data set downloads, you are presented with two online customization paths. MAINVIEW AutoCustomization sets up the MAINVIEW environment and includes new steps to link the base functions with the new components. OZI Customization provides the updates for the selectable components. You are asked to specify a password in both paths. The same password should be used in both places, either the MAINVIEW for DB2 password, or the System Performance for DB2 password.

Installing the Components Separately

The following section describes how to perform a MAINVIEW for DB2 base function installation, either Standard or SMP/E, optionally followed by a Standard installation of the non-SMP/E components.

The installation process requires the following steps:

1. Use the M-series tapes to perform the MAINVIEW for DB2 base function installation.
2. Perform MAINVIEW AutoCustomization. If you plan to install the selectable (non-SMP/E) components soon, reply YES in the new steps that specify the integration information. Specify dummy names as placeholders, or the actual names that you intend to use, for the MVDB2/DC library and CATALOG MANAGER data set HLQ parameters (which are not yet established). Specify default values for any other items.
3. Either immediately or later, use the C-series tapes to perform a Standard installation of the non-SMP/E components. This installation should be performed as a new installation run with a new OZI profile, so that a complete record of the two installations is available for future reference.

In the list of products, you will see the entry for **MAINVIEW for DB2 Selectable Components**. Select this entry, and one or both of the individual component entries under it:

- MAINVIEW for DB2 – Data Collector
- CATALOG MANAGER for DB2 (Browse Only)

4. Perform the OZI customization steps for the selected components.
5. Perform manual customization updates to some of the MAINVIEW for DB2 members to specify the values that you did not have during AutoCustomization. If you have already entered the correct values, manual customization is not necessary. These updates are described in [“Defining the Connection to the MAINVIEW for DB2 – Data Collector” on page 26](#) and [“Defining the Connection to CATALOG MANAGER for DB2” on page 27](#).

Installing from Electronic Software Distribution

An alternative might be to use Electronic Software Distribution (ESD) to download the required product libraries directly, instead of placing an order and waiting for a shipment. Using ESD, you can install all the components together with a Standard installation, or you can perform the steps in [“Installing the Components Separately” on page 4](#) with the following exceptions:

1. In Step 1, instead of using tapes, select **Electronic** and **SMP/E** on the Select Distribution and Installation Methods panel. Then select **MAINVIEW for DB2** and **MAINVIEW Infrastructure** to begin the process of downloading the libraries.
2. In Step 3, instead of using tapes, select **Electronic** and **Standard** on the Select Distribution and Installation Methods panel. Then select **MAINVIEW for DB2 Selectable Components** and one or both of the non-SMP/E components.

Note: *Do not* select the MAINVIEW for DB2 product entry or MAINVIEW Infrastructure, because they have already been installed with SMP/E.

MAINVIEW for DB2 Selectable Components

The two new selectable components are optional and can be installed when the additional functionality is desired. See the *MAINVIEW for DB2 Release Notes* for more information about the features provided.

For more information about these components, see [“MAINVIEW for DB2 – Data Collector”](#) and [“CATALOG MANAGER for DB2 \(Browse Only\)”](#) on page 7.

MAINVIEW for DB2 – Data Collector

This new component provides

- Additional trace data collection options for both online and batch functions, as described in [Table 1](#).
- A new batch reporting program.
- Hyperlink access to reports from MAINVIEW for DB2 – Data Collector or the other DB2 Performance products that run in the same environment. This function includes access to the EXPLAIN feature shared by these products.

The trace records defined for collection in the MAINVIEW for DB2 – Data Collector are

Table 1. Data Classes

Data Class	IFCIDs
DB2ACCT	DB2 accounting records. DB2 IFCIDs: <ul style="list-style-type: none"> • 3—Accounting • 239—Accounting DBRM/Package Overflow
DB2SYS	DB2 system records. DB2 IFCIDs: <ul style="list-style-type: none"> • 1—System Statistics • 2—Database Statistics • 107—Page Set OPEN/CLOSE
DB2PERF	DB2 Performance Records (all other DB2 IFCIDs). MVDB2/DC IFCIDs: <ul style="list-style-type: none"> • *23/24/25—Utility Processing • 90—Text of DB2 Command • 125—RID List Processing • 140—Audit Authorization Failures • *225—Storage Summary
DB2AUDIT	DB2 audit records. DB2 IFCIDs: <ul style="list-style-type: none"> • 140—Audit Authorization Failures • *141—Audit GRANTs and REVOKEs • *142—Audited Object DDL • *143—Audited Object First Write Attempt • *144—Audited Object First Read Attempt • *145—Audited Object DML at BIND

Table 1. Data Classes (Continued)

Data Class	IFCIDs
MVDBACC	MAINVIEW for DB2 – Data Collector Accounting Summary Records. (BMC IFCIDs 350–352)
<p>Note: IFCIDs that are preceded by an asterisk (*) are disabled by default. They can be optionally used for batch reporting. See the <i>MAINVIEW for DB2 Performance Reporter User Guide</i> for instructions on how to activate additional IFCIDs when you want to produce a report that requires them.</p>	

IFCIDs that are not preceded by an asterisk (*) in [Table 1](#) are autostarted for collection, but administration options in the Data Collector allow you to specify that they should be discarded and not written to trace data sets. The data classes can be defined to output groups for logging to different trace data sets. For more information, see the *System and SQL Performance for DB2 Administrator Guide*.

Note: In general, these data classes should be assigned to the same output group (this option is the default). If changes are made, DB2ACCT and MVDBACC should be kept in the same output group.

The IFCIDs are used as follows:

- IFCIDs 90, 107, 125 and 140 provide data for system event trace views in MVDB2.
- IFCIDs 1, 2, 3, 239 and optionally the audit IFCIDs 140-145, the utility IFCIDs 23-25, and the storage IFCID 225 can be used to provide input to batch reporting instead of SMF.
- IFCIDs 3, 239, 350-352 are used to provide thread interval history views in MVDB2. Since the Data Collector trace data sets are compressed, you can usually access a longer time period than from the MVDB2 THRDHIST trace logs.

To install this component, see the *System and SQL Performance for DB2 Customization Guide*. These installation procedures are common to the Pool Advisor for DB2, APPTUNE™ for DB2, and SQL Explorer™ for DB2 products, and the System Performance for DB2 solution. This component and the other products run in a separate address space called the Data Collector. MAINVIEW for DB2 is only compatible with Release 4.0.00 or higher. The password that you have included in the MAINVIEW BMCPSWD data set (BDSTBL3x for MAINVIEW for DB2, or SPDTBL3x for the System Performance for DB2 solution) must also be included in the Data Collector load library.

See [“Defining the Connection to the MAINVIEW for DB2 – Data Collector”](#) on page 26 for more information about defining the connection from MAINVIEW for DB2 to the Data Collector.

See “Data Collector Reporting Facilities” in the *MAINVIEW for DB2 Performance Reporter User Guide* for information on using the new batch reporting program, DOMBRPT1.

CATALOG MANAGER for DB2 (Browse Only)

This component provides browse access to DB2 catalog tables from a MAINVIEW user session. This access is provided through hyperlinks, either from easy menus to lists of objects, or from data views that provide direct access to an object on that view. All catalog tables are supported.

To install this component, see the *Administrative Products for DB2 Customization Guide*. No CATALOG MANAGER password is required for browse access from MAINVIEW for DB2. If you own CATALOG MANAGER, you can connect MAINVIEW for DB2 to your installed copy. However, full access to remote DB2s is only enabled with CATALOG MANAGER for DB2 7.2.01. For access to remote DB2s, you must enable DDF connections during the CATALOG MANAGER installation.

See [“Defining the Connection to CATALOG MANAGER for DB2”](#) on page 27 for more information about defining the connection from MAINVIEW for DB2 to CATALOG MANAGER.

Product Compatibility

This section discusses product compatibility with previous releases of MAINVIEW for DB2 and with RxD2.

Cross-System Compatibility with Previous Releases

All windows-mode and full-screen-mode MAINVIEW for DB2 functions are fully available for multiple-system support communication between Release 7.2 and earlier releases. Compatibility is handled automatically.

Downward Compatibility

MVDB2 7.2 can process trace log data sets (TLDSs) created on MVDB2 7.2, 7.1, 6.1, or 5.1. The one restriction is that the release level of the target DB2 in the Trace History application cannot be lower than the DB2 release of the TLDS. That is, a MVDB2 7.2 BBI-SS PAS that only monitors DB2 6.1 cannot read a DB2 7.1 TLDS. A BBI-SS PAS that monitors DB2 7.1 can read TLDSs for DB2 7.1, 6.1, and 5.1.

Upward Compatibility

An MVDB2 7.1 terminal session can access all MVDB2 7.2 trace functions (including history traces) through a cross-system connection to an MVDB2 7.2 BBI-SS PAS. However, an MVDB2 7.1 terminal session cannot process an MVDB2 7.2 trace log data set within an MVDB2 7.1 BBI-SS PAS.

Compatibility with the Data Collector Component

MVDB2 7.2.00 is compatible with a Data Collector at the 4.0.00 or 4.1.00 release level. Some documented features are only available with Release 4.1.00. (Refer to the *MAINVIEW for DB2 Release Notes* for Version 7.2.00, updated November 2003.)

Compatibility with RxD2

MVDB2 7.2 is compatible with RxD2/FlexTools 2.1. Hyperlinks are invoked through expand buttons in MAINVIEW for DB2 full-screen displays to provide quick access to corresponding RxD2 displays or functions, such as EXPLAIN for an SQL statement. The target DB2 is passed from MVDB2 to RxD2.

CAF Compatibility

The BBI-SS PAS can connect to both DB2 6.1 and DB2 7.1 subsystems if the proper CAF compatibility PTFs are available from IBM and applied to DB2 6.1. See [“DB2 Target System Considerations” on page 24](#) for more information.

Update Considerations

This section describes update considerations for existing users moving from MAINVIEW for DB2 Release 7.1 to Release 7.2. *AutoCustomization is recommended.*

Consolidating Monitor Exceptions and Alarms

If MAINVIEW AutoOPERATOR is not used to post MAINVIEW for DB2 monitor exception messages as alerts, you can now request that the alerts be created automatically by MAINVIEW for DB2 with a new ALERTQ option in BBPARM member BBIISP00. You can view monitor exceptions and user-defined alarm messages together in the consolidated MAINVIEW Alert views. See [Chapter 3, “Customizing MAINVIEW for DB2 Functions”](#) for more information about customization.

Enabling the Selectable Components

If the two selectable components have not been installed at the same time as the MVDB2 base functions, or the AutoCustomization steps were not executed, see [“Defining the Connection to the MAINVIEW for DB2 – Data Collector” on page 26](#) and [“Defining the Connection to CATALOG MANAGER for DB2” on page 27](#) for manual customization instructions.

Note: The DOMC CLIST that is used for hyperlinking to the Report Manager has been updated to include a new data set that is required to support the revised common Explain feature. This change is included in PUT0302B. The common Explain will not function correctly without this modification.

Allocating a Sufficient Terminal Session Region Size

MAINVIEW for DB2 requires a minimum terminal session or user address space region size of 4MB (4096K). It is recommended that you set the region size to 6MB if you anticipate running MAINVIEW for DB2 while doing other work from an ISPF split-screen. Also, a 6MB region size is recommended if you anticipate transferring between multiple products while MAINVIEW for DB2 is active.

Using an External Security Manager (ESM)

External security managers (ESMs) grant access to MAINVIEW products through the MVS security authorization facility (SAF) interface. The SAF interface provides access to RACF, CA-TOP SECRET, or CA-ACF2 ESMs. Refer to *Implementing Security for MAINVIEW Products* for instructions to create resource definitions that can be used by your site’s ESM.

Implementing EXCP or VTAM Terminal Sessions

BMC Software uses MAINVIEW Alternate Access to provide session communication for all existing and future MAINVIEW products. This facility establishes communication between MAINVIEW products and EXCP or VTAM through ISPF without requiring an active TSO session.

Authorizing ISPF Split-Screen Support

MAINVIEW for DB2 must be able to support multiple occurrences of MAINVIEW windows. As an example, transfers between MAINVIEW products are done with an ISPF split-screen. TSF authorization must be added to provide ISPF split-screen support.

Errors may result without adequate split-screen support. Error messages usually occur after an attempt to transfer between products or to divide the screen with the ISPF SPLIT command. Use the following messages as diagnostic aids to resolve problems that occur as a result of inadequate split-screen support.

- **PS2010E - INSUFFICIENT STORAGE TO RUN THE SESSION**

The terminal session region size is too small and cannot support an adequate number of transfer sessions.

If you are a TSO user, you must log off TSO and then log on with a larger region size. Your site's TSO administrator may have to give you authorization to increase your region size.

If you are a VTAM or EXCP terminal user, change the REGION= parameter in the JCL to 4096K or larger.

- **TS0023E - NOT SUPPORTED IN CURRENT ENVIRONMENT**

BBILOAD DD statements specify data sets that are not APF-authorized. If you are able to run MAINVIEW products but receive this message during a product transfer, BBILOAD specifies different data sets than does BBILINK.

Add the unauthorized data sets to the APF list and restart the terminal session. You can add data sets to the APF list with MAINVIEW SYSPROG Services or MAINVIEW for OS390's SYSPROG APF service.

- **TS0025E - PMGLAUTH REQUIRED FOR TRANSFER SUPPORT**

PMGLAUTH program is not in the TSO-authorized commands list nor is it in a LINKLIST or STEPLIB data set.

Add PMGLAUTH to the AUTHTSF list in SYS1.PARMLIB(IKJTSoxx) and log on again. You can add PMGLAUTH to the AUTHTSF list with MAINVIEW SYSPROG Services or MAINVIEW for OS390's SYSPROG AUTHTSO command.

If PMGLAUTH is in the TSF list and you still receive message TS0025E, type PMGLAUTH from a TSO READY prompt and check to see if the message COMMAND NOT FOUND appears. The appearance of this message means that PMGLAUTH is not in a LINKLIST or STEPLIB data set. Do one of the following:

- Concatenate BBLINK to the STEPLIB in your logon procedure.
- Copy PMGLAUTH to an existing LINKLIST data set.
- Add BBLINK to your system LINKLIST.

Performance Reporter Considerations

This section describes the migration considerations for the Performance Reporter component for existing users who are moving from an earlier release to Release 7.2.

If you decide to install the MVDB2/DC component, there are two new batch features available. You can use the Data Collector to optionally log data to use as batch input instead of SMF data, and there is a new reporting facility available. For more information about these features, see the *MAINVIEW for DB2 Performance Reporter User Guide* and “[MAINVIEW for DB2 Selectable Components](#)” on page 5.

Migration from MAINVIEW for DB2 7.1 to MAINVIEW for DB2 7.2

No table migration is required from Release 7.1 to 7.2, because the tables have not been changed. You can continue to use tables that were built with MAINVIEW for DB2 7.1.

Migration from MAINVIEW for DB2 6.1 to MAINVIEW for DB2 7.2

Many changes occurred to the tables from MAINVIEW for DB2 6.1 to 7.1. If you are migrating from MAINVIEW for DB2 6.1, you must create new tables.

DB2 Tables

MAINVIEW for DB2 7.1 provided new table definitions that include many new columns of DB2 Version 7 information.

In addition, the DMRABDTL and DMRABSUM tables were added with new detail and summary accounting buffer records.

If you already have Performance Reporter installed, you should define these new tables with unique names; for example, in a new database (Step 5, page 49) and/or with a different CREATOR (Step 6, page 50).

Table Migration

If you wish to migrate the data from previous tables to the new tables, BBSAMP member DPJMIGR contains a sample job to migrate tables from MAINVIEW for DB2 6.1 to MAINVIEW for DB2 7.2. The job consists of steps to unload MAINVIEW for DB2 6.1 tables, convert the unloaded data to MAINVIEW for DB2 7.2 format, and load MAINVIEW for DB2 7.2 tables. Multiple tables can be migrated in a single run. Migration from MAINVIEW for DB2 5.1 tables is not supported.

Two separate files are needed for each step to separate unloaded data of the same record types. Summary accounting records and TYPE=BUFFER records are in a separate file than detail accounting records and TYPE=STAT records and are processed by a separate migration step.

Note: If very large tables are to be migrated, it is possible to use the UNLDSTART and UNLDEND parameters in the first unload step to break the work into multiple jobs that process only a subset of the data.

Customization

AutoCustomization includes an optional step to migrate data from MAINVIEW for DB2 6.1 tables to MAINVIEW for DB2 7.2 tables. Use of ALTER is not supported.

Chapter 2. Navigating through the MAINVIEW for DB2 Installation Process

This chapter provides installation and customization road maps to assist you when you install the selectable components with MAINVIEW for DB2. With these step-by-step instructions, you should be able to get the components up and running quickly. It does not cover the MAINVIEW-related steps.

Important

These road maps are intended for MAINVIEW users who are only installing the new components and none of the additional DB2 products that share some of the same installation and customization steps. This restriction includes the System and SQL Performance solution products that share the MAINVIEW for DB2 – Data Collector technology and the DB2 Administration products that have common setup steps with CATALOG MANAGER for DB2. You have additional considerations if you are licensed for the complete CATALOG MANAGER product. In these cases, refer to the *System and SQL Performance for DB2 Customization Guide* or the *Administrative Products for DB2 Customization Guide* for complete instructions.

Note: The road maps do not include every panel in the process; they highlight only the panels where your choices are being clarified. In cases where a panel is not listed, follow the instructions on the panel or accept the defaults.

Installation Road Map

Table 2 is intended to quickly guide you through the OZI installation process. This process is organized according to the initial panels that you navigate as you run the OZI Installer.

Table 2. Installation Road Map

Installation/Customization Panel	Action
Select Distribution and Installation Methods	Beginning with PUT0301B, you have a choice of tape distribution media. When performing a tape install, select either 3480 or 3490 tapes, corresponding to the type of tapes that you ordered.
Installation Tape VOLSER(s)	<p>If you choose 3490 tapes, note that all MAINVIEW products (in both Standard and SMP/E versions) are distributed on a single cartridge. This cartridge is known as the M9A tape. Be sure to specify your site's unit name for 3490 tapes.</p> <p>If you specified a Standard installation, you are also asked for the VOLSER of the C9A tape, which contains the optional selectable components (Data Collector and Catalog Manager Browse).</p> <p>If you chose 3480 tapes, you will receive an M-series and C-Series tape set.</p>
Install System Product and Solution Selection	<p>You are asked to select the product or products that you want to install. Select the MAINVIEW for DB2 product entry.</p> <p>If you are doing an SMP/E installation, none of the selectable components are listed, only the MAINVIEW and RxD2 products. You do not need to explicitly select MAINVIEW Infrastructure. It is included automatically.</p> <p>The selectable components can be installed with a Standard installation. If you also are installing MAINVIEW for DB2 (and possibly other MAINVIEW products) with a Standard installation, you can select MAINVIEW for DB2 and its components at the same time.</p> <p>When selecting either or both of the selectable components, be sure to also select the MAINVIEW for DB2 Selectable Components header item. (You can select the System Performance for DB2 Solution in the same manner.)</p> <p>Note: If you own RxD2, don't forget to also select RxD2/LINK and RxD2/FlexTools. (You might need to scroll down to see them.) They can be selected with either an SMP/E or standard install whenever you select the MAINVIEW for DB2 product.</p>

Table 2. Installation Road Map (Continued)

Installation/Customization Panel	Action
MAINVIEW for DB2 Selectable Components Interface to MAINVIEW for DB2	<p>If you choose only the selectable components, you are warned that you are not installing the base product. You have a further opportunity to select a Standard installation of MAINVIEW for DB2 from this panel. You can bypass this step if you did an SMP/E installation.</p>
Install System Product Customization	<p>You have options to perform two sets of customization steps online: OZI Customization and AutoCustomization (Autocust).</p> <p>The most noticeable change to MAINVIEW for DB2 7.2 installation is the addition of a set of steps that customize the selectable components. This process is called OZI Customization, and must be performed in addition to the usual MAINVIEW AutoCustomization process.</p> <p>If you are installing either or both of the selectable components, you can begin with either of these customization options. However, the following “Customization Road Map” on page 16 begins with the AutoCustomization option (option 2).</p>

Customization Road Map

Table 3 is intended to quickly guide you through the customization process. This process is organized according to the panels that you navigate as you run MAINVIEW AutoCustomization, OZI Customization, and the Installation Assistant.

Table 3. Customization Road Map

Installation/Customization Panel	Action
<p>MAINVIEW AutoCustomization (Autocust)</p> <p>This section of the road map only covers the steps added with MVDB2 7.2 that support the selectable components. For more information on the complete MAINVIEW process, see the <i>MAINVIEW Common Customization Guide</i>. Chapter 3 in this book addresses some additional MVDB2 considerations that you should review. It also includes manual customization instructions for the component interfaces in case you are not performing AutoCustomization.</p>	
<p>PRODUCT CUSTOMIZATION</p>	<p>Select the listed products for customization. The additional customization for the components is included with the selection of the MAINVIEW for DB2 product.</p>
<p>CREATE BBI-SS START PROCEDURE</p>	<p>Another AutoCustomization change to support the MVDB2 selectable components is found in Step 19 – Create BBI-SS Start Procedure.</p> <p>Specify whether you have decided to use the selectable components.</p> <p>An additional panel in this step includes the Data Collector load library in the PAS JCL when you confirm that you are using the Data Collector.</p>
<p>SELECTABLE COMPONENTS CLISTS</p>	<p>The final new AutoCustomization step is number 31 – Define CLISTS for MVDB2 Selectable Components.</p> <p>You are asked if you want to install the CLIST that enables MAINVIEW hyperlinks to Report Manager products. This new step customizes the DOMC CLIST that is used for hyperlinks to Report Manager products that are running in the Data Collector, and the DMRACT CLIST and parameter member, DMRACTR, that are used for the hyperlinks to CATALOG MANAGER. Manual instructions for these connections are available in “Defining the Connection to the MAINVIEW for DB2 – Data Collector” on page 26 and “Defining the Connection to CATALOG MANAGER for DB2” on page 27.</p> <p>This concludes the AutoCustomization changes for the support of MVDB2 7.2.</p>
<p>Install System Product Customization</p>	<p>After completing the AutoCustomization steps, perform the OZI Customization.</p> <p>Return to the Install System Product Customization panel and select option 1.</p>

Table 3. Customization Road Map (Continued)

Installation/Customization Panel	Action
<p>OZI Customization</p> <p>See the <i>System and SQL Performance for DB2 Customization Guide</i> for more information about customizing the MAINVIEW for DB2 – Data Collector component. See the <i>Administrative Products for DB2 Customization Guide</i> for more information about customizing the CATALOG MANAGER Browse component.</p>	
<p>Install System Previous Release of Product</p>	<p>This panel is the first of several OZI Customization steps.</p> <p>Specify a previous release for each of the selectable components only if you are migrating. If installing for the first time, or re-installing the same release, specify NONE.</p>
<p>Install System DB2 Parameter Information Panel</p>	<p>Information entered on this panel will be used to customize the selectable components for the first DB2 subsystem (you can clone others later).</p> <p>If DDF is available for access to a remote DB2 system by CATALOG MANAGER, be sure to set the flag to Y and supply the location name.</p>
<p>Install System Grant Public Access Panel</p>	<p>Be sure to allow public access for a remote CATALOG MANAGER.</p>
<p>Install System JCL Generation File Information</p>	<p>Unless you will be using any of the BMC Software Administrative Products, such as Load Plus, you do not need to execute the JCL Generation Options Dialog.</p>
<p>Install System CATALOG MANAGER Options Specification</p>	<p>You can usually accept the CATALOG MANAGER defaults on this panel.</p>
<p>Install System Server Options Specification</p>	<p>You can usually accept the defaults for the Performance Activity Products on this panel.</p>
<p>Install System Product to Product Interface Panel</p>	<p>This panel is applicable only for the installation of full versions of the Administrative Products.</p> <p>Ignore this panel when installing the selectable components.</p>
<p>Install System ISPF Interface Panel Verification</p>	<p>This panel is not applicable when installing the selectable components.</p>
<p>Install System BMCDB2 Control Table</p>	<p>This panel is not applicable when installing the selectable components.</p>
<p>Install System - Final Tasks</p>	<p>Select each of the options on this panel in order. Begin with Product Authorization.</p>
<p>Install System Product Authorization</p>	<p>Specify how you intend to set up product passwords.</p> <p>You can retain your product authorization from previously installed products by copying the authorization modules into your new load/password library.</p>
<p>Install System JCL Generation File Review</p>	<p>Review, and if necessary, correct information that you have previously entered during the OZI Customization process.</p>

Table 3. Customization Road Map (Continued)

Installation/Customization Panel	Action
ssid JCL Generation Install	This panel is not applicable when installing the selectable components.
Install System Variable Review	Note that the DB2 system specified in this panel must be at the same DB2 version as specified earlier.
Install System JCL Generation Option Panel	<p>At this point, JCL members are created that when run, will actually perform the customization of the selectable components.</p> <p>The \$C97IA member is a reminder to execute the Installation Assistant CLIST once you exit OZI.</p>
Install System Product Customization	After completing OZI Customization, run the Installation Assistant (IA).
<p>Installation Assistant (IA)</p> <p>The final installation task is called the Installation Assistant. It is invoked outside of OZI to customize the DB2 Performance Products and the Data Collector. (You will need to follow the steps in the Installation Assistant to customize at least one DB2. You can also define additional DB2s now, or do so later in the Data Collector online administration panels.)</p> <p>Exit all the way out of the OZI CLIST (make sure you receive a message saying that your profile has been saved) and then execute the IA CLIST as described in the \$C97IA install JCL member.</p> <p>See the <i>System and SQL Performance for DB2 Customization Guide</i> and the <i>System and SQL Performance for DB2 Administrator Guide</i> for more information.</p> <p>Note: The Installation Assistant provides a quick setup to get the Data Collector products up and running. You might want to customize many options later, such as adjusting the size of the trace data sets. Most of this customization can be done from the online administration panels available in the Data Collector. Information about other features, such as setting up trace data set archiving for batch reporting, is described in the books referenced above.</p>	
Installation Assistant - Getting Started	Specify the name of the Performance Products load library on this panel.
Installation Assistant - Names	Specify the DOMPLEX prefix and Data Collector suffix. This step defines the ssid of the Data Collector address space.
Installation Assistant - Product Selection	<p>To install the Data Collector selectable component and no other Performance Products, select the following option:</p> <p style="text-align: center;">Y ACTIVITY MONITOR for DB2 or MAINVIEW for DB2 – Data Collector</p> <p>Be sure to specify N for all the other options.</p>
Installation Assistant - DB2 Collections Specifications	<p>The specifications on this panel can also be changed online through the Data Collector Admin panels. Accept the defaults for now.</p> <p>Be sure to specify Y for Monitor this DB2 with AM or MVDB2 DC.</p> <p>Be sure to specify N for Automatically start exceptions in an MVDB2/DC only environment.</p>

Table 3. Customization Road Map (Continued)

Installation/Customization Panel	Action
Installation Assistant - DB2 Performance Defaults	<p>These specifications will be used to define the Data Collector output groups and trace data sets. Output groups define which record types are written to each set of trace data sets.</p> <p>Be sure to specify Y for Monitor DB2 with AM/MVDB2 DC.</p>
Installation Assistant - DB2-Specific Information	<p>For this step, specify the name of the DB2 system to be monitored. If you have more than one system, you can create the first one and then use the copy command to create others. (The values for each DB2 can be edited in the following panel.)</p> <p>Press the Enter key to verify the correct values for this DB2 system, and then press PF3 to continue.</p>
Installation Assistant - DB2 Definition	<p>Verify that the displayed values are correct.</p>
Installation Assistant - Performance Parameters	<p>Use this screen to verify the output group definitions that you entered previously. Press PF3 to continue.</p>
Installation Assistant - DOMPLEX Parameters	<p>Specify each of the Data Collector parameters on this panel.</p> <p>You can press PF1 to see more information on each of the parameters.</p>
Installation Assistant - Data Collector Options	<p>Accept the defaults. Remember that this information can be changed online.</p> <p>Be sure to blank out the Exception Facility PROC name. It is only applicable to the full ACTIVITY MONITOR product.</p>
Installation Assistant (first panel)	<p>Specify the names of the trace data sets. Note that symbolics are available.</p>
Installation Assistant (next panel)	<p>Specify the suffixes of the trace data set VSAM components here.</p>
Installation Assistant - Ready to Create Jobs	<p>If any of these values need to be changed, enter R to return to the data entry panels. If the values are correct, press PF3.</p>
	<p>Finally, submit these two jobs to finish configuring the Data Collector:</p> <ul style="list-style-type: none"> • IA\$DCALC • IA\$DCUPS
Installation Assistant - Final Status	<p>Did the jobs run successfully? If so, enter option 1.</p>
Installation Assistant - Completed	<p>The customization is completed.</p> <p>This panel shows you the name and location of your Data Collector PROC. Copy this to your PROCLIB.</p>

Follow-Up Tasks / Verification

You need to complete a few post-installation tasks to make sure that the product and all its components installed correctly.

Note: If you need further instructions to accomplish any of the following tasks within the MAINVIEW for DB2 – Data Collector component, see the “Customization Tasks” section of the *System and SQL Performance for DB2 Customization Guide*. You can also press the **HELP** key from any panel for more information. The *System and SQL Performance for DB2 Administrator Guide* provides information about administrative tasks for the MAINVIEW for DB2 – Data Collector component.

Table 4. Follow-Up Tasks

Task	Action
Refresh the MVS Linklist Lookaside (LLA).	<p>This task is <i>optional</i>. Perform these steps <i>only</i> if both of the following conditions are true:</p> <ul style="list-style-type: none">• You are using the MVS Linklist Lookaside (LLA) feature.• You have installed the product load modules into a LINKLST data set. <p>1. If both conditions are true, issue the following command from an MVS console on each CPU that is using a Data Collector:</p> <p>F LLA,REFRESH</p> <p>This command builds a new copy of the Linklist Lookaside directory in virtual storage. The refresh might take a few minutes to complete.</p> <p>2. Check the system log for the following confirmation message:</p> <pre>CSV210I LNKLST LOOKASIDE REFRESHED</pre>

Table 4. Follow-Up Tasks (Continued)

Task	Action
MAINVIEW for DB2 – Data Collector verification	
Verify connection.	<p>You can verify that the MAINVIEW for DB2 – Data Collector component is connected properly, as follows:</p> <ol style="list-style-type: none"> 1. Start the Data Collector by executing the Data Collector JCL in your PROCLIB. 2. Start the CAS and PAS by executing the JCL in your PROCLIB to start a CAS and a BBI-SS PAS. (See the <i>MAINVIEW for Common Customization Guide</i> and the <i>MAINVIEW Administration Guide</i> for more information.) 3. Log on to MAINVIEW for DB2 and access the EZDB2 Easy Menu. (See the <i>MAINVIEW for DB2 User Guide, Volume 1: Views</i> for log on instructions.) 4. Set the context to an active target DB2 subsystem (CON <i>db2target</i>). 5. Select the MVDB2/DC Admin/Archive option from the EZDB2 Easy Menu and then select option 1 to access the Administration menu for the Data Collector. <p>If this hyperlink works, continue on to the “Verify set-up” task (below).</p> <p>However, if the connection to the Data Collector does not work, you can perform the following actions to find the problem:</p> <ul style="list-style-type: none"> • Check that the passwords are where they need to be. • Check the DOMC CLIST, which should be in BBCLIB. • Check the PAS startup messages to verify the products in the PAS and that the correct Data Collector load library is in the STEPLIB concatenation. • Issue the PRODUCTS command from SDSF to verify the products in the Data Collector with the syntax: <code>/dcid products</code>. For example, for data collector JB41, issue the command: <pre style="margin-left: 40px;">/jb41 products</pre> <p>A list of all data collector products that have registered themselves is displayed in the data collector message log.</p>
Verify set-up.	<p>From the Administration menu, you can verify that the MAINVIEW for DB2 – Data Collector component is set up correctly, as follows:</p> <ol style="list-style-type: none"> 1. Verify the DOMPLEX profile (option 2). 2. Verify or change the global options settings (option 4).

Table 4. Follow-Up Tasks (Continued)

Task	Action
Verify the EXPLAIN process.	<p>Issue a dynamic EXPLAIN command, as follows:</p> <ol style="list-style-type: none"> 1. Return to the MAINVIEW for DB2 – DC Main Menu. 2. Select the E (EXPLAIN Interface) option. 3. Select option 5 - Ad Hoc SQL. 4. Enter an SQL statement, for example: <code>select * from sysibm.systables</code> 5. Press ENTER and then press the PF3 key. 6. Select option 1 to EXPLAIN the SQL. <p>If this process works, continue to the next section. However, if an error occurs and you are running Release 4.1.00 of the Data Collector, check that the DOMC CLIST contains the additional data set for the EXPLAIN interface that is required with this release.</p>
CATALOG MANAGER Browse	
Verify installation.	<p>You can verify that the CATALOG MANAGER Browse component is installed correctly, as follows:</p> <ol style="list-style-type: none"> 1. Make sure the context is set to a local target DB2 subsystem. 2. Select the CATALOG MANAGER Browse option from the EZDB2 Easy Menu. 3. Select an object type from the Catalog Browser Primary Menu. <p>If this process works, you have now completed the verification.</p> <p>If an error occurs</p> <ul style="list-style-type: none"> • Check the results of the \$C40INST job and make sure that all steps executed successfully. • Check the DMRACT CLIST, which should be in BBCLIB. • Check the member DMRACTR in UBBPARM to ensure that it specifies the correct CATALOG MANAGER release number.

Chapter 3. Customizing MAINVIEW for DB2 Functions

This chapter describes how to tailor MAINVIEW for DB2 to your site's needs. Customization of BBI and the MAINVIEW Infrastructure is discussed in the *MAINVIEW Common Customization Guide*. Customization of MAINVIEW for DB2 – Data Collector is discussed in the *System and SQL Performance for DB2 Customization Guide* and customization of CATALOG MANAGER for DB2 is discussed in the *Administrative Products for DB2 Customization Guide*.

Using Product Libraries

Several distributed libraries are included with MAINVIEW for DB2, including a parameter library (BBPARM), a sample library (BBSAMP), and a profile library (BBPROF). Use the contents of these distributed libraries as models to create site-customized product libraries, either manually or with AutoCustomization.

Warning

The distributed libraries should never be modified. If you change them, subsequent SMP maintenance will overwrite your changes.

Throughout the MAINVIEW documentation set, references to these libraries use the distributed name. However, when you need to make changes, be sure to use the corresponding library that has been customized for your site. [Table 5](#) lists the distributed name, the corresponding customized library created by AutoCustomization, and leaves space for you to note any other corresponding library that may have been created for your site.

Table 5. Product Libraries

Distributed Library Name	Library Created by AutoCustomization	Other Site-Customized Copy
BBPARM	UBBPARM	
BBSAMP	UBBSAMP	
BBPROF	SBBPROF	

See “Using MAINVIEW Product Libraries” in the *MAINVIEW Common Customization Guide* or “Using Product Libraries” in the *MAINVIEW Administration Guide* for more information about all the product libraries.

DB2 Target System Considerations

The following notes answer questions about your DB2 target system and the BBI-SS PAS:

- MVDB2 libraries are *not* required in your DB2 system.
- One BBI-SS PAS can monitor multiple DB2 systems (see BBPARM member BBIJNT00).

Note: MAINVIEW for DB2 7.2 supports DB2 7.1, 6.1, and 5.1. A MAINVIEW for DB2 PAS can support monitoring of DB2 subsystems at two different DB2 releases. To do this, the appropriate Call Attach (CAF) compatibility level must be available in the DB2 load library used in the PAS. Contact IBM for further information on the two releases you want to access. Depending on the release level, this may require upward-compatible PTFs and the use of the lower version load library. With DB2 7.1, downward compatibility may be available.

- The BBI-SS PAS establishes a Call Attach Facility (CAF) connection to DB2 that detects DB2 startups and shutdowns, and establishes a DB2 thread to use the DB2 Instrumentation Facility Interface (IFI) for workload requests.

Note: If the MVDB2 CAF connection to DB2 is lost for any reason, you can restart it with the BBI control command RESET BM. For more information, see the *MAINVIEW Administration Guide*.

- The BBI-SS PAS must load several DB2 modules. It first searches the data set specified in the DSNLOAD DD (if present), then STEPLIB and the system link list. The DSNLOAD DD is not required.

DB2 Authorization of the BBI-SS PAS

The BBI-SS PAS must be GRANTed authorization to issue trace control commands and capture data through the DB2 Instrumentation Facility Interface (IFI). The SQL statement text is

```
GRANT TRACE,MONITOR1,MONITOR2,DISPLAY TO authid;
```

In addition, to issue DB2 commands from MVDB2, you must GRANT the privileges required for the types of DB2 commands you want to issue from the BBI-SS PAS.

Note: The Cancel Thread capability from DUSER for threads from DB2 4.1 or higher requires SYSADM, SYSOPR, or SYSCTRL authority.

- Other system privileges are

```
RECOVER
STOPALL
STOSPACE
SYSADM
SYSOPR
SYSCTRL
```

- Database privileges are

```
DBADM ON DATABASE
DISPLAYDB ON DATABASE
STARTDB ON DATABASE
STOPDB ON DATABASE
```

What the authorization ID is and how it is determined depends on the access security system being used. The rules are listed below.

- If no security management system is installed or if it is active, the BBI-SS PAS ID is used as the authorization ID for trace requests.
- If the security management system is active and the BBI-SS PAS is run as a job, the user ID of the job is used. This user ID can be established in a number of ways; for example:

RACF Add the USER= parameter to the JOB statement.

CA-ACF2 Add a /*LOGONID statement after the JOB statement.

- If security is active and the BBI-SS PAS is run as a started task, the options are more subtle:

RACF This is the value specified in the security system's Started Procedure Table (ICHRIN03) for the BBI-SS PAS procedure.

CA-ACF2 A /*LOGONID card can be added to the BBI-SS PAS startup procedure.

Note: One method to display the active authorization ID is to start the BBI-SS PAS and issue the DB2 command:

```
-DIS THD( * )
```

The authorization ID is displayed in the AUTHID column for the active BBI-SS PAS connection.

CA-TOP SECRET is capable of overriding this authorization ID with either non printable characters or the word *BYPASS*. If this occurs, issue the following CA-TOP SECRET commands to define the BBI-SS PAS ACID to CA-TOP SECRET. The ACID is the BBI-SS PAS authorization ID to DB2.

```
TSS CREATE (X) FACILITY(STC) *NOPW* DEPT(ZZZ) (X=STARTED TASK NAME)
TSS ADD(X) (Y=STEP OR JOB NAME)
TSS ADD(STC) PROC(Y) ACID(X)
```

Then, do the GRANTs listed previously.

Consult your security administrator to determine the authorization procedures for your particular security system.

Defining the Connection to the MAINVIEW for DB2 – Data Collector

The following steps are required to activate the new functions that are provided by this selectable component. AutoCustomization and OZI customization support these steps, or you can do them manually.

1. To activate the interface from the BBI-SS PAS to the Data Collector, you must specify the Data Collector load library in the BBI-SS PAS Started Task JCL (created by AutoCustomization or by following the instructions in the *MAINVIEW Common Customization Guide*).

In UBBSAMP and your PROCLIB, edit the JCL (original source in member SSJCL in BBSAMP). Specify the correct data set name for the Data Collector load library in the STEPLIB concatenation. If you are starting from the original source member, remove *CDCLOAD.

This step activates the connection logic and allows trace data that was collected in the Data Collector to be retrieved and displayed in MAINVIEW for DB2 views.

The BBI-SS PAS uses auto discovery to find a local active Data Collector. If more than one is active (for example, in a test environment), you can direct the PAS to connect a specific Data Collector with the parameter CDC in the BBPARM member DMRBEX00.

Note: If you are installing the OPERTUNE product, it might also be present in this Data Collector load library. Including the load library to activate the API will also activate the MAINVIEW for DB2 interface to OPERTUNE that allows changing ZPARMs from views. Security is checked both in MVDB2 and in OPERTUNE before any change is allowed.

2. Start the Data Collector Started Task by using the customized procedure *DOMssid* in the JCL library. If you are migrating from a previous release, use the Data Collector procedure in the *DOMPROC* member of the *CNTL* data set.
3. To enable hyperlinks from MAINVIEW for DB2 views to related reports in the other DB2 Performance products and some additional MAINVIEW for DB2 – Data Collector reports, customize the *CLIST DOMC* that is distributed in BBSAMP with the high-level qualifier (HLQ) of the Data Collector data sets and copy it to *BBCLIB*.
4. Ensure that the MAINVIEW for DB2 password member (*BDSTBLx*) is copied into the Data Collector *LOAD* library if it was not specified during OZI customization.

Defining the Connection to CATALOG MANAGER for DB2

The following steps are required to enable the hyperlinks from MAINVIEW for DB2 views to CATALOG MANAGER to display information from DB2 catalog tables. AutoCustomization supports these steps.

1. To enable the hyperlinks, customize the CLIST DMRACT that is distributed in BBSAMP and copy it to BBCLIB.

You must provide the following information from your CATALOG MANAGER installation:

- HLQ(*cathlq*)—*cathlq* identifies the high-level qualifier of the CATALOG MANAGER data sets.
- REL(*nmmn*)—*nmmn* identifies the release level, (such as 7201).
- DOPTS(ACTDOPD1)—ACTDOPD1 is the default options module that in most cases is the valid specification. If you have defined separate options modules per DB2 (not necessary for MVDB2 access), you might need to further customize this CLIST.

If you are customizing manually, you must also provide MVHLQ—MAINVIEW for DB2 high-level qualifier.

If you do not have DDF connections defined between your DB2s, or have not enabled DDF usage in CATALOG MANAGER 7.2.01, specify a release level of 7.1.01 or earlier to bypass the use of a location parameter in the hyperlinks. The DB2 ssid will be used instead, but the hyperlinks will only be able to attach to a DB2 local to your MAINVIEW user session.

2. To activate the connection to CATALOG MANAGER, edit member DMRACTR in UBBPARM (original source in member DMRACTR in BBPARM). Specify the CATALOG MANAGER release number in the first four characters of the line. (For example, the current release number is specified as 7201.)

Note: No password is required in the CATALOG MANAGER LOAD library for browse access from MAINVIEW for DB2.

Defining the Connection to System Performance for DB2

If you are installing the System Performance for DB2 solution, another step is required to activate the following hyperlink on the MAINVIEW DB2 Options panel:

SPD System Performance for DB2

You must access SPD from this option (not DOMCLIST) to enable access to full MAINVIEW functionality from the solution panels.

The following step is supported by OZI customization:

If the Data Collector components are installed separately from the MAINVIEW components, copy the SPDCLIST member from the Data Collector JCL library to the MAINVIEW BBCLIB library.

Customizing the Application Trace Facility

This section describes how to manually

- Specify trace defaults in BBPARM member DMRBEX00
- Set up and maintain a trace directory and trace log data sets
- Set up continuous workload history traces

A request for a trace can also request that the trace data be recorded to VSAM data sets for later viewing or printing. The logging of trace data requires a preallocated trace directory that must be identified to BBI. Setup of the trace directory can be done automatically by AutoCustomization, as described in the *OS/390 and z/OS Installer Guide* or manually, as described in this section. Trace log data sets can be preallocated as described in this section, or they can be dynamically allocated at the time of the trace request.

By defining one or more traces to start automatically, a continuous workload history is available for later viewing or printing.

Specifying Trace Defaults

The DMRBEX00 member of the BBPARM data set defines trace request defaults per DB2 system, which prime the options for the trace request data entry panels. This member is also used to control other product features, as described in [“Customizing Background Processing” on page 39](#). That section also describes how to reset these values during operation.

This section describes the DMRBEX00 keywords that define option defaults for

- DB2 accounting classes
- All trace requests
- A detail trace
- Trace logging

DB2 Accounting Classes

One keyword can be used to define the accounting classes for which data collection is desired. These classes are included on the MAINVIEW for DB2 trace request to DB2 that supports your collection of accounting data. The keyword is as follows:

ACCTG=(1,2,3,7,8) Where any combination of these accounting trace classes can be specified. The list must be defined within parentheses. The default is class 1 only.

Note: The use of this keyword is only needed, or recommended, if an accounting trace (normally written to SMF) is not already active in DB2, since MAINVIEW for DB2 will automatically receive the data from the active classes that are specified in DB2.

General Trace Options

The following keywords define the defaults for the trace display buffer size (STORAGE option) and trace duration (STOP option). These options apply for any trace and are presented when a trace is requested.

STORAGE Specifies the size of the display buffer for the requested trace. This value overrides the value defined in BBIISP00.

TRTIME=n Where n specifies the default duration of a trace in minutes (1 to 32,000). The default is no limit.

Note: If TRTIME is specified, the STOP keyword in the ATRAC Start DB2 Trace Request data entry panel is primed with this value. If a value is not specified, STOP is not primed. A STOP value that is not in the hh:mm:ss format is interpreted as a STOPCNT value in minutes.

The following DMRBEX00 keyword lets you set a limit to the total amount of storage allowed for a trace:

TRLIM=nK|nnnnnnnn Where n can be 1 to 8 characters as kilobytes (K) or bytes. It specifies the upper limit on the total storage that can be allocated for any one trace. If the storage is not specified in K (kilobytes), the value of n is in bytes. The default value is the product of the default TRBUFF and TRSIZE times 2.

Detail Trace Options

The following keywords define the defaults for the data collection buffers (TRSIZE and TRBUFF options) and limit the total amount of storage allowed for detail trace data collection:

A pool of buffers is maintained for each detail trace that is active and is GETMAINED in Extended Private Area. One of these buffers is allocated at CREATE THREAD time per active thread that is being traced. The following DMRBEX00 parameters or an ATRAC Start Trace request define the size and number of these buffers. The buffers can be specified per DB2 system.

The values for these DMRBEX00 keywords prime the ATRAC data entry panel:

TRBUFF=nnn Where nnn is the number of buffers to be allocated for a detail trace request. The number should be at least equal to the number of concurrent active threads being traced in DB2 plus 10%. The default is 20. If TRBUFF is specified with an ATRAC request, it overrides the TRBUFF value in DMRBEX00.

TRSIZE=nnnK Where nnn is the size in kilobytes of each buffer. This number is rounded to a multiple of 4K. This size times 2 determines the maximum amount of data that can be traced for one thread without trace logging. The default is 400K. If TRSIZE is specified with an ATRAC request, it overrides the TRSIZE value in DMRBEX00.

For example, DMRBEX00 could specify:

```
TARGET=DB2P
TRBUFF=20
TRSIZE=32K
```

Total pool size is $20 * 32K = 640K$.

Note: If the trace is not logged, the data is truncated if more events are being traced for one transaction than fit in 2 buffers. To trace long-running batch programs, or to trace many lock events (DETAIL, LOCK), it may be necessary to increase TRSIZE or to log the trace.

Trace Logging Options

The following keywords define the defaults for a trace log data set allocation request:

TRPREFIX	Defines the data set name prefix for trace log data sets if the value for the Log DSN option on the Start DB2 Trace Request panel is specified without quotation marks. If a value for TRPREFIX is not defined, the ID of the user requesting the trace is used.
TRREUSE	Where Y (YES) requests data to be overwritten if a log data set is not reset. N (NO) indicates that data is not to be overwritten. The default is Y. If the request specifies a 1 for the number of logs and N is defined for TRREUSE, data is not recorded. If the request specifies a 1 and Y is defined for TRREUSE, previous data recorded in the log is overwritten.
TRVOLS=(x,y...)	Where x or y indicates the ID of the default volume(s) for trace log data set allocation. Up to seven volumes can be specified. The default value specified in DMRBEX00 with the TRVOLS keyword is SYSDA.
TRCYL	Defines the primary allocation default in cylinders (CYLS option) for trace log data sets. The default value is 3.
TRSUFFIX	Defines the default suffix to add to the trace cluster DSN (Data DSN Suffix option) to make the data set name for the data component. The default value is D.
TRSMSSCL	Defines the default name of the SMS storage class for trace log data set allocation. There is no default value.
TRMSDCL	Defines the default name of the SMS data class for trace log data set allocation. There is no default value.
TRSMCMCL	Defines the default name of the SMS management class for trace log data set allocation. There is no default value.

Setting Up and Maintaining a Trace Directory

Before a request for trace logging can be started, a trace directory must be preallocated and initialized. This section describes how to set up the trace log directory using sample members in the BBSAMP data set and BBPARM member BBIISP00 (see [“Using Product Libraries” on page 23](#)).

Note: If a security management system is installed, you may need to grant the BBI-SS PAS authority to dynamically allocate trace log data sets.

Defining and Initializing a Trace Directory Data Set

There is one trace directory per BBI-SS PAS. The trace directory is a VSAM linear data set containing one entry for each trace log data set. Each entry indicates the date and time of data set creation, the current status of the data set, the trace target, and other related information. Entries can be added to or deleted from the directory to allow trace logs to be moved between systems.

Use the following BBSAMP sample member to define and initialize the trace directory:

JXT001 Defines and initializes the trace directory.

1. Add your job card.
2. Update the symbolics as necessary.
3. Submit the job.

Identifying the Trace Directory to BBI

Use the following BBPARM member:

BBIISP00 Identifies the trace directory to BBI:

```
TRDIR=dsn , SUBSYS=ssss
```

where

`dsn` Represents the data set name of a trace directory for MAINVIEW for DB2 trace logging (there is no default name). The directory must be allocated and initialized before any trace can be started with trace logging. BBSAMP member JXT001, described previously, creates the trace directory.

`ssss` (Optional.) Subsystem name to which this trace directory applies.

Verifying Trace Directory Entries

Trace directory entries are not updated automatically by events occurring outside of the BBI-SS PAS, such as data set deletion or archival. So, you may occasionally need to synchronize the trace directory information with the actual status of the data sets. Use the following BBSAMP member to verify, purge, or print directory entries.

Note: Since every entry in the trace directory is dynamically allocated and read to verify its current status, this process could run for some time.

JXT003 Checks for the existence of a trace log data set in the system catalog. The use of PARM determines the action to be taken.

1. Add your job card.
2. Update the symbolics as necessary.
3. Specify the processing option for PARM:

Blank If PARM is not specified (default), an uncataloged entry is marked as INV (INVALID).

ARCVOL= If ARCVOL (Archive Volser) is specified, this value is matched against the volser in the system catalog for each entry in the directory. If matched, the data set is not verified. This allows a site to bypass recalling all trace log data sets from archives.

LIST Lists the directory entries that are changed. If NOVERIFY is specified or implied, all entries are listed (equivalent to LISTALL).

LISTALL Lists all entries.

NOLIST Does not list changed entries.

PURGE Deletes any data sets in the directory that are invalid trace data sets.

NOPURGE Does not delete invalid data sets (marked as INV (INVALID) in the directory).

VERIFY Verifies each of the entries in the trace directory.

Note: If VERIFY is specified, the defaults are LIST, WRITE, and NOPURGE.

NOVERIFY Does not verify entries in the trace directory.

WRITE Updates the trace directory with status changes.

NOWRITE Does not update the trace directory with changes detected.

Note: If no PARM is specified, no action is taken.

4. Submit the job.

Managing Trace Log Data Sets

This section describes how to create and manage trace log data sets manually using sample members from the BBSAMP data set.

Defining a Trace Log Data Set

You can define different trace logs as often as you need them, or you can let the BBI-SS PAS allocate them for you dynamically (see the JXT011 sample job description in the *MAINVIEW for DB2 User Guide*).

Archiving a Trace Log Data Set

A trace request can be defined to archive a log data set automatically when it is full, as described in the DZTBARC sample job description in the *MAINVIEW for DB2 User Guide*.

A trace log data set that is no longer active can be archived on demand by submitting this job manually.

Restoring an Archived Trace Log Data Set

Use BBSAMP member DZTBRL0D to restore an archived trace log data set.

Note: You also can add the linear data set to the online trace directory and view the contents online. Use the NEW command on the History Traces application (Option 5) as described in the *MAINVIEW for DB2 User Guide*.

Printing a Trace Log Data Set

Use BBSAMP member DZTBTRAC to print a trace log data set. See the *MAINVIEW for DB2 User Guide* for a description of this sample job.

Printing from an Online Application

You also can print a trace log data set from the History Traces application (Option 5) with the P line command when executing the terminal session from ISPF.

This process requires that you customize the skeleton JCL in member DZJPTRAC in the BBPROF data set. You can tailor this member to an individual user (UBBPROF data set) or site (SBBPROF data set). The data set must be defined in the CLIST used to execute the terminal session (MAINVIEW CLIST or a copy).

Use AutoCustomization to modify this member automatically or manually change the &DLIB variable to your BBLINK data set name.

Setting Up Standard Traces for Workload History

You can use the BBIISP00 member of the BBPARM data set to select a group of timer-driven monitor and trace requests to start automatically. These requests are defined in another member of the BBPARM data set. If you specify the default block request member BLKDMRW in BBIISP00 (TARGET=db2id, BLK=BLKDMRW), a starter set of monitors and two summary traces are requested:

- ```
REQ=ATRAC THRDHIST TYPE=SUMMARY TITLE='THREAD HISTORY' STORAGE=400K
* LOGTRAC=Y TRNUMDS=3 TRSWTIME=24:00
```

This trace is a summary trace of the complete DB2 workload. It should be run as a standard request to provide viewing and printing of thread history. It is accessed directly from Option 6, GRAPH. It adds very minimal overhead because it requires only the DB2 Accounting trace. The second line is set up as a comment to show you how you could define trace logging to a set of three data sets, automatically switching to a new data set at midnight. Depending on your DB2 workload volume and operations procedures, you might need to modify some of these keyword values or specify other values. All options are defined in the BBPARM member BLKDMRKY. For more information, see the *MAINVIEW for DB2 User Guide, Volume 2: Analyzers/Monitors/Traces*. To set default values for all traces, such as the volumes to be used for allocation, see [“Specifying Trace Defaults” on page 29](#).

If you choose to capture accounting data in the MAINVIEW for DB2 – Data Collector to support batch processing, you might want to keep a shorter online history in THRDHIST for quick analysis with the MAINVIEW for DB2 trace displays. Both THRDHIST and the MAINVIEW for DB2 – Data Collector data are available for online analysis through the Thread Interval History views. Because the MAINVIEW for DB2 – Data Collector data is compressed, you might be able to keep more history available online through this option. You can use drill-down options to view the detailed accounting records for a selected interval.

Although there are many options available, there are basically two ways to set up a continuously logging trace, and you must evaluate your system characteristics before choosing which is better.

- The first method uses automatic allocation of one or more new trace log data sets each time the trace request is started (at BBI-SS PAS startup), as shown in the preceding example. No DSN is specified, so that the generated name will always be unique (specifying TRPREFIX in DMRBEX00 defines the hilevel node).

This method can be used if MVS and the BBI-SS PAS are rarely brought down. The only consideration is that if the log allocation fails, perhaps because of lack of space, the trace request also fails.

- The second method is to set up a group of preallocated logs (any number of them) that are continually reused. An archive job can be defined to run automatically (log full, log switched, or trace complete) to save the data and mark that log for reuse. Each time the BBI-SS PAS starts, and this trace request is started, the next available log with the oldest data is chosen automatically for output.

This method uses fewer online log data sets. However, if you require archiving, this method may require intervention after any unplanned outage of MVS or the BBI-SS PAS, since the archive job on the current log cannot run. If you do not require archiving, specify TRREUSE=Y to allow overwriting of a log without it being reset.

**Note:** If you have a very high volume of threads in some DB2 subsystems, you might want to reduce the amount of data that you keep on THRDHIST trace logs and set up the Data Collector to provide continuous collection of thread history. Both the collection and storage are optimized to handle large volumes, although you need to use the Data Collector administration panels to adjust the number and size of the active trace data sets to handle the expected volume. The archive process creates files compatible with SMF data. With the 4.1.00 release of the Data Collector, access to this data is available starting from MVDB2 thread interval history views, with drill down to detail threads in Report Manager reports. This access is described in the *MAINVIEW for DB2 and RxD2 Getting Started* manual.

- `REQ=ATRAC BIGELAP TYPE=SUMMARY ELAP=10.0`

This is an example of an exception trace to capture only those transactions or queries that ran longer than 10 seconds. More exception filters can be added, or workload selection criteria can be added, such as `DB2CONN=cicsjobname`.

## Setup Recommendations

There are several points you should consider before the Application Trace is heavily used.

- Set the dispatching priority of the BBI-SS PAS higher than DB2

This is most important for the DB2 DBM1 and MSTR address spaces. It is not necessary for IRLM. If the BBI-SS PAS does not get enough resources to complete its work in a reasonable time period, this can cause U3912 or U3920 timeout abends. These abends are recoverable, but disruptive.

This is recommended for most monitoring functions, but it is most important for detail traces. When a detail trace is requested by the user, MAINVIEW for DB2 starts a DB2 trace using the Instrumentation Facility Interface (IFI). DB2 GETMAINS a buffer in ECSA and uses this to pass the detail data to MAINVIEW for DB2. If MAINVIEW for DB2 processing cannot keep up with the DB2 activity (transferring the filled buffer), trace data is lost.

- Evaluate whether to increase the BBI-SS PAS region size

The data buffers MAINVIEW for DB2 uses to collect and store trace data are all GETMAINED in the Extended Private Area (EPVT) of the BBI-SS PAS. The usual MVS default size of EPVT is 32 megabytes; this can be increased by specifying a larger REGION= parameter in the BBI-SS PAS startup JCL (SSJCL). This is an upper limit, not an allocation at startup; the extra storage is GETMAINED only when required for trace requests. If the BBI-SS PAS is monitoring multiple DB2s and you plan to run several concurrent detail traces, a size of 60 megabytes to 100 megabytes is recommended. Depending on the trace buffer specifications used, the usage of EPVT per DB2 (to support any number of summary traces and the maximum of four detail traces) can vary between 3 megabytes to 40 megabytes or more. Check the following buffer descriptions to estimate your average and maximum storage requirement.

- Adjust the trace buffer storage defaults per target DB2

There are four kinds of buffers:

- IFIBUFF

The buffer GETMAINED by DB2 in ECSA for each START TRACE IFI request. One is used for all summary traces, and one each can be assigned for each detail trace, up to the maximum of four. The default size of 32K is usually adequate.

**Note:** Currently, DB2 does not release this storage at trace completion, but does reuse it when another trace request uses the same OPx destination.

- STORAGE buffer

The online display buffer GETMAINED by MAINVIEW for DB2 in the BBI-SS PAS EPVT for each trace request, whether summary or detail. This buffer is kept as long as the trace is active or complete so you can view the data. It is freed when the trace is purged from the Current Traces list. The size of this buffer determines the amount of trace data you can view from a current trace (more data may be available from History Traces if the trace was logged). A default of 400K to 2000K (2 megabytes) is recommended. This can be defined per DB2 in BBPARM member DMRBEX00.

For a detail trace, the default size is automatically adjusted to at least 4 times TRSIZE.

- TEMPORARY USER DISPLAY buffer

One buffer is GETMAINED by MAINVIEW for DB2 in the BBI-SS PAS EPVT for each user viewing a trace display. It is slightly bigger than the STORAGE buffer. (This buffer is not under user control.)

- DETAIL TRACE EVENT CAPTURE buffers

Multiple buffers are GETMAINED by MAINVIEW for DB2 in the BBI-SS PAS EPVT for each detail trace request. The number and size are controlled by the TRBUFF and TRSIZE parameters. The buffers are released when the detail trace is stopped (data collection complete) or purged. These values are also specified per DB2 in DMRBEX00. The defaults are currently TRBUFF=20, TRSIZE=400K. TRSIZE=200K usually allows tracing of three to four concurrent threads at the SQL level; however, the defaults should be increased for the following conditions:

- Most tracing is of online transactions, where many concurrent threads must be traced
  - Increase TRBUFF to three times the expected number of threads
- Most tracing is of long-running applications, or more event types are often traced (SCANS, I/O, LOCKS)
  - Increase TRSIZE to 400K (and reduce TRBUFF if possible)

You need to balance all these parameters to control total storage usage. Review TRLIM to ensure that it allows for the allocations caused by the revised STORAGE, TRBUFF, and TRSIZE parameters.

- Adjust the default for trace log data set size

Increase TRCYL (default is three cylinders) when longer detail traces with many events per thread are run frequently (long-running jobs/extra event types). For this type of trace, logging is recommended. Without logging, data capture per thread is limited to two buffers of TRSIZE. With logging, multiple buffers can be written per thread and combined automatically when recalled online or printed. Note that some data can be lost for one thread if events span two data sets.

---

## Customizing Background Processing

This section describes how to customize the background processing for product functions set up by the administrator to run continuously without user intervention. This includes

- Exceptions and runaway query messages
- DB2 message logging
- Early warning monitors

**Note:** Workload history traces are described in [“Setting Up Standard Traces for Workload History” on page 35](#).

Parameter specifications in the DMRBEX00 member of the BBPARM data set customize the first two features, which are activated at BBI-SS PAS startup. To change any of the exception processing criteria when a BBI-SS PAS is active, edit the DMRBEX00 member and then issue the following BBI control command:

```
.RESET PARM DMRBEX00
```

to activate the changes. (See the *MAINVIEW Administration Guide*.)

## Controlling Exception Messages from Background Samplers

Background sampling is used to detect exception conditions in critical DB2 system resources (such as the logs or buffer pools) and also to detect thread exceptions during execution (runaway queries) that could be serious enough to impact DB2 performance.

Exception messages are shown on the DB2 Exception panel (DB2EX service) while the condition exists, and are displayed chronologically on the LOG DISPLAY.

By default, exceptions are activated. To control the number and type of exceptions for which the background sampler scans, specify the criteria for any background sampler message in BBPARM member DMRBEX00. For any specified target (the default is the first target defined in BBPARM member BBIJNT00), you can inactivate or control the conditions for a specific message. In this example:

```
TARGET=DB2X
MSG=DZ0630W , CPUTOT=2000 , GPTOT=1000 , CYCLES=3
```

if a TSO query is using more than 2 seconds of CPU time or if there are more than 1000 GETPAGES and if either or both of these two conditions have been true for the last four cycles, the message DZ0630W identifying that TSO user is displayed on the DB2 EXCEPTION panel and on the associated BBI-SS PAS's LOG DISPLAY panel.

**Note:** At present, a cycle is defined as approximately 5 seconds.

See BBPARM member DMRBEX00 for a complete description of options and syntax, and DMRBEXBB for definitions of each exception condition. DMRBEX00 also includes instructions for disabling a particular message or message threshold. See “Part 4. Monitors — Background Exception Sampler” in Volume 2 of the *MAINVIEW for DB2 User Guide* for a list of all exception messages and a description of the conditions being detected.

## Restarting Background Samplers

You must restart your MAINVIEW for DB2 background samplers if they have stopped. To check on the status of the samplers and restart them:

1. Select Option 3 from the Primary Option Menu or type =3 on any COMMAND line to display the Active Timer Requests panel.
2. Type BG ON on the COMMAND line to display the background samplers on the Active Timer Requests panel. Scroll right to see the request status, as shown in [Figure 1](#).

```

BOOLE AND BABBAGE ----- ACTIVE TIMER REQUESTS ----- PERFORMANCE MGMT
COMMAND ==> BG ON TGT ==> DB2A

LC CMDS: S(SELECT), W(SHOW), M(MODIFY), P(PURGE), R(REPLICATE), H(HELP) <<<
LC SERV PARM TITLE USER ID TARGET SEC AREA STAT
 EXCA DB2 BACKGROUND MONITOR BK-GRND DB2A ACTV
 ACTVE DB2 BACKGROUND MONITOR BK-GRND DB2A ACTV
 QJST DB2 BACKGROUND MONITOR BK-GRND DB2A ACTV
 QTXA DB2 BACKGROUND MONITOR BK-GRND DB2A ACTV
 QBST DB2 BACKGROUND MONITOR BK-GRND DB2A ACTV
 UCPU DB2 BACKGROUND MONITOR BK-GRND DB2A ACTV
***** END OF REQUESTS *****

```

Figure 1. Active Timer Requests Panel

3. Determine whether any background samplers need to be restarted.

The STAT column indicates the status for each sampler. A sampler must be restarted if its status is one of the following:

INV      INValid. The request terminated because of an invalid parameter or measurement. Or, it may have timed out because of system overload.

LOCK     LOCKed by the LOCK command or the service ABENDED.

4. Use the line command E (rEstart) to restart a stopped sampler.
5. To remove the background samplers from the Active Timer Requests display, type BG OFF.

## Logging DB2 Messages

All DB2 messages issued to the system console from selected target DB2 subsystems can be captured and written to the BBI-SS PAS Journal log. This function is defined in BBPARM member DMRBEX00. The default is to not capture the DB2 messages (LOG=NO). To activate their capture for a specified target, specify LOG=YES. For example,

```
TARGET=DB2X
LOG=YES
TARGET=DB2Y
LOG=NO
```

logs the messages from DB2X and not from DB2Y.

**Note:** This cannot be changed dynamically, because it is queried only at initialization time. The RESET command does not change this parameter.

To process the DB2 messages when an AutoOPERATOR product is installed with MVDB2, specify rules with

```
ORIGIN=DB2
```

## Setting Up and Refining Standard Early Warning Monitors

Monitors are timer-driven services that measure key DB2 resource or workload variables over time. Exception conditions are detected based on user-specified thresholds, which allow early warning of system problems. Recent history of the measurements is kept online for trend analysis. Warning messages are sent to the DB2 Exception panel (DB2EX service) and to the LOG DISPLAY, just like the background sampler exceptions.

A standard set of monitors can be defined to be automatically started per DB2 subsystem. The BBIISP00 member of BBPARM allows the specification of another BBPARM member containing a block of predefined monitor and trace requests. The standard customization steps in AutoCustomization, or the manual procedures described in the *MAINVIEW Common Customization Guide*, define a sample set of monitors to be activated (member BLKDMRW).

After these monitors have been activated and have collected sufficient history, the warning thresholds should be reviewed and adjusted for each DB2 target, so that the proper exceptions will be triggered, as follows:

1. Select the plot of recent history for each active monitor from the Active Timer Requests panel (Option 3).
2. Compare the threshold (shown with a vertical line of Ws if defined) to the average values measured (top three lines of the graph), and also to the maximum ever measured (shown at the bottom of the graph, either alone or as the highest value in the range distribution).
3. Adjust the threshold so that a warning is triggered only when the condition is serious enough to warrant attention.

There are other monitor services that could be added over time to the standard set. As other problem conditions are encountered in DB2 or the system profile changes, spend a few minutes on prevention by reviewing the available monitors and background samplers to define an early warning that could reduce or avoid future occurrences of system degradation.

## Creating Alerts from Monitor Exception Messages

MAINVIEW provides Alert views that consolidate exception messages from multiple products, and include user-defined alarms (MAINVIEW Alarm Manager) and MAINVIEW AutoOPERATOR alerts. If MAINVIEW AutoOPERATOR is not used to post MAINVIEW for DB2 exception messages as alerts, you can request that MAINVIEW for DB2 create the alerts automatically, including both monitor and background monitor exceptions. This request is made per DB2 with the ALERTQ operand on the TARGET statement in the BBPARM member BBIISP00. For more information about this statement, see the *MAINVIEW Common Customization Guide*.

Alerts are posted to the views by using the specified queue name, and the alert is automatically removed when the warning condition is resolved. By choosing an alert queue name that can be used consistently for both MAINVIEW for DB2 monitors and alarms, such as “DB2” or “MVDB2,” you can focus on just the DB2 messages in that queue when needed. Each alert entry shows the exception message and provides a hyperlink to a related view to simplify analysis of the problem that is causing the alert.

**Note:** If these exception messages are already being processed into alerts by MAINVIEW AutoOPERATOR rules for Journal messages, this parameter is not needed. Specifying it could cause duplicate alerts.

---

## Customizing DB2 Services

DBI has a modular, table-driven design so you can more easily tailor DB2 to meet specific needs. This section describes how to modify the analyzer, monitor, and trace services. The focus of this section is on security—how to restrict which services a user sees.

### Modifying a Service

The services are defined in service tables that specify their characteristics. You can modify service characteristics dynamically by altering the service table entries. Service tables are located in BBLINK library load modules.

Use BBPARAM member IMFSTD00 (service table definition member) to change the characteristics of any service. Any changes placed in IMFSTD00 are used to dynamically modify services when your system is started.

The two characteristics that can be changed are the security and title specifications. See [“Security for Analyzer, Monitor, and Trace Services” on page 64](#) before changing these specifications.

**Note:** You can restrict users to see only those services they are allowed to access. This restriction enhances security by simplifying the choices presented to the user. BBSAMP member DMRSTD00 is an example of how to set up the security codes by DB2 functional area (such as user activity or buffer pools) and relate these codes to user groups (such as DBAs or system programmers). See [“Service Selection Lists by User Group” on page 64](#).

### Service Table Definition

Use BBPARAM member IMFSTD00 to change the specifications of existing services. The following rules apply when creating IMFSTD00:

- A BBIPARM DD statement must exist in the BBI-SS PAS jobstream and it must contain the member IMFSTD00.
- All 80 columns of each statement may be used for specifying the various keywords and their values. Sequence numbers may be placed in columns 73 to 80, but there must be at least one blank between the last specification and the sequence number.
- All the keywords needed to modify a given service can be specified either on one statement or split over multiple statements.
- A specific keyword and its value or values must be contained in the same specification statement.
- Comments are designated with an asterisk (\*) in column 1. Comment statements can be interspersed with specification statements.
- Comments are allowed within specification statements if one blank separates the specification from the comment.
- Commas can be used as delimiters in statements; leading blanks are ignored.
- The REQUEST keyword must appear first in a statement and must be followed immediately by the SERVICE keyword and then by the DB2REL keyword.

- If any syntax errors are found in a request to modify a service, the accepted keywords up to the error are used to execute a partial change to the service table.

Table 6 lists the valid keyword parameters for IMFSTD00 and describes the syntax for each.

Table 6. Service Table Keywords and Parameters

| <b>Keyword</b> | <b>Keyword Description</b>                                  | <b>Parameters</b>                                                                                                                                                          |
|----------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REQUEST        | Identifies the start of a new service table entry change.   | MODIFY Specifies that an existing service definition is to be changed.                                                                                                     |
| SERVICE        | Identifies the name of the service to be modified.          | xxxxx Specifies a 1- to 5-character service name. It must be an existing service name.                                                                                     |
| DB2REL         | Identifies the release level of the service to be modified. | nnnn Specifies the DB2 release as 0310 (DB2 3.1), 0410 (DB2 4.1), 0510 (DB2 5.1), or 0610 (DB2 6.1). This parameter is required and must follow the SERVICE parameter.     |
| TITLE          | Identifies the title to be given to a service.              | x.....x Specifies a 1- to 24-character title, which changes the existing title. Begin and end the title with single quotation marks if it contains blanks or commas.       |
| ACCESS         | Identifies the access code required to use this service.    | A Any alphabetic character A through Z. Specifies the access code that is matched with the user's authorized access code. See the PMACC= keyword in BBPARM USERID members. |

For example:

```
REQUEST=MODIFY , SERVICE=DB2EX , DB2REL=0220 , ACCESS=B
```

changes the security access code of an existing service.

---

## Customizing Performance Reporter

To produce batch reports, you must first customize the MAINVIEW for DB2 Performance Reporter component. This task includes running jobs to extract data from SMF, run reports from the extracted data, and load, manage, and report from data in DB2 tables.

**Note:** To use the new Data Collector batch reporting facilities, no initial customization is required. See “Data Collector Reporting Facilities” in the *MAINVIEW for DB2 Performance Reporter User Guide* for information on producing these batch reports. For information about how to set up archiving of the Data Collector trace data sets for use as input to batch reporting, see the *Performance Activity Products Administrator Guide*.

BMC Software provides AutoCustomization procedures, described in the *OS/390 and z/OS Installer Guide*, so that you can tailor your product automatically. This is the **preferred method**. The Performance Reporter is defined as a separate AutoCustomization dialog to simplify its use whenever you are ready to set up your batch processing.

This section describes the steps for tailoring your product manually. If you need any help during AutoCustomization, refer to the manual customization step described in this section. If you have installed your product using AutoCustomization, you do not need to read this section

[Appendix C, “Estimating Storage for Performance Reporter Data” on page 73](#) describes how to determine the storage needed for statistics and accounting data. [Table 7](#) briefly lists each of the customization steps.

Table 7. Performance Reporter Customization Checklist

|     |     |                                                                    |
|-----|-----|--------------------------------------------------------------------|
| ___ | 1.  | Specify operational defaults, page <a href="#">46</a>              |
| ___ | 2.  | Specify Performance Reporter defaults, page <a href="#">47</a>     |
| ___ | 3.  | Obtain SYSADM/SYSCTRL privilege, page <a href="#">47</a>           |
| ___ | 4.  | Define STOGROUP usage (DPCSTOW), page <a href="#">48</a>           |
| ___ | 5.  | Define database usage (DPCDB), page <a href="#">49</a>             |
| ___ | 6.  | Generate CREATE TABLE statements, page <a href="#">50</a>          |
| ___ | 7.  | Create DB2 objects (DPJCREAT), page <a href="#">54</a> .           |
| ___ | 8.  | Migrate DB2 Tables, page <a href="#">55</a> .                      |
| ___ | 9.  | Bind the processing plan (DPJBIND), page <a href="#">56</a>        |
| ___ | 10. | Bind the reporting plan (JXRPBIND), page <a href="#">57</a>        |
| ___ | 11. | Tailor extract/summarization JCL (DPRSMF), page <a href="#">58</a> |
| ___ | 12. | Tailor summarization JCL (DPRSUM), page <a href="#">59</a>         |
| ___ | 13. | Tailor report JCL (DPRREPT), page <a href="#">60</a>               |
| ___ | 14. | Set up QMF queries (DZPRQINS), page <a href="#">61</a>             |

### Data Set Usage

AutoCustomization creates UBBPARM and UBBSAMP data sets that are copies of the distributed BBPARM and BBSAMP. (See [“Using Product Libraries” on page 23.](#)) Modifications made to members in these user libraries are not overlaid by later maintenance to the SMP target libraries. If you are customizing your product manually, you should create UBBPARM and UBBSAMP data sets and copy BBPARM to UBBPARM and BBSAMP to UBBSAMP.

### DB2 Object Names

The sample members used in the following steps are set up using default DB2 object names. If you change any of these names to follow site conventions, you must change every occurrence of that object name in other sample members. Each step creating an object refers to the other members where this name is used. However, the easiest way to ensure that all occurrences are changed is to use the provided utility (DZPRUCNV) that scans the required data sets and changes all identified text strings. To use this program, modify the DZPRUPRM and DZPRUJCL samples in UBBSAMP. (See [“Using Product Libraries” on page 23.](#))

DZPRUJCL      Modify the JCL in DZPRUJCL to site standards.

DZPRUPRM      This sample contains change statements for each object name, which are initially set up as

```
OLD=default-object-name,NEW=default-object-name
```

You need to update only the NEW keyword value to specify the object name you want. You can read through the steps and specify all the changes at once or run the utility as many times as you want, specifying one or more changes to be made. This utility can also be used to modify job defaults in each of the following definition jobs; for example, DB2 subsystem ID.

You need to change P=NOWRITE to P=WRITE on the DZPRUJCL PROC statement to cause updates to occur.

## Step 1: Specify Operational Defaults

This step defines the parameters needed for the allocation of all jobs used for MAINVIEW for DB2. If this step was done during AutoCustomization for MAINVIEW for DB2, a COMPLETED status is shown. A COMPLETED status means you do not need to go through this step.

## Step 2: Specify PERFORMANCE Defaults

This step defines the parameters needed for dynamic allocation of other jobs used during Performance Reporter customization.

1. As an option, create a member containing a valid JCL job card in a data set that is not a BMC Software product target or distribution library, such as UBBSAMP.

This member can then be added to each sample job used for Performance Reporter customization as instructed in the steps that follow.

2. Define a unit ID for temporary data set allocation parameters and a unit ID for permanent data set allocation parameters.

## Step 3: Obtain SYSADM/SYSCTRL Privilege

1. Obtain the necessary privileges on the DB2 system that is to contain the DB2 objects referenced in the following steps.

## Step 4: Define STOGROUP Usage

You have various options for STOGROUP usage:

- Create a new STOGROUP for Performance Reporter.
  1. Edit member DPCSTOW in UBBSAMP.
    - a. Replace the characters, STVLQQ, to specify one (or more) VOLSER.
    - b. Replace Y characters with the high-level index name (VCATNAME) for the VSAM data sets to be created by DB2.
    - c. Change the STOGROUP default DMRPRSG1 name to site conventions if necessary.

If you change the STOGROUP name here, specify the same STOGROUP name in the samples used in [“Step 5: Define Database Usage” on page 49](#) and [“Step 6: Generate CREATE TABLE Statements” on page 50](#).

- Use an existing STOGROUP.

Specify the STOGROUP name, using the DZPRUCNV utility with the DZPRUJCL and DZPRUPRM samples.

**Note:** If you use AutoCustomization, an empty member, DPCSTOW, is created in the UBBSAMP data set. If you do not use AutoCustomization, all DPCSTOW references in the following steps must be deleted manually.

- Do not use a STOGROUP.

Define all data sets for table spaces outside the context of DB2 with IDCAMS DEFINE statements for VSAM clusters using the proper DB2 naming conventions.

**Note:** If you use AutoCustomization, an empty member, DPCSTOW, is created in the UBBSAMP data set. If you do not use AutoCustomization, all DPCSTOW references in the following steps must be deleted manually.

- Use the default DB2 STOGROUP.

**Note:** If you use AutoCustomization, an empty member, DPCSTOW, is created in the UBBSAMP data set. If you do not use AutoCustomization, all DPCSTOW references in the following steps must be deleted manually.

## Step 5: Define Database Usage

This step defines a unique database for the Performance Reporter tables. Use one of these options:

- Create a new database for Performance Reporter.
  1. Edit member DPCDB in UBBSAMP.
    - a. If you changed the STOGROUP name in “[Step 4: Define STOGROUP Usage](#)” on [page 48](#), change the STOGROUP name in this sample to the same name.
    - b. Optional. Change the default DMRPRDB1 database name to conform to your site’s naming conventions if necessary.

To change the default name to your site standards, use the DZPRUCNV utility with the DZPRUJCL and DZPRUPRM samples.
- Use an existing database.

**Note:** If you use AutoCustomization, an empty member, DPCDB, is created in the UBBSAMP data set. If you do not use AutoCustomization, all DPCDB references in the following steps must be deleted manually.
- Use the default DB2 database.

**Note:** If you use AutoCustomization, an empty member, DPCDB, is created in the UBBSAMP data set. If you do not use AutoCustomization, all DPCDB references in the following steps must be deleted manually.

## Step 6: Generate CREATE TABLE Statements

This step generates the CREATE statements for the tables, table spaces, and indexes required for Performance Reporter.

- Optional. Change the default names in the samples shown in [Table 8](#) to conform to your site's naming conventions if necessary (see [“Using Product Libraries” on page 23](#)).

To change the default names to your site standards, use the DZPRUCNV utility with the DZPRUPRM and DZPRUJCL samples.

**Note:** For those users who are migrating from a previous release, the DMRABDTL, DMRABSM2 and DMRABSUM tables have been added with new detail and summary accounting buffer records.

Table 8. List of Performance Reporter Tables

| Default Table Name Description                     | Default Table Space Name | Create Table Member (UBBSAMP) | Report Members (BBPARM) | QMF Members (BBSAMP)                         |
|----------------------------------------------------|--------------------------|-------------------------------|-------------------------|----------------------------------------------|
| DMRPR.DMRACDTL (detail accounting table)           | DMRPRTAD                 | DPCTACDT                      | ACxxxxxx                | QACxxxxx                                     |
| DMRPR.DMRACSUM (summary accounting table)          | DMRPRTAS                 | DPCTACSM                      | SAxxxxxx                | QSAxxxxx                                     |
| DMRPR.DMRACSM2 (summary-2 accounting table)        | DMRPRTA2                 | DPCTACS2                      | SAxxxxxx                | QSAxxxxx                                     |
| DMRPR.DMRABDTL (detail buffer accounting table)    | DMRPRTID                 | DPCTABDT                      | ACxxxxxx                | QACxxxxx                                     |
| DMRPR.DMRABSUM (summary buffer accounting table)   | DMRPRTIS                 | DPCTABSM                      | SAxxxxxx                | QSAxxxxx                                     |
| DMRPR.DMRABSM2 (summary-2 buffer accounting table) | DMRPRTI2                 | DPCTABS2                      | SAxxxxxx                | QSAxxxxx                                     |
| DMRPR.DMRADDTL (detail DDF accounting table)       | DMRPRTDD                 | DPCTADDT                      | ACxxxxx                 | QACCPDFx<br>QACCPFFA<br>QACDDFxx<br>QACOVDfx |
| DMRPR.DMRADSUM (DDF summary accounting table)      | DMRPRTDS                 | DPCTADSM                      | SAxxxxxx                | QSACPDFx<br>QSADDFLx<br>QSADDFRx<br>QSAOVDFx |
| DMRPR.DMRADSM2 (DDF summary-2 accounting table)    | DMRPRTD2                 | DPCTADS2                      | SAxxxxxx                | QSACPDFx<br>QSADDFLx<br>QSADDFRx<br>QSAOVDFx |
| DMRPR.DMRAPDTL (detail package accounting table)   | DMRPRTPD                 | DPCTAPDT                      | ACxxxx                  | QACxxxx                                      |

Table 8. List of Performance Reporter Tables (Continued)

| <b>Default Table Name Description</b>                           | <b>Default Table Space Name</b> | <b>Create Table Member (UBBSAMP)</b> | <b>Report Members (BBPARM)</b> | <b>QMF Members (BBSAMP)</b> |
|-----------------------------------------------------------------|---------------------------------|--------------------------------------|--------------------------------|-----------------------------|
| DMRPR.DMRAPSUM (package summary accounting table)               | DMRPRTPS                        | DPCTAPSM                             | SAxxxx                         | QSAxxxx                     |
| DMRPR.DMRAPSM2 (package summary-2 accounting table)             | DMRPRT2                         | DPCTAPS2                             | SAxxxx                         | QSAxxxx                     |
| DMRPR.DMRSTAT (detail statistics table)                         | DMRPRTSS                        | DPCTST                               | STxxxxxx                       | QSTxxxxx<br>QSTOVRxx        |
| DMRPR.DMRBFDFT (detail buffer statistics table)                 | DMRPRTBD                        | DPCTBFDFT                            | STxxxxxx                       | QSTxxxx                     |
| DMRPR.DMRSTDF (DDF statistics table)                            | DMRPRTSF                        | DPCTSD                               | STOVDFT<br>STOVRxx             | QSTOVDFT<br>QSTOVRxx        |
| DMRPR.DMRAUSUM (audit summary table)                            | DMRPRAUS                        | DPCTAUSM                             | AUSUM<br>AUDTL                 | QAUSUM<br>QAUDTL            |
| DMRPR.DMRAUFAL (authorization failures table)                   | DMRPRAUF                        | DPCTAUFL                             | AUFAIL                         | QAUFAIL                     |
| DMRPR.DMRAUGRV (authorization control - GRANTs / REVOKEs table) | DMRPRAUG                        | DPCTAUGR                             | AUDGRV                         | QAUDGRV                     |
| DMRPR.DMRAUDDL (DDL access table)                               | DMRPRAUD                        | DPCTAUDL                             | AUDDL                          | QAUDDL                      |
| DMRPR.DMRAUDML (DML access table)                               | DMRPRAUM                        | DPCTAUDM                             | AUDML                          | QAUDML                      |
| DMRPR.DMRAUDMB (DML at BIND table)                              | DMRPRAUB                        | DPCTAUSB                             | AUDMLB                         | QAUDMLB                     |
| DMRPR.DMRAUCHG (authorization ID change table)                  | DMRPRAUC                        | DPCTAUCH                             | AUCHNG                         | QAUCHNG                     |
| DMRPR.DMRAUUTL (utility access table)                           | DMRPRAUU                        | DPCTAUUT                             | AUUTIL                         | QAUUTIL                     |

2. If you changed the STOGROUP name in “[Step 4: Define STOGROUP Usage](#)” on page 48, change the STOGROUP name in these sample members to the same name.

### 3. Customize the table definitions.

The following table customization applies to all tables, both detail and summary.

#### a. Determine the data you do not want stored, such as

- Entire tables not used at your site

For example, the detail accounting table does not need to be created if you summarize accounting data and only load summary data.

- DDF data

If your site does not use DDF or DRDA, you do not need to create any DDF tables or reports.

- Package accounting data

If your site does not run with accounting trace class 7/8 active, you do not need to create any package accounting tables.

- Data collected by Performance Reporter that is not used in any Performance Reporter reports and that is not needed for special reports at your site

“Part 3. Performance Data Tables” of the *MAINVIEW for DB2 Performance Reporter User Guide* describes the data used in the Performance Reporter reports.

- Columns in Performance Reporter tables that are meaningful only if data sharing is used at your site
- Columns in Performance Reporter tables not used for reporting at your site
- COMMENT ON statements for Performance Reporter columns
- CREATE INDEX columns not used in any sample reports

#### b. Use the samples starting with a DPCT prefix (TABLE CREATE members) to remove

- Unwanted tables

Remove the utility statements that create the table, table space, and table index, and grant SELECT ACCESS to that table to PUBLIC.

**Note:** The member names must also be removed in the DPJCREAT sample (see “[Step 7: Create DB2 Objects](#)” on page 54).

- Columns not used in any distributed report

In each member, there is a column name, DMRAUTOCUST, that marks the beginning of optional columns for that table. AutoCustomization uses this to delete the remaining column definitions if you request only the columns used in the distributed reports.

- Data sharing and global locking columns

In each member, there is a column name, DMRACTSHARE, that marks the beginning of data sharing and global locking columns for that table. AutoCustomization uses this to delete the columns up to the DMRAUTOCUST column definition if you request to exclude data sharing columns.

- Unwanted columns

Remove the control statement that creates the column name.

**Note:** If you remove a column name, you must also remove the corresponding COMMENT ON statement.

This table customization applies to all tables, both detail and summary.

**Note:** New column names are *not* supported. While it is possible to remove existing columns, it is not possible to add new ones.

- COMMENT ON statements

Remove any or all COMMENT ON statements. AutoCustomization can optionally remove all COMMENT ON statements for you.

- Unused CREATE INDEX columns

In each member, there is a CREATE INDEX statement with index column names. Index column names after DATETIME are not used in any sample Performance Reporter reports and may be removed if not used by any special reports at your site. Any index column names preceding and including DATETIME must be kept to avoid duplicate keys in Performance Reporter processing. AutoCustomization can optionally remove unused CREATE INDEX statement column names for you.

c. Examine the space allocations done by each DPCTxxxx sample for compatibility with your expected volumes.

d. COMPRESS YES is specified. Review for applicability in your environment.

## Step 7: Create DB2 Objects

This step submits a job to execute the CREATE statements for the DB2 objects generated in the preceding steps.

1. Edit member DPJCREAT in UBBSAMP and run DBJCREAT on the same DB2 system where the objects are to be created:

**DPJCREAT** Is a two-step allocation job. The first step allocates a spin file for the SMF Extractor job. The second step defines the storage group, database, table spaces, tables, and indexes used to store the performance data. And, DPJCREAT also grants SELECT authority to PUBLIC.

- a. Add your job statement.
- b. Change the HIDP parameter to the high-level qualifier of your BMC Software product libraries.
- c. Verify that the HIDB2 parameter is the correct prefix for your DB2 library names.
- d. Specify the UNIT and VOL parameters. These parameters are used to allocate a small permanent data set used by the SMF extractor.
- e. Submit the job.

## Step 8: Migrate DB2 Tables

**Note:** No migration is necessary for data tables that were created in MAINVIEW for DB2 7.1. Migration is necessary only for those data tables that were created in MAINVIEW for DB2 6.1.

This step optionally submits jobs to migrate existing Performance Reporter accounting and statistics tables to the new release of MAINVIEW for DB2.

Steps to load DB2 tables use the DB2 Load Utility, DSNUTILB. You must modify your JCL if your installation uses a different utility. The utility must be able to interpret LOAD control statements in the same format that DSNUTILB uses.

**Note:** AutoCustomization includes an optional step to migrate data from MAINVIEW for DB2 6.1 tables to MAINVIEW for DB2 7.2 tables. Use of ALTER is not supported.

1. Migrate existing Performance Reporter tables to new Performance Reporter tables using the following job:

**DPJMIGR** Is a four-step job. The first step unloads data from existing DB2 tables. The second and third steps convert the data to new formats. The final step loads data into new DB2 tables.

- a. Edit member DPJMIGR in UBBSAMP.

- b. Run on DB2 system(s) with existing Performance Reporter tables and new Performance Reporter tables.

**Note:** You may need to split DPJMIGR into two jobs if the DB2 systems are not on the same MVS system.

Be very careful to specify the parameters and control statements correctly to match your “FROM” and “TO” systems. The old MAINVIEW for DB2 version must be used in the UNLOAD step to correctly process the previous format of the tables. The new MAINVIEW for DB2 version must be used to create the load statements for the LOAD into the new tables.

Depending on which DB2 subsystems are being accessed in the steps, the DB2 version may be the same or different. The DB2 SDSNLOAD must match the accessed DB2 at each stage (see parameters FROMDB2 and TODB2). You must specify the control statements in the UNLOAD step to select the originating DB2 and select which data you want. The parameter LDSYS in the procedure defines the target DB2 subsystem for the LOAD.

## Step 9: Bind the Processing Plan

This step binds the plan that processes all performance data (SMF extract, summarization, or purge).

1. Edit members DPJBIND in UBBSAMP and bind the processing plan using these jobs:

DPJBIND            Binds the summary/purge program defined by DPCBIND.

- a. Add your job statement.
- b. Update the symbolics as necessary.
- c. Submit the job.

**Note:** This job must be rerun when maintenance is applied that changes the DBRMs DPSPURGD or DPSQLDAD. Any such maintenance has a HOLD FOR ACTION code requesting that the bind job be run.

## Step 10: Bind the Reporting Plan

This step binds the plan that produces reports.

1. Edit member JXRPBIND in UBBSAMP and bind the reporting plan using this job:

JXRPBIND      Binds the report program and grants execute authority for the reporting plan to public.

- a. Add your job statement.
- b. Update the symbolics as necessary.
- c. Update the name of the DB2 system using the SYSTEM parameter in the DSN command.
- d. Verify the plan name for program DSNTIAD in the RUN statement.
- e. Submit the job for DBRM JXRDSQL.

**Note:** This job must be rerun when maintenance is applied that changes DBRMs, DPSPURGD, or DPSQLDAD. Any such maintenance has a ++HOLD . . . REASON(ACTION) . . . code indicating that after updating, the bind job must be run.

## Step 11: Tailor Extract/Summarization JCL

This step tailors the SMF extract and summarization job, DPRSMF.

1. Edit member DPRSMF in UBBSAMP to tailor DPRSMF for your periodic production (see the *MAINVIEW for DB2 Performance Reporter User Guide* for a description of DPRSMF). Accounting records can be loaded in summary and/or detail tables.

Steps to load DB2 tables use the DB2 Load Utility, DSNUTILB. You must modify your JCL if your installation uses a different utility. The utility must be able to interpret LOAD control statements in the same format that DSNUTILB uses.

- DPRSMF            Is a run time job that extracts accounting and statistics records from SMF, reformats them, and loads them into DB2.
- a. Add your job statement.
  - b. Change the HIDP parameter to the high-level qualifier of your BMC Software product libraries.
  - c. Verify that the HIDB2 parameter is the correct prefix for your DB2 library names.
  - d. Specify the data set name of the unloaded SMF data set for the SMF parameter.
  - e. Specify the UNIT name to allocate temporary work space.
  - f. Specify the target DB2 system for the SYSTEM parameter.
  - g. Specify the ID of a DB2 load utility for the UID parameter.
  - h. Change the value of the SSID parameter to the target DB2 subsystem ID in the first input control statement for Step 3 of the procedure.
  - i. Modify the table name if changes are made in [“Step 6: Generate CREATE TABLE Statements”](#) on page 50.
  - j. Modify tablespace and database name in REPAIR step if changes are made in [“Step 5: Define Database Usage”](#) on page 49 or [“Step 6: Generate CREATE TABLE Statements”](#) on page 50.

## Step 12: Tailor Summarization JCL

This job tailors the optional summarization job, DPRSUM. DPRSUM can be used to purge old data from the performance tables.

1. Edit member DPRSUM in UBBSAMP to tailor DPRSUM for your periodic production (see the *MAINVIEW for DB2 Performance Reporter User Guide* for a description of DPRSMF). Accounting records can be loaded in summary and/or detail tables.

Steps to load DB2 tables use the DB2 Load Utility, DSNUTILB. You must modify your JCL if your installation uses a different utility. The utility must be able to interpret LOAD control statements in the same format that DSNUTILB uses.

- |        |                                                                                          |
|--------|------------------------------------------------------------------------------------------|
| DPRSUM | Summarizes accounting data and/or purges outdated data from the performance data tables. |
|--------|------------------------------------------------------------------------------------------|
- a. Add your job statement.
  - b. Change the HIDP parameter to the high-level qualifier of your BMC Software product libraries.
  - c. Verify that the HIDB2 parameter is the correct prefix for your DB2 library names.
  - d. Specify the UNIT name to allocate temporary work space.
  - e. Specify the target DB2 system for the SYSTEM parameter.
  - f. Specify the ID of a DB2 load utility for the UID parameter.
  - g. Examine and change the control statements as necessary to implement your data storage strategy.
  - h. Modify the table name if changes are made in [“Step 6: Generate CREATE TABLE Statements”](#) on page 50.

## Step 13: Tailor Report JCL

This job produces all the Performance Reporter reports. Delete any reports you do not want.

1. Edit member DPRREPT in UBBSAMP to tailor DPRREPT for your periodic production (see the *MAINVIEW for DB2 Performance Reporter User Guide* for a description of DPRSMF).

- |         |                          |
|---------|--------------------------|
| DPRREPT | Runs the reporting jobs. |
|---------|--------------------------|
- a. Add your job statement.
  - b. Change the HIDP parameter to the high-level qualifier of your BMC Software product libraries.
  - c. Verify that the HIDB2 parameter is the correct prefix for your DB2 library names.
  - d. Specify the UNIT name to allocate temporary work space.
  - e. Adjust the list of reports as needed for your site. The default generates all the Performance Reporter predefined reports.
  - f. Specify the target DB2 system for the SYSTEM parameter.
  - g. Modify the table names if changes are made in [“Step 6: Generate CREATE TABLE Statements” on page 50.](#)
  - h. Delete unwanted reports.
  - i. For information about batch verification, see [“Batch Verification” on page 62.](#)

## Step 14: Set Up QMF Queries

This step loads the sample Performance Reporter queries, forms, and procedures into your QMF environment if you are using QMF.

1. Edit member DZPRUQMF in UBBSAMP to conform to site standards, change the table creator, change any table names changed in “[Step 6: Generate CREATE TABLE Statements](#)” on page 50, and submit the job.

You need to add statements to INPRMLST for any table names changed. For example,

```
OLD=DMRACDTL , NEW=DMRACCTDTL
```

will change all occurrences of DMRACDTL to DMRACCTDTL in QMF queries.

2. If you have installed Performance Reporter QMF queries, forms, and procedures previously, use QDELETE to delete them:
  - a. Copy QDELETE from BBSAMP to UBBSAMP.
  - b. Edit QDELETE to use the same owner name used in a previous Performance Reporter install.
  - c. Enter QMF and import the delete procedure, DZPRQDEL, from BBSAMP.

Use the command:

```
IMPORT PROC FROM 'hilevel.BBSAMP(DZPRQDEL)'
```

- d. Use the EDIT PROC command to change the high-level data set qualifiers to meet your site's requirements.
- e. Press PF2 to run the procedure, or type the command:

```
RUN PROC
```

3. Enter QMF and import the install procedure, DZPRQINS, from BBSAMP.

Use the command:

```
IMPORT PROC FROM 'hilevel.BBSAMP(DZPRQINS)'
```

4. Use the EDIT PROC command to change the hilevel data set qualifiers to meet your site's requirements.
5. Press PF2 to run the procedure, or type the command:

```
RUN PROC
```

DZPRQINS imports all PERFORMANCE REPORTER objects (queries, forms, and procedures) necessary for QMF report generation. All objects are saved in QMF tables with the generic ownership ID DMRPR.

---

## Batch Verification

After the DPRSMF, DPRSUM, and DPRREPT jobs are tailored, as described on pages [58](#) through [60](#), they can be submitted and run as a verification job stream.

Running a verification job stream produces the three detail tables, one summary table, and a set of all distributed reports. The reports produced from the detail accounting data (reports ACxxxx) essentially are the same as those from the summary accounting data (reports SAxxxx).

---

## Chapter 4. Implementing Product Security

This chapter describes how to authorize access to MAINVIEW for DB2 services.

---

### Authorizing Security

MAINVIEW product security is enabled through the MVS system authorization facility (SAF) interface. SAF passes security requests to external security managers (ESMs). SAF security supports CA-ACF2, CA-TOP SECRET, or RACF.

Entity names define product resources that are secured by an ESM through the SAF interface. *Implementing Security for MAINVIEW Products* lists SAF entity names for MAINVIEW for DB2's full-screen services and actions in the section on Basic Security. Some are shared resources and are described in the section, "Securing Resources that Affect Multiple Products." This includes security for BBI-SS PAS resources like the journal, as well as control of DB2 commands, traces, and the display of SQL text. Look for all entries that list DMR as an affected product. There is also a section specifically for MAINVIEW for DB2 that describes how to control DB2 commands by command name.

Part 3, Enhanced Security, describes how to use Plex Manager security views to manage security parameter and resource class property members in the BBSECURE data set. This part includes a section on MAINVIEW for DB2 resources controlling access to windows mode table data and actions. Another section lists the MAINVIEW for DB2 views that access that table data.

---

## Security for Analyzer, Monitor, and Trace Services

Security access classes for analyzer, monitor, and trace services is defined in service tables that you can modify (see the ACCESS keyword in [“Service Table Definition” on page 43](#)).

The security level for each service is shown in the service selection applications that list analyzer and trace displays and data collection monitors.

Users are authorized to use the services through the PMACC resource (see *Implementing Security for MAINVIEW Products*).

### Service Selection Lists by User Group

The service list displays selected from the Primary Option Menu can be restricted to display only the services for which the user has authority. This applies to

- Option 2 (ANALYZERS)
- The SM (START MONITORS) primary command
- Option 3 (MONITORS)

BBSAMP member DMRSTD00 is an example of how to set up the service security codes by DB2 functional area, such as user activity or buffer pools. Each service is assigned a security code according to its area. USERID members can then be created either for groups (such as DBAs or system programmers) or individuals to access only specific services by listing one or more security code(s). If the corresponding security code is not defined in the user's authorization member, the user does not see those services on the service selection displays; however, they are displayed on the EXPAND selection bar.

The SERVLIST keyword in BBPARM member BBIISP00 determines whether or not this feature is activated. The value for SERVLIST can be ALL or RESTRICT. ALL is the default; users see all services on the list displays. RESTRICT specifies only those services for which a user is authorized.

# Command and Function Authorization

Users must be authorized to issue commands or use applications against a target DB2 subsystem.

Following is a summary of basic authorization resources for MAINVIEW for DB2. Most of these resources are also used by MVCICS and MVIMS. A description is in the “Basic Security” section of *Implementing Security for MAINVIEW Products*.

| <b>Parameter</b> | <b>Description</b>                                                                                                                  |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| PMACCx           | Service class authorization, global authorization, or request authorization (free, modify, purge, quiesce, reset, stop, or switch). |
| DB2CMD           | Authority to issue DB2 commands.                                                                                                    |
| TRACE.x          | Authority to start any trace (a summary trace only or a detail trace of a specified level).                                         |
| DB2TRACE.GENERIC | Authority to start a detail trace for the total workload.                                                                           |
| TRALLOC          | Authority to have the BBI-SS PAS dynamically allocate trace logs for this user.                                                     |
| DB2SQLxx         | Authority to display all SQL statements, no SQL text, or SQL text only of threads with a requestor’s user ID.                       |

There are also enhanced security resources that control access to windows mode data, commands, and views. There are resources for each table (data record) and its related group of views. There are also resources controlling the use of actions to issue OPERTUNE commands to change ZPARMs, and to activate or deactivate collection of SQL cache statistics. A description of these resources is in the “Enhanced Security” sections of *Implementing Security for MAINVIEW Products*.

---

## Thread Display Security Exit

In addition to the security provided by the DB2SQL keyword in the user ID members of the BBPARM data set, a security exit can also be coded. The exit can be coded in Assembler Language to set a return code to suppress the display of thread activity detail and/or SQL statement text in the Detail User Status (DUSER) and Application Trace displays. BBSAMP member DZSQLU can be used as a model. A message is displayed to indicate authorization failure.

The exit is loaded during BBI-SS PAS initialization and invoked before

- Current active thread information is displayed (DUSER and UTRAC)
- Trace summary services are displayed (LTRAC, TSTAT, and TSUMx)
- Trace thread services are displayed (STRAC and DTRAC)
- CANCEL THREAD command is processed (DUSER)

It is also invoked once at initialization and once at BBI-SS PAS termination to allow housekeeping.

## Environment

The exit must be coded and linked as reentrant (RENT). The load module must be called DZSQLU and be present in the BBLINK load library before the BBI-SS PAS is initialized. It is entered in Key 8, AMODE-31, problem state, and is ESTAE-protected by the BBI-SS PAS.

The exit can invoke another security routine, such as RACF or ACF2.

## Register Usage

On entry:

|        |                                                                                                                                              |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------|
| R0     | Contains one of three values to indicate the type of entry to the exit:                                                                      |
| 0      | Initialization call. A call is made to the exit during BBI-SS PAS initialization for exit setup. Only Word 1 of the parameter list is valid. |
| 4      | Authorization check. A call is made to the exit before each display of a thread by the DUSER or DTRAC services.                              |
| 8      | Termination call. A call is made to the exit during BBI-SS PAS termination for exit cleanup. Only Word 1 of the parameter list is valid.     |
| R1     | Contains the address of a nine-word parameter list (see <a href="#">“Parameter List” on page 67</a> ).                                       |
| R2-R12 | Unpredictable.                                                                                                                               |
| R13    | Contains the address of an 18-word save area to be used by the exit.                                                                         |
| R14    | Contains the return address.                                                                                                                 |
| R15    | Contains the entry point address of the module.                                                                                              |

On exit:

|       |                                                                              |
|-------|------------------------------------------------------------------------------|
| R15   | Contains a return code that is only checked for a type 4 call:               |
| 0     | Honor DB2SQL keyword parameter in BBPARM member USERID for SQL text display. |
| 4     | Display all data.                                                            |
| 8     | Suppress a display of SQL text.                                              |
| Other | Suppress a display of entire thread.                                         |

## Parameter List

The exit is entered with R1 addressing a nine-word parameter list:

|        |                                                                                                                               |
|--------|-------------------------------------------------------------------------------------------------------------------------------|
| Word 1 | Address of a fullword where the exit can store data between calls, such as the address of a control block.                    |
| Word 2 | Address of an 8-byte field containing the name of the plan executing the SQL statement.                                       |
| Word 3 | Address of an 8-byte field containing the authorization ID of the user executing the plan.                                    |
| Word 4 | Address of a 12-byte field containing the correlation ID.                                                                     |
| Word 5 | Address of an 8-byte field containing the connection name.                                                                    |
| Word 6 | Address of an 8-byte field containing the ID of the user requesting the display.                                              |
| Word 7 | Address of a 5-byte field containing the name of the service invoked, such as DUSER or DTRAC.                                 |
| Word 8 | Address of a 4-byte field containing the target DB2 system name.                                                              |
| Word 9 | Address of an 8-byte field containing the ID of the user starting the trace. This field is 0 for the DUSER and UTRAC service. |

**Note:** The fields addressed by Word 2 to Word 9 must not be modified by the exit. When this exit is invoked for the trace summary displays, LTRAC, TSTAT, and TSUMx, Words 2 to 5 are 0.



## Appendix A. BBSAMP Data Set Members

To help you understand and use your BMC Software product easily, the BBSAMP data set contains members that you can edit for your site's use. These members contain macros, sample JCL, sample user exit routines, and sample statements for a variety of functions.

Table 9 describes BBSAMP customization members for MAINVIEW for DB2.

Table 9. BBSAMP Data Set Customization Members for MAINVIEW for DB2

| BBSAMP Member Name               | Description                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FACxxxxx<br>FSAxxxxx<br>FSTxxxxx | QMF forms for Performance Reporter.                                                                                                                                                                                                                                                                                                               |
| DB2CMDxx                         | Samples for DB2 command security.                                                                                                                                                                                                                                                                                                                 |
| DMRSTD00                         | Sample service table definition to set up a security profile. In this example, each service is assigned a security code according to its functional area, such as user activity or buffer pool. Edit to reflect site-specific requirements. The authority granted to user IDs can then specify by security code which services a user can access. |
| DPxxxxxx<br>DZPRxxxx             | Sample members for Performance Reporter customization.                                                                                                                                                                                                                                                                                            |
| DPCTxxxx                         | Sample SQL to define table-related objects.                                                                                                                                                                                                                                                                                                       |
| DPTRACE                          | Sample utility for printing trace data in batch mode.                                                                                                                                                                                                                                                                                             |
| DZxxxxxx                         | Sample installation members for Performance Reporter.                                                                                                                                                                                                                                                                                             |
| DZJPxxxx                         | Sample report statements for trace print.                                                                                                                                                                                                                                                                                                         |
| DZSQLU                           | Sample thread display security exit.                                                                                                                                                                                                                                                                                                              |
| DZTBxxxx                         | Sample JCL to print, archive, and restore trace log data sets.                                                                                                                                                                                                                                                                                    |
| JXTnnnn                          | Sample batch jobs to set up and maintain the trace directory and trace log data sets.                                                                                                                                                                                                                                                             |
| QACxxxxx<br>QSAxxxxx<br>QSTxxxxx | QMF queries for Performance Reporter.                                                                                                                                                                                                                                                                                                             |
| DOMC                             | Sample CLIST that is customized and copied into BBCLIB to allow hyperlinks to Data Collector reports.                                                                                                                                                                                                                                             |
| DMRACT                           | Sample CLIST that is customized and copied into BBCLIB to allow hyperlinks to CATALOG MANAGER Browse displays.                                                                                                                                                                                                                                    |



---

## Appendix B. BBPARM Data Set Members

Table 10 lists sample members in BBPARM that can be used to define product default parameters, initiate background processing, and generate predefined Performance Reporter accounting and statistics reports.

Table 10. BBPARM Data Set Members for MAINVIEW for DB2

| <b>BBPARM Member Name</b> | <b>Description</b>                                                                                                                                                                                                        |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACxxxxxx                  | Performance Reporter SQL to generate accounting reports.                                                                                                                                                                  |
| SAxxxxxx                  | Performance Reporter SQL to generate summary accounting reports.                                                                                                                                                          |
| STxxxxxx                  | Performance Reporter SQL to generate statistics reports.                                                                                                                                                                  |
| BLKDMRW                   | This member contains a sample set of multiple timer-driven service requests. The member name is specified with the BLK parameter in BBPARM member BBIISP00 to activate the requested services when the BBI-SS PAS starts. |

Table 10. BBPARM Data Set Members for MAINVIEW for DB2 (Continued)

| <b>BBPARM<br/>Member Name</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DMRBEX00                      | <p>This member defines various parameters per DB2 target subsystem (TARGET):</p> <ul style="list-style-type: none"> <li>• All DB2 messages issued to the system console from that DB2 subsystem can be logged to the BBI-SS PAS Journal (LOG)</li> <li>• Background sampler exceptions <ul style="list-style-type: none"> <li>– Exception messages can be directed to the BBI-SS PAS Journal (default), to the system console (BMSGWTO for all messages, WTO for an individual message), or to a TSO ID (BMSGTSO for all messages, MTSO for individual messages).</li> <li>– Specific messages (MSG) can be deactivated (ACTIVE) or controlled (CYCLES).</li> <li>– Thresholds also can be set for individual runaway messages per attach type to determine if a thread is a runaway transaction.</li> </ul> </li> <li>• Application trace options <p>Trace storage (STORAGE), size (TRLIM), and duration (TRTIME) also can be specified. In addition, the size (TRSIZE) and number (TRBUF) of the detail trace buffers can be specified, as well as several trace logging options.</p> </li> <li>• LOCKOUT records <p>The limit on the number of records kept for the Lockout History display can be set with the LOCKOUTS parameter.</p> </li> <li>• DB2 accounting classes <p>The accounting classes for data collection can be specified with the ACCTG keyword.</p> </li> </ul> |
| BBPTWK00                      | This member contains DB2 application workload definitions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

---

## Appendix C. Estimating Storage for Performance Reporter Data

This appendix provides guidelines for estimating the amount of storage needed at your site for Performance Reporter statistics and accounting data.

The default table space allocations in BBSAMP member DPCSTOW require 200 cylinders of DASD. These allocations support a small Performance Reporter batch system that processes approximately 10,000 or more statistics records, 100,000 or more detail accounting records, and 10,000 or more summary accounting records.

If the tables are customized to delete unwanted columns, more records will fit in the same allocation. In that case, default table space allocations support 20,000 or more statistics records, 100,000 or more detail accounting records, and 10,000 or more summary accounting records.

For more accurate estimates, you must determine

1. Your processing volumes (number of accounting and statistical records created daily)
2. A summarization strategy (see “Summarization Strategy Considerations” in the *MAINVIEW for DB2 Performance Reporter User Guide*):
  - What granularity is needed (daily, weekly, monthly)?
  - What level of summarization keys are needed?
  - What is the correct retention period for the data in each table?
3. Which tables you want to maintain:
  - Do you need DDF tables?
  - Do you want to load detail accounting records?
  - How many summary tables do you want?
4. The size of the rows in the tables:
  - Are you deleting unwanted columns?

Use these guidelines to estimate storage:

|                    |                                                                                                                                                                                                                                                                                                                                              |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Statistics records | For each statistics record processed, one statistics summary row and one buffer summary row are created. Two statistics summary rows fit in a 4K page in the detail statistics table (DMRSTAT). Nine buffer detail rows fit in a 4K page in the detail buffer statistics table (DMRSBFDT). Sixteen DDF statistics records can fit in a page. |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

For example, if the default statistics interval of 30 minutes is used, 48 rows of each type are created for a full day’s processing. This requires 16 pages for statistics summary rows and 10 pages for buffer summary rows per day for the statistics information for each system monitored. If 3 DDF destinations are active during the day, 3 x 48 or 144 DDF statistics rows are created, requiring 9 pages.

Accounting records Three accounting records fit in a 4K page in the detail accounting table (DMRACxxx). The DDF accounting records are smaller; eight of them can fit in a page. Seven package accounting records can fit in a page. The volume of these records depends on the activity in the DB2 system(s) monitored. For example, a production DB2 system with a fairly light load of 10,000 records per day requires 3,334 pages of storage per day. If 10 percent of these threads access a single DDF destination, 125 additional pages are required.

**Note:** The size of the rows can be reduced by deleting unwanted columns (see [“Step 6: Generate CREATE TABLE Statements”](#) on page 50).

Audit records Seventeen audit summary records fit in a 4K page in the audit summary table (DMRAUSUM). Seven records fit in a page in the authorization failures table (DMRAUFAL). Eight records fit in a page in the authorization control table (DMRAUGRV). Eight records fit in a page in the DDL access table (DMRAUDDL). Eighteen records fit in a page in the DML access table (DMRAUDML). Eight records fit in a page in the DML at BIND access table (DMRAUDMB). Ten records fit in a page in the authorization ID change table (DMRAUCHG). Sixteen records fit in a page in the utility access table (DMRAUUTL). The volume of these records depends on the activity in the DB2 system(s) monitored.

---

## Appendix D. Moving a DB2 Subsystem from One LPAR to Another LPAR

This appendix explains how MAINVIEW for DB2 can support a DB2 subsystem that is moved from one LPAR to another LPAR without recycling the BBI-SS PAS.

MAINVIEW for DB2 does not support dynamic target definition through the common MAINVIEW Target Definition dialogs. However, static target definitions can be set up to support DB2s that might sometimes run on different systems (for example, data-sharing members in a sysplex).

---

### Target Definitions

For any DB2 subsystem that may be moved from one LPAR to another LPAR, define an entry per LPAR in the BBIJNT00 member of BBPARM, with the same TARGET DB2 SSID but with a unique ALIAS. The BBIISP00 member should reference the ALIAS name in the TARGET entries. For example:

BBIJNT00:

```
TARGET=DB2P ,TYPE=DB2 ,SUBSYS=SSA1 ,RELEASE=0610 ,ALIAS=DB2P1 (on SYSA)
TARGET=DB2P ,TYPE=DB2 ,SUBSYS=SSB1 ,RELEASE=0610 ,ALIAS=DB2PSYSB(on SYSB)
```

BBIISP00:

```
TARGET=DB2P1 ,BLK=XXXXXXXX
TARGET=DB2PSYSB ,BLK=XXXXXXXX
```

---

### Runtime Considerations

At PAS initialization, a service point is created for each ALIAS on each LPAR. On those LPARs where the DB2 subsystem is not active, most of the monitors started via the BLK REQ entry in BBIISP00 will quiesce (and generate QUIESCE messages in the Journal). If the DB2 subsystem is later brought up on that LPAR, the monitors will be activated automatically.

In windows mode, the Context is always shown as the ALIAS. In PLEXMGR, all service points will be shown as active. The STDB2 View (SSI mode) will show the status of all defined targets, including the inactive targets. The inactive targets will show `Connect Fail` in the Warning Msg column. Other views only show the data returned from the active DB2s.

In full-screen mode, use the active ALIAS instead of the DB2 SSID in the TARGET Field. If an inactive ALIAS is entered, this message will appear: IM9301E CANNOT LOCATE DB2 SPECIFIED.



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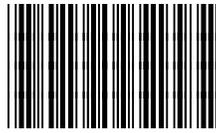
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# Notes



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