

OS/390 and z/OS

Installer Guide



Supporting

OS/390 and z/OS Installer 2.2

November 2008



Contacting BMC Software

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Support website

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- read overviews about support services and programs that BMC offers
- find the most current information about BMC products
- search a database for issues similar to yours and possible solutions
- order or download product documentation
- download products and maintenance
- report an issue or ask a question
- subscribe to receive proactive e-mail alerts when new product notices are released
- find worldwide BMC support center locations and contact information, including e-mail addresses, fax numbers, and telephone numbers

Support by telephone or e-mail

In the United States and Canada, if you need technical support and do not have access to the web, call 800 537 1813 or send an e-mail message to customer_support@bmc.com. (In the subject line, enter **SupID:<yourSupportContractID>**, such as SupID:12345). Outside the United States and Canada, contact your local support center for assistance.

Before contacting BMC

Have the following information available so that Customer Support can begin working on your issue immediately:

- product information
 - 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 issue
- 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 detailed information about the OS/390 and z/OS Installer, which is also called the *Installation System*. This book is intended for system administrators and database administrators who are responsible installing BMC Software products on OS/390 or z/OS systems. Use this book to understand how the Installation System works, and use your product installation and customization documentation for information about installing specific products.

To use this book, you should be familiar with the following items:

- job control language (JCL) and the Interactive System Productivity Facility (ISPF)
- IBM OS/390 or z/OS systems

For example, you should know how to respond to ISPF panels and how to perform common actions in a mainframe environment.

Like most BMC Software documentation, this book is available in printed and online formats. Visit the BMC Software Customer Support website at http://www.bmc.com/support_home to request additional printed books or to view online books and notices (such as release notes and technical bulletins). Some product shipments also include the online books on a documentation CD.

NOTE



Online books are formatted as Portable Document Format (PDF) or HTML files. To view, print, or copy PDF books, use the free Adobe Reader from Adobe Systems. If your product installation does not install the reader, you can obtain the reader at <http://www.adobe.com>.

The software also offers online Help. To access Help, press **F1** within any product, or click the **Help** button in graphical user interfaces (GUIs).

Conventions

This book uses the following special conventions:

- All syntax, operating system terms, and literal examples are presented in this typeface.

- Variable text in path names, system messages, or syntax is displayed in *italic* text:

testsys/instance/fileName

- The symbol => connects items in a menu sequence. For example, **Actions => Create Test** instructs you to choose the **Create Test** command from the **Actions** menu.

Syntax statements

The following example shows a sample syntax statement:

```
COMMAND KEYWORD1 [KEYWORD2 | KEYWORD3] KEYWORD4={YES | NO} fileName...
```

The following table explains conventions for syntax statements and provides examples:

Item	Example
Items in italic type represent variables that you must replace with a name or value. If a variable is represented by two or more words, initial capitals distinguish the second and subsequent words.	<i>alias</i> <i>databaseDirectory</i> <i>serverHostName</i>
Brackets indicate a group of optional items. Do not type the brackets when you enter the option. A comma means that you can choose one or more of the listed options. You must use a comma to separate the options if you choose more than one option.	[<i>tableName, columnName, field</i>] [-full, -incremental, -level] (UNIX)
Braces indicate that at least one of the enclosed items is required. Do not type the braces when you enter the item.	{ <i>DBDName tableName</i> } UNLOAD device={ <i>disk tape, fileName deviceName</i> } {-a -c} (UNIX)
A vertical bar means that you can choose only one of the listed items. In the example, you would choose either <i>commit</i> or <i>cancel</i> .	{ <i>commit cancel</i> } {-commit -cancel} (UNIX)
An ellipsis indicates that you can repeat the previous item or items as many times as necessary.	<i>columnName . . .</i>

Installation overview

This chapter contains the following topics:

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Installation System overview

The Installation System from BMC Software is an ISPF application that generates a set of installation batch jobs in job control language (JCL). You can use these batch jobs to unload and customize BMC Software products from distribution media. You can also use the batch jobs to apply maintenance to installed products.



NOTE

The Installation System is also called the *OS/390 and z/OS Installer*.

As shown in the following table, the Installation System accommodates different installation and maintenance media, and different installation strategies:

Category	Supported choices	More information
installation methods	<ul style="list-style-type: none"> ■ Custom installation ■ Express installation 	"Installation methods" on page 16
product distribution methods	<ul style="list-style-type: none"> ■ electronic software distribution (ESD) ■ tape distribution ■ maintenance files 	"Distribution methods" on page 17
installation strategies	<ul style="list-style-type: none"> ■ full installation ■ maintenance installation ■ installation on a single DB2 subsystem ■ installation on multiple DB2 subsystems 	"Installation strategies" on page 19
installation settings	<ul style="list-style-type: none"> ■ use of default values from the system ■ use of specified new values ■ use of an installation profile (values that are preserved from an earlier installation) 	"Installation profile repository and installation profiles" on page 23

Installation methods

The Installation System supports a *Custom* installation and an *Express* installation. Both installation methods create an environment that is maintained using the IBM System Modification Program Extended (SMP/E) maintenance.

Regardless of which method you choose, the Installation System guides you through the installation process, allowing you to accept or change defaults along the way. You can readily access Help from each panel by pressing F1.

Custom installation

The Custom installation uses the full SMP/E product installation and maintenance program. SMP/E product distribution files contain modification control statements (MCSs) and relative files (RELFILEs) for SMP/E product installation and maintenance.

The Custom installation method is required if you are adding a product to an existing SMP/E installation.

Express installation

The Express installation provides an SMP/E installation that uses IEBCOPY to copy the product data sets, and sets up an SMP/E environment by using predefined SMP/E zones and libraries. The Express installation method includes steps for unloading, customizing, and executing BMC products. You might want to use the Express installation method under the following circumstances:

- to install all products into a new SMP/E environment
- to install products for a trial or demo system

Distribution methods

BMC offers the following methods of software distribution:

- electronic software distribution (ESD)
- distribution tapes
- maintenance files

ESD

Electronic product shipment is performed using FTP. You use FTP to download product files from a server at BMC for subsequent installation at your site. After specifying the products and solutions that you want to download, you receive the following items:

- base installation libraries

The base installation libraries are required to initiate the Installation System CLIST. These libraries include an installation library (*HLQ.INSTALL*, where *HLQ* is a high-level qualifier) and a load library (*HLQ.INSTALL.LOAD*). These libraries also include ISPF panels and programs that are necessary to customize the installation of the products, and infrastructure components that multiple BMC products use.

- product and solution files

The following considerations apply to using the ESD site:

- To download from the ESD site, you must have an ESD user ID and password. To obtain them, contact your BMC Customer Support representative.
- If you have restrictions that apply to transferring files through FTP (such as byte limits, network or server timeout limits, or firewall restrictions), use tapes instead of the ESD site.

Distribution tapes

Physical product shipment is done using 3480 or 3490 tapes. The shipment includes the following tapes:

- B-series tape set

The B-series tape set (formerly the BMI tape) contains the base installation libraries that are required to initiate the Installation System. This tape set also includes ISPF panels and programs that are necessary to customize the installation of the products, and infrastructure components that multiple BMC products use.

- one or more product tape sets

These tape sets contain the panels and programs to unload and customize most BMC products. Examples are the C-series (DB2 products), I-series (IMS products), and M-series (MAINVIEW products) tape sets.

Maintenance files

Maintenance files update the BMC products that you installed with the Installation System. Maintenance files repair product defects or add product enhancements. BMC provides these maintenance files through eFix, ESD, and tape.

BMC provides the following types of maintenance files:

- program update tape (PUT)
- SMP/E service files

PUT maintenance

PUT files contain verified PTFs and hold data. BMC tests PTFs before distributing them to verify that they perform as designed. BMC distributes PUT files from the ESD site or on physical tape:

- To download PUT files from the ESD site, select **Electronic Maintenance** from the **Additional Options** menu. See “[Generating jobs to perform SMP/E maintenance](#)” on page 124 for more information.
- To order PUT maintenance on tape, contact your local Customer Support representative or send an e-mail message to Product_Distribution@bmc.com.

SMP/E service files

SMP/E service files contain additional maintenance to be applied during installation to bring the product to the GA level or to a specific PUT level. All PTFs and APARs that are required for creating the GA level of the product are added to the service files. However, if BMC incorporates an APAR into a maintenance update concurrently with the release of a new product, that APAR is not added to the service files.



NOTE

Use the SMP/E service files only when performing a Custom installation of a product.

Installation strategies

In addition to supporting Custom installation and Express installation, the Installation System allows you to perform full or maintenance installations, and to install products on a single DB2 subsystem or on multiple subsystems. Your installation strategy should suit your product configuration needs, while requiring the least amount of time and effort.

Considerations for determining an installation strategy

To choose the best installation strategy, consider the following questions:

- Which BMC products are installed at your site, and what are their maintenance levels?
- Which BMC products do you plan to trial or add to your installation?
- How much time and effort are required for customizing your products?
- Are you experienced with SMP/E procedures and terminology?

Your answers will help you determine the scope of your installation.

Full or maintenance installation

Depending on your responses to the preceding questions, you can choose to perform a full or maintenance installation:

- Use a *full* installation to install products for the first time or to install new releases of products that are already installed.

- Use a *maintenance* installation to upgrade products to current maintenance levels.

Runtime enablement

For selected BMC products and solutions, the Installation System supports runtime enablement (RTE). RTE lets you create runtime libraries by combining your BMC product SMP/E target libraries and user data sets into a single runtime library that is not SMP/E managed. RTE is intended to be used for product deployment, and the products are not executed from the SMP/E target data sets.

If you select the RTE option, the Installation System configures data set members that are used to execute products to point to the RTE set of libraries (not the target data sets) during the product customization phase of installation. After customization, the RTE job (\$R05RTEC) is executed to create the RTE data sets.

Low-level qualifiers (LLQ) for the RTE data sets have a BMC prefix followed by up to five characters, which makes the LLQ unique and identifies the contents of the data sets, for example, the LLQ of the messages data set is BMCMLIB.

The RTE process combines like data sets into one data set. For example, the contents of BBSAMP, DBSAMP, IMSAMP, XXSAMP, and any similar user data sets that are created, like UBBSAMP, are merged into BMCSAMP. Merging the data sets into a single data set reduces the number of data sets to manage in the production environment.

The \$R05RTEC job, which copies content from the SMP/E target libraries to the runtime libraries, can be created by using one of the following options to control how the copy steps are ordered:

- Sort/Break = N

The copy steps are created in the following order, with the copy steps within each step in alphabetical order:

- BB libraries
- DB libraries
- IM libraries
- XX libraries
- password
- user libraries
- OZI (ozicntl and \$R05RTEC)

- Sort/Break = Y

A copy step is created for each type of content such as CLIB, DBRM, LINK, and other content. The copy steps are sorted in alphabetical order within each step.

The runtime enablement feature affects the installation process in several areas:

- product selection

During product customization, you might be prompted to change your product selections. If you select some products *that do* support runtime enablement and some that do not, you are prompted to continue without using the runtime enablement feature or to change the products that you selected so that you can use the runtime enablement feature.

- product customization

During product customization, if all products that you are installing support runtime enablement, you are prompted to run your products from runtime enablement data sets or from your SMP/E target libraries.

- runtime enablement

When you have run all product customization jobs, choose **Runtime Enablement** from the installation main menu to create and run the \$R05RTEC job. This job allocates or uses the existing runtime libraries and copies members from the target and user data sets into the runtime libraries.

- product maintenance

During product maintenance, you apply SMP/E maintenance to your SMP/E target libraries and then copy the updated members into your runtime data sets.

Merged and non-merged installations

For *most* BMC products for DB2 and IMS, you can select a merged or non-merged installation. With both the merged and non-merged installation, each product function modification ID (FMID) can now have its own data definition definition (DDDEF):

- Merged installation (available in earlier versions) places product libraries in three collections of data sets. The data set names are prefixed with BB, DB, or XX (such as BBLINK, DBLINK, or XXLINK).
- The new non-merged installation places the product libraries in product-specific data sets that are prefixed by the product code (for example, ACPLINK). For BMC products for DB2, a non-merged installation requires the use of runtime enablement.

Sample strategies

Table 1 summarizes common installation strategies.

Table 1 Sample installation strategies (part 1 of 2)

Situation	Installation strategy
You are installing new BMC products, and you have no other BMC products installed.	<p>You need to perform a full installation. You can choose one of the following installation methods:</p> <ul style="list-style-type: none"> ■ Custom installation of any combination of BMC products ■ Express installation of any combination of BMC products
You are upgrading previously installed BMC products to new releases.	<p>You need to perform a maintenance installation if you are upgrading to a maintenance-level (.mm) release.</p> <p>You need to perform a full installation if you are upgrading to a full-level (v.r) release.</p>
You are installing new products for trial.	<p>You can choose one of the following installation methods:</p> <ul style="list-style-type: none"> ■ Express installation of the new products for trial <p>You can run the trial products on the same CPU with existing products.</p> <ul style="list-style-type: none"> ■ Express installation of your existing products and trial products <p>If you install trial products with your existing products, you might have difficulty removing the trial products at a later date without removing the other products.</p> <p>Note: The difference between trial products and licensed products is the type of password that you use and the password's expiration date. You should notice no other differences when you install trial and licensed products.</p>

Table 1 Sample installation strategies (part 2 of 2)

Situation	Installation strategy
You are installing new products or trials <i>and</i> upgrading previously installed products to new releases.	<p>You can choose one of the following installation methods:</p> <ul style="list-style-type: none"> ■ Custom installation of the new products in separate SMP/E data sets <p>You can run new and existing products concurrently on the same CPU. If you decide to license the new products after the trial, you can use the same SMP/E distribution files to install the products in the same SMP/E data sets as the existing products.</p> <ul style="list-style-type: none"> ■ Express installation of the new products for trial <p>You can run the trial products on the same CPU with existing products.</p> <ul style="list-style-type: none"> ■ Express installation of your existing products and trial products <p>If you install trial products with your existing products, you might have difficulty removing the trial products at a later date without removing the other products.</p> <p>Note: Product installation is faster with the Express installation method than with a Custom installation. After a Express installation, all products are at current maintenance levels.</p>
You are installing maintenance only.	If BMC products are installed at your site and you want to update the products to current maintenance levels, apply maintenance by using program update tape (PUT) files.

Installation profile repository and installation profiles

The installation profile repository and installation profiles provide a means of storing and managing installation variables for many products, across many installation sessions. You can use preserved values from any previous installation, or you can selectively use the default values that the Installation System provides.

Profile repository

The profile repository is an index of profiles that you use to install BMC products. The repository is a sequential data set that stores each profile name, the date when the profile was created, and other information.

When you first run the Installation System, you are required to create a profile repository. BMC recommends the following convention for your repository name:

HLQ.BMCREPO

The variable *HLQ* is a high-level qualifier that should be easily identified and used by all installation users in your facility. All users are encouraged to use the same repository because only one repository is necessary for any installation environment. However, because the repository can store many hundreds of profiles, you can choose to create additional repositories, as necessary, for organizational purposes.

TIP



If many profiles are created in your environment, consider creating a separate repository for each calendar or fiscal year in which profiles are created.

The following profile management features are available within the profile repository:

- View or browse a profile to verify the contents before beginning an installation session.
- Print a profile to review the contents. This feature generates print JCL for a profile report.
- Copy a profile to create a profile that is modeled from another. This feature is useful when you want to use many but not all of the variables from an earlier session.
- Delete a profile that is no longer required.
- Use an existing profile when you want to replicate a previous installation, using the same variables, values, and defaults that you used in the original installation session.
- Create a new installation profile data set.

If an installation profile data set does not exist, specify the *HLQ* and *ID*. If a profile repository data set does not exist, specify *HLQ.BMCREPO*. The Installation System creates the installation profile and profile repository data sets.

Profiles are listed in the repository in chronological order of use; the most recently used is listed first. By using the profile repository, you can ensure a consistent and specific installation environment for a group of products or for a business unit within your enterprise.

Installation profile

The installation profile is a sequential data set that contains the variables and values used during the installation of the BMC Software mainframe products. This includes variables and values used in the user options, product install, customization and additional options process. The installation profile can be used to provide subsequent installers with the data entered during previous installations.



NOTE

The \$BMCPROF ISPF should not be confused with the installation profile. The \$BMCPROF ISPF profile contains the variables and values that you provide prior to the product installation.

When you first run the Installation System, you are prompted to create a new profile. The profile name uses the following format:

HLQ.IDPROF

The variable *HLQ* is a high-level qualifier that you provide and may be used by other installers, *ID* is a four-character name that you choose, and *PROF* is an appended string that identifies the data set as an installation profile.

In subsequent installation sessions, the most recently used profile is the default. You can choose to create a new profile, or you can select a profile from the profile repository.

By reusing an existing profile, you can replicate an earlier installation exactly. If you make changes during the installation, the Installation System updates the profile accordingly.

In most cases, the best practice is to create a new profile for each distinctly different installation. If installation variables are few, you can simply copy a similar profile, advance to the variables that require change (by using the checkpoint feature), and proceed with the installation. You can stop your installation at any checkpoint. You can then start over, or you can resume the installation from one of the listed checkpoints.

How to display profile repository information

You can use a CLIST member (READREPO) to display your installation profile and profile repository information outside the Installation System. After you perform an installation with the Installation System, READREPO is included in your customized installation library if the version of your installation library is 2.0.09 or later.

To display installation profile repository information

- 1 Copy READREPO to a UDBCLIB library.
- 2 Enter **EX READREPO**.
- 3 When the CLIST prompts you for the control or repository data set name (DSN), enter the location of your previous repository.

For example, enter *yourProductHLQ.CNTL* or *yourHLQ.BMCREPO*.

If you have an older version of the installation in place but you have a newer tape or ESD installation library available, you can use the READREPO CLIST from the newer library to read the older repository. If you have another library, such as a JCL library that contains a member named OZICNTL, you can use the OZICNTL member to locate the READREPO CLIST. The OZICNTL member contains the customized installation library name and the repository name.

Conventions for using the Installation System

This section explains conventions that apply during the installation process.

Panel selections

Throughout the Installation System, you are requested to make selections on panels. Unless otherwise stated, you select an item by typing a slash (/) or the letter *s* next to the item and pressing **Enter**.

Function keys and commands

The Installation System panels provide messages at the bottom to indicate which function keys are available. By default, the active function keys are not displayed. To display the active keys, type the ISPF command **PFSHOW** on the **Command** line and press **Enter**.

NOTE



Some Installation System panels use every available line to display input variables. To display all variables, type **PFSHOW OFF** on the **Command** line and press **Enter**.

You can use the following commands and function keys to move through the Installation System panels:

- **HELP** or **F1** displays the Help panel for the current panel.
- **END** or **F3** saves your changes and returns to the Installation System Main Menu.
- **CANCEL** or **F12** saves any changes and returns to the previous panel.
- **Enter** accepts the defaults or changes and continues to the next panel.

In the Installation System Help panels, use the following keys or commands to navigate:

- **F3** exits the Help panel and returns to the current installation panel.
- **F10** or **F12** returns to the previous page of a multiple-page Help panel.
- **Enter** or **F11** continues to the next page of a multiple-page Help panel.

Data set names

The Installation System uses ISPF conventions when processing data set names. If the TSO/E PROFILE NOPREFIX option is in use, the Installation System does not append a prefix to the data set name that you specify. The maximum length for a data set name is 44 characters, including the prefix, if used.



NOTE

The TSO/E PROFILE PREFIX option must be turned on when you start the Installation System. If the option is not turned on, you must use the setup parameter as described in “To start the Installation System” on page 49

Symbolic variables

The Installation System frequently uses symbolic variables in data set names, data set prefixes, and job-statement information. In the Installation System, most symbolic variables are related to keyword values that you specify in the product options. Symbolic variable names begin with an ampersand (&).

While the Installation System assembles product options, macro processing tries to resolve all symbolic variables in the listing. Most symbolic variables are resolved when a BMC product generates JCL. When necessary, the Installation System doubles the ampersand for all symbolic variables to prevent errors.

The double-character rule also applies to the following characters:

- single quotation marks within literal values if the literal is enclosed with delimiting single quotation marks
- a period if the literal immediately follows a variable name

The following table illustrates the use of double characters:

Variable	Result
&&	&
"	'
..	.

Volume serial number ID

Every tape is identified by a unique volume serial (VOLSER) number. The VOLSER is printed on the tape label and is encoded electronically on the tape. The VOLSER number, or VOLSER ID, is a six-character string that is based on the following syntax:

targetMediaOrderYmd

- The variable *target* represents the single-character tape set identifier. BMC products are organized into the following types:
 - *B-series* identifies the base installation tape.
 - *C-series* identifies the classic or DB2™ product family tapes.
 - *I-series* identifies the IMS™ product family tapes.
 - *M-series* identifies the MAINVIEW product family tapes.
 - *P-series* identifies the PUT maintenance tapes.
 - *S-series* identifies the SMP/E service tapes.

A series can contain one or more tapes.

- The variable *Media* represents the single-character media identifier:
 - 8 identifies 3480 tapes.
 - 9 identifies 3490 tapes.
- The variable *Order* represents the single character tape usage order. Tape A is first, B is second, and so on.

- The variable *Ymd* represents the tape's date in the format year, month, day:
 - The year is the last digit of the four-digit year (4=2004).
 - The month can be from 1 through C (1-9, A=10, B=11, and C=12).
 - The day can be from 1 through V (1-9, and A=10 through V=31).

For example, 47H means the date of the tape is July 17, 2004.

Examples of VOLSERS are M9A4CV and C8B581:

- M9A4CV=M-series products; 3490 tape; first tape in tape set; December 31, 2004
- C8B581=C-series products; 3480 tape; second tape in tape set; August 1, 2005

Naming conventions for product packaging

BMC naming conventions classify product components while allowing for future expansion. The conventions reflect product-line organization. They also classify machine-readable data that is used during installation as SMP/E setup, product installation, or product-specific information.

BMC classifies system modifications (SYSMODs) by product line and type. Each seven-digit SYSMOD name uses the format *BTPFV* or *BTPN*:

- The initial *B* represents BMC Software.
- The variable *T* represents the SYSMOD type:

Value for <i>T</i>	SYSMOD type	Example
B	function	BBBBX16 BBIBA26
A	APAR	BAB0001 BAI0002
P	PTF	BPB0123 BPI0456

- The variable *P* represents the product line.
- The variable *F* represents a two-character identifier that is used only for a function SYSMOD.
- The variable *V* represents a two-digit version number that is used only for a function SYSMOD.
- The variable *N* represents an APAR or PTF number within the product line.



NOTE

The letters *C*, *D*, *E*, and *F* are reserved for future APAR SYSMOD use. The letters *Q* and *R* are reserved for future PTF SYSMOD use.

Naming conventions for Custom and Express data sets

BMC uses naming conventions for product distribution files to prevent conflicts between system and product data sets. The following naming conventions apply to Custom and Express data sets:

Name variable for product data set	Description	Example
<i>targetLibraryName</i>	target library ddname or DDDEF name	<i>HLQ.V2050.ESD6.DBLINK</i>
<i>distributionLibraryName</i>	distribution or maintenance library ddname or DDDEF name	<i>HLQ.V2050.ESD6.ADBLINK</i>
<i>runtimeLibraryName</i>	runtime library ddname or DDDEF name	<i>HLQ.V2050.ESD6.BMCLINK</i>
<i>function</i>	function name	ZAUP221
<i>prdRelease</i>	three-letter product code and release number	SPD2200 Note: Release numbers can include a combination of one-digit or two-digit version, release, and modification levels. For example, 1100 means version 1.1.00 (version 1, release 1, no maintenance).

Custom installation data sets

BMC identifies product data sets for a Custom installation as shown in the following examples:

- SMPMCS
- BMC.*function.Fnn*

Express installation data sets

BMC identifies product data sets for a Express installation as shown in the following examples:

- `BMC.prdRelease.targetLibraryName`
- `BMC.prdRelease.distributionLibraryName`
- `BMC.prdRelease.UCLIN.DLIB.CSI`
- `BMC.prdRelease.UCLIN.TARGET.CSI`

To use the high-level qualifier *BMC*, the `RFDSNPFX` parameter is required in the header for the SMPMCS of all product function IDs (FMIDs).

NOTE



If multiple users are installing products, all users of the Installation System must have access to the data sets defined by the high-level qualifier.

Installation and customization process

To ensure a fast and error-free installation, you should understand the installation and customization process before starting. The basic steps are as follows:

- 1** Set up the Installation System as instructed in [Chapter 2, “Setting up the Installation System”](#):
 - A** Plan your installation (“[Overview](#)” on page 33).
 - B** Set up installation libraries by downloading or unloading the software (“[Setting up the installation libraries](#)” on page 38).
 - C** Start the Installation System, create an installation profile repository, and specify user options (“[Starting and preparing the Installation System](#)” on page 48).
- 2** Install product libraries by generating and running installation JCL ([Chapter 3, “Installing product libraries”](#)).
- 3** Customize product options, as needed, to prepare for execution ([Chapter 4, “Customizing products”](#)).
- 4** Apply product or solution passwords ([Chapter 5, “Applying product passwords”](#)).

- 5 Apply maintenance to the products or solutions (Chapter 6, “Applying maintenance”).

Setting up the Installation System

This chapter contains the following topics:

Overview	33
Preparing for installation	34
Using an installation worksheet	36
Reviewing installation requirements	36
Setting up the installation libraries	38
Obtaining the base installation libraries	38
Creating a customized installation library	44
Starting and preparing the Installation System	48
Starting the Installation System	48
Creating an installation profile repository and installation profiles	50
Specifying user options	54

Overview

[Table 2 on page 34](#) summarizes the tasks that you must complete to set up the Installation System. This table also provides references to more information about each task.

Table 2 Task summary for setting up the Installation System

Task	Subtasks	Reference
Prepare for installation.	To gather the information that you will need, run the Installation Checklist Generator or complete an installation worksheet, and review installation requirements. ^a	<ul style="list-style-type: none"> ■ “Preparing for installation” on page 34 ■ “Using an installation worksheet” on page 36 ■ “Reviewing installation requirements” on page 36
Set up the installation libraries.	Obtain the base installation libraries from the ESD site or from a distribution tape.	<ul style="list-style-type: none"> ■ “To download base libraries from the ESD site by using FTP” on page 39 ■ “To download base libraries from the ESD site by using a web browser” on page 41 ■ “To unload base libraries from a tape” on page 42
	Create a customized installation library.	“Creating a customized installation library” on page 44
Start and prepare the Installation System.	Start the Installation System.	“Starting the Installation System” on page 48
	Create a profile repository to store installation variables and customization options.	“Creating an installation profile repository and installation profiles” on page 50
	Specify user options that determine how the Installation System will run and where it will store installation JCL.	“Specifying user options” on page 54

^a Some products are not supported by the Installation Checklist Generator (ICG), and some do not provide an installation worksheet.

Preparing for installation

Before proceeding, you should review [Chapter 1, “Installation overview,”](#) of this book. Also, review the release notes that shipped with your product or solution.

In addition, all BMC products have product-specific installation or customization guides. Be sure to review those books before starting the installation.

NOTE



At times it might be necessary to cancel the installation and revert to the previous level of a product. You should ensure that a complete backup of your current system is available before you begin the installation process.

Using the optional Installation Checklist Generator

For some BMC products, you can use the Installation Checklist Generator utility to prepare for installation. This utility is available from the BMC website.

NOTE



The Installation Checklist Generator does not support all BMC products. To verify support, refer to the release notes for your product.

Features of the Installation Checklist Generator

The Installation Checklist Generator allows you to select a set of BMC products and produce an integrated checklist that outlines the steps that you need to complete for a successful installation. The checklist provides the following information:

- preparation steps to complete and items to assemble before starting the installation process
- installation tasks that will help you run the Installation System and complete the installation process
- customization tasks that you must complete to run your product

NOTE



Some products use customization utilities that you can run from the Installation System or outside the Installation System. For information about product-specific customization tasks that you need to perform, see your product-specific documentation.

Each checklist also provides references to additional information for each task.

Running the Installation Checklist Generator

You can run the Installation Checklist Generator from the BMC website.

NOTE



The Installation Checklist Generator runs with Microsoft Internet Explorer 4 or later, and Netscape Navigator versions 4.08 through 4.78.

To run the Installation Checklist Generator from the BMC website

- 1 Visit the OS/390 and z/OS Installer page on the BMC website at http://www.bmc.com/supportu/bmcsoftware_install/bmcihome.html.
- 2 Log on and click the link for the Installation Checklist Generator.

To log on, first-time users can obtain a user name and password by registering at the support page. Alternatively, you can request a temporary user name and password from your BMC sales representative.

NOTE

The BMC website provides the most current Installation Checklist Generator information.



Using an installation worksheet

Another resource for installation planning is the product-specific installation worksheet, which is included in some product installation guides or customization guides. The worksheet contains specific data that you need to gather and decisions that you need to make before beginning the installation and customization processes, including:

- high-level qualifier for data set names
- installation library and data set names
- installation JCL information
- database names

Reviewing installation requirements

This section discusses requirements that apply to installing and customizing BMC products and solutions.

Password requirements

To activate a BMC product or solution, you must have a password. The Product Authorization Letter that accompanied your product shipment provides details.

The Installation System accommodates any of the following methods for establishing license authority to access and use BMC products:

- Use the **Product Authorization** option from the Installation System Additional Options Menu. This option starts the BMC Software Product Authorization utility, which is documented in [Chapter 5, “Applying product passwords.”](#)
- Review and edit the Product Authorization JCL that is unloaded with the products, and submit the JCL outside the Installation System’s operation.
- Use the Installation System’s product customization process to establish access authority.

NOTE

Some BMC products can be authorized only during the product customization process.



Estimated space requirements

During the unload process, the Installation System determines space requirements and automatically allocates various data sets according to the products that you selected for installation. The Installation System displays the total space requirements for all of your selections.

You can increase the allocation for any or all data set types. You can increase the allocation for a specific data set type, or you can apply a percentage increase to all data set allocations. You cannot decrease space allocations.

NOTE

The Installation System does not display space estimates for user data sets that it allocates in the \$C05ALOC job. However, these data sets require approximately 40 cylinders of space.

In addition, the Installation System does not display space estimates for runtime data sets that it allocates in the \$R05RTEC job. You can create your own data sets.



Installation System requirements

The Installation System has the following ISPF requirements:

- ISPF version 4.0 or later

- You must have the DD ISPTABL library in your ISPF logon PROC.

This library is needed for the ISPF table processing that the Installation System requires.

- Set the disposition of your ISPPROF or ISRPROF data set to shared (DISP=SHR) in your logon procedure.

Setting the disposition to shared allows batch TSO to update the data set. Specifically, this setting allows you to merge product tapes and run BMCINSTL REXX EXEC. If you do not set the disposition to shared, you will receive an ISPS105 error (invalid keyword) when you submit the installation JCL to merge product tapes, and when you run BMCINSTL REXX EXEC.

Setting up the installation libraries

You use the base installation libraries when installing products or applying product maintenance. The base installation libraries consist of an installation library and a load library. Before installing products, you must set up the base installation libraries as follows:

1. Obtain the base installation libraries (“[Obtaining the base installation libraries](#)” on [page 38](#)).
2. Set up a customized installation library (“[Creating a customized installation library](#)” on [page 44](#)).

Obtaining the base installation libraries

You can obtain the base installation libraries from either of the following sources:

- Download the libraries from the ESD File Transfer Protocol (FTP) site.

You can download directly to the mainframe (if your site allows direct downloads through FTP), or you can use a web browser to download to a personal computer (PC) and then transfer the files to the mainframe.

- Unload the libraries from a distribution tape.

You create and submit JCL to unload libraries from the tape. You can model your initial unload JCL after the example in [Figure 2 on page 43](#).

Complete the procedure that best suits your needs:

- “To download base libraries from the ESD site by using FTP” on page 39
- “To download base libraries from the ESD site by using a web browser” on page 41
- “To unload base libraries from a tape” on page 42

NOTE



Instructions for downloading from the ESD site are also available on the ESD site at the following URL:

ftp://*userID:password*@epddownload.bmc.com/bmc/esd/ozl/ozl_readme.htm

Before you begin

Ensure that you have completed the following prerequisites before proceeding:

- Review the release notes, technical bulletins, and flashes that are associated with your products. These notices contain additional information that might have been added after this book was published.
- Back up your current product versions. Copy and save your current installation and product libraries.
- If you plan to download from the ESD site, obtain a user ID and password from your BMC Software Customer Support representative to access the site.

Your Customer Support representative can also inform you of any special requirements for accessing and downloading products and solutions. All products require authorization before you can run them.

NOTE



BMC recommends that you use unique plan names, table names, repository names, and qualifier names.

To download base libraries from the ESD site by using FTP

- 1 Create a batch job that is similar to the sample in [Figure 1 on page 41](#).
 - A Ensure that the JCL is unnumbered; FTP reads all 80 characters.
 - B Set **CAPS OFF** and **NUM OFF**.
 - C Customize the JOBCARD job to comply with your site’s requirements.



NOTE

This job requires a REGION parameter value of 0M.

- D** Change variable text in the INPUT DD section (highlighted in bold in [Figure 1 on page 41](#)) as follows:



WARNING

The FTP server is case sensitive. You must use lowercase letters for all data in the INPUT DD section.

- Change *userID* and *password* to the user ID and password that you obtained from BMC.
- Change *unit* to the unit parameter.
- (optional) Change *volume* and the SMS variables to the correct values for your site.

NOTE

If you do not use these parameters, delete these lines. Do not leave blank lines in the JCL.



- Change *versionNumber* to the version number that is listed on the ESD site for the Installation System binary image file at the following location:

`ftp://userID:password@epddownload.bmc.com/bmc/esd/ozl/`

- Change *newDataSetName* to a valid data set name for your site.

This data set should not already exist. The data set is created when the binary image file is downloaded.

- Make any additional changes your site requires, such as providing proxy information to get outside your firewall.

- 2** Submit the JCL to download the compressed libraries.
- 3** After the job completes successfully, edit the downloaded data set according to the instructions in the file.
- 4** Submit the edited JCL to decompress the base installation libraries.

When the job decompresses the base installation libraries, it creates the *HLQ.BMC.INSTALL* and *HLQ.BMC.INSTALL.LOAD* data sets at the same location as the decompressed libraries.



NOTE

If you have adequate space allocated for your TSO session, you can submit the JCL from within the member. Otherwise, save your changes, exit the data set, and submit the data set (JCL) externally.

- 5 To create a customized installation library, proceed to “Creating a customized installation library” on page 44.

Figure 1 Sample FTP download job for the base installation libraries

```
//JOB_NAME JOB (ACCOUNT), 'USER COMMENT',
//          CLASS=JOB_CLASS,MSGCLASS=MSG_CLASS,
//          REGION=OM,NOTIFY=&SYSUID
//FTPGET EXEC PGM=FTP,REGION=5120K,
//          PARM='epddownload.bmc.com (timeout 720 exit=8'
//SYSMDUMP DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSOUT DD SYSOUT=*
//OUTPUT DD SYSOUT=*
//INPUT DD *
userID password
cd bmc/esd/ozi
binary
locsite rec=fb lr=80 blk=6160
locsite cy pri=20 sec=2
locsite u=unit
locsite vol=volume
locsite stor=smsStorageClass
locsite mg=smsManagementClass
locsite datac=smsDataClass
get bmcozi-versionNumber-image.bin +
'newDataSetName'
quit
/*
//
```

To download base libraries from the ESD site by using a web browser

- 1 Using a web browser, download the following file to your personal computer's desktop:

epddownload.bmc.com/bmc/esd/ozi/bmcozi-vversionNumber-image.bin



NOTE

The variable *versionNumber* represents the current base installation version number.

- 2 Copy the downloaded file to your mainframe by using the transfer program of your choice.



NOTE

The file transfer must meet the following requirements:

- The transfer must be binary.
 - The data set on the mainframe must be a fixed block 80 sequential file.
 - The block size must be 6160.
 - The primary allocation must be set to 30 cylinders, and the secondary allocation must be set to 2 cylinders.
-

- 3 After the transfer completes successfully, edit the downloaded data set according to the instructions in the file.
- 4 Submit the edited JCL to decompress the base installation libraries.

When the job decompresses the base installation libraries, it creates the *HLQ.BMC.INSTALL* and *HLQ.BMC.INSTALL.LOAD* data sets at the same location as the decompressed libraries.



NOTE

If you have adequate space allocated for your TSO session, you can submit the JCL from within the member. Otherwise, save your changes, exit the data set, and submit the data set (JCL) externally.

- 5 To create a customized installation library, proceed to “[Creating a customized installation library](#)” on page 44.

To unload base libraries from a tape

- 1 Create a batch job that is similar to the example shown in [Figure 2](#):



TIP

If you have a CD drive available, you can copy [Figure 2](#) from the copy of this installation guide that is on your documentation CD, and use the copy as a base for creating the batch job. Be sure to check for and correct any spacing problems or other transferred errors.

- A** Edit the job to unload File 1 into the load library that the Installation System will use (for example, BMC.INSTALL.LOAD).
- B** Edit the job to unload File 2 into a partitioned data set (PDS, not PDSE) with the low-level qualifier INSTALL (for example, BMC.INSTALL).

In [Figure 2 on page 43](#), *B9Aymd* represents the base installation tape's VOLSER. The variable *HLQ* is the high-level qualifier that you assigned to the INSTALL data set when you unloaded the base installation libraries.

Modify the job card information according to your site's requirements.

Figure 2 Batch job for unloading the base installation libraries from the distribution tape

```
//JOB_NAME JOB (account), 'USER COMMENT',
//          CLASS=JOB_CLASS,MSGCLASS=MSG_CLASS,
//          REGION=OM,NOTIFY=&SYSUID
//UNLOAD   EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//SYSUT3   DD UNIT=SYSDA,SPACE=(TRK,(1,1))
//SYSUT4   DD UNIT=SYSDA,SPACE=(TRK,(1,1))
//BMCTLOAD DD DSN=BMC.INSTALL.LOAD,DISP=OLD,VOL=SER=B9Aymd,
//          UNIT=TAPE,LABEL=(1,SL,EXPDT=98000)
//*
//BMCTINST DD DSN=BMC.INSTALL,DISP=OLD,VOL=SER=B9Aymd,
//          UNIT=AFF=BMCTLOAD,LABEL=(2,SL,EXPDT=98000)
//*
//BMCILOAD DD DISP=(,CATLG,DELETE),DSN=HLQ.INSTALL.LOAD,
//          UNIT=SYSDA,SPACE=(CYL,(50,5,500)),
//          DCB=(RECFM=U,BLKSIZE=23476)
//*
//BMCIINST DD DISP=(,CATLG,DELETE),DSN=HLQ.INSTALL,
//          UNIT=SYSDA,SPACE=(CYL,(60,5,900)),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=6160)
//*
//SYSIN    DD *
COPY      I=BMCTLOAD,O=BMCILOAD
COPY      I=BMCTINST,O=BMCIINST
```

2 Submit the job to unload the base installation libraries.

To create a customized installation library, proceed to [“Creating a customized installation library.”](#)

Creating a customized installation library

After downloading or unloading the base installation libraries, you can use the procedure in this section to start the Installation System and create your site-specific installation environment.

NOTE



In this procedure, the variable *HLQ* is the high-level qualifier that you assigned to the `INSTALL` data set when you unloaded the base installation libraries.

Before you begin

Unload the base installation libraries as explained in “[Obtaining the base installation libraries](#)” on page 38.

To avoid merge error ISPS105 (invalid keyword), set the disposition of your `ISPPROF` or `ISRPROF` data set to shared (`DISP=SHR`) in your logon procedure. This setting allows batch TSO to update the data set.

To create a customized installation library

1 From the TSO Commands panel, start the Installation System with or without the setup option:

- If you want to run the Installation System *with* the setup option (which allows you to specify the names and locations of temporary data sets for use during the installation), enter the following command:

```
EX 'HLQ.INSTALL(BMCINSTL)' 'SETUP'
```

For example, if your high-level qualifier is `BMC.BMCI`, enter the following command:

```
EX 'BMC.BMCI.INSTALL(BMCINSTL)' 'SETUP'
```

- If you want to run the Installation System *without* the setup option, enter the following command:

```
EX 'HLQ.INSTALL(BMCINSTL)'
```

WARNING



If you are using SMS-managed data sets or JES3, you must use the setup option.



NOTE

BMC recommends that you use the setup option for subsequent installations because the option allows control of temporary data sets, SMS capabilities, JES options, and previously used installation profiles.

BMC recommends that you omit the setup option only if you are a first-time user of the Installation System, or if you want to reenter the provided defaults for items such as job card information.

2 When the Setup Options panel (Figure 3) is displayed, provide the necessary information and press **Enter**.

Figure 3 Setup Options panel

BMC Software Install System Setup Options

Command ==> _____

During the installation process, the install system will allocate some temporary data sets to complete the install process. The install system will default the high level qualifier (HLQ) of those data sets to your TSO userid. If another HLQ is desired, then it should be entered below with any other relevant data set requirements.

Temporary Data Set HLQ _____ (24 char. max)
 Temporary Storage Class . . . _____ (Specify Value if Required for SMS)
 Temporary Management Class . . _____ (Specify Value if Required for SMS)
 Temporary Data Class _____ (Specify Value if Required for SMS)
 Temporary Unit SYSALLDA
 Temporary VOLSER _____
 Type of JES used JES2 (Specify JES2 or JES3)

Reuse Previously Used Application-ID (\$BMC) from the Install Library Y (Y/N)

Press Enter to continue.

TIP


- Use a unique high-level qualifier for the **Temporary Data Set HLQ** field.
- In the **Reuse Previously Used Application-ID** field, select **Y** to use the \$BMC profile if you have one user start the install and pass the installation to another user to complete the installation using the existing values. Select **N** when you do not want to share an installation values between users.

If you reuse the \$BMC application ID, any changes you make during the installation session will replace the values currently stored for that installation session.

You will not see the **Reuse Previously Used Application-ID** option the first time you run the Installation System.

When you finish, the BMC Software Installation Configuration panel (Figure 4 on page 46) is displayed. The **Setup New Customized Installation Library** option is preselected.

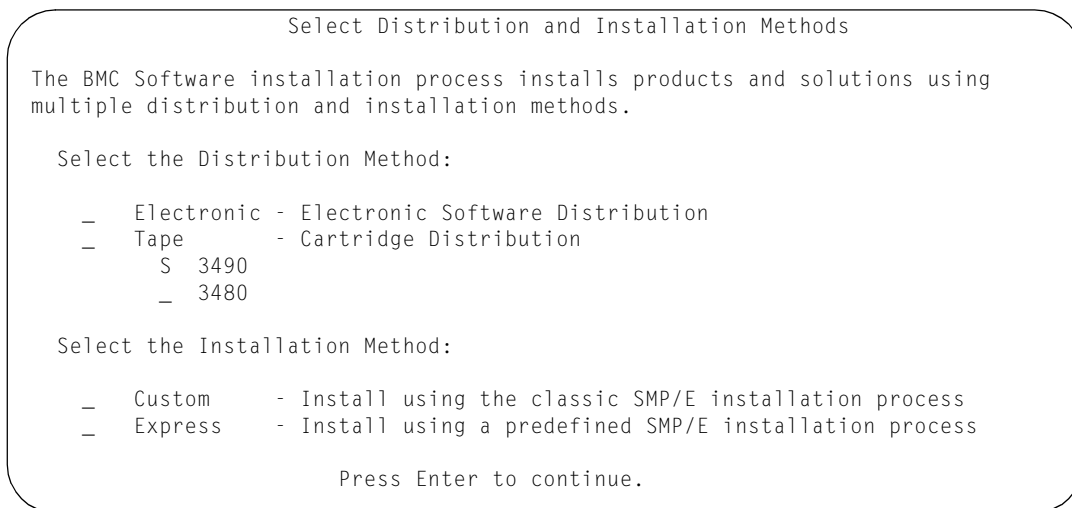
Figure 4 Installation Configuration Initial Menu



3 To continue, press Enter.

The system displays the **Select Distribution and Installation Methods panel (Figure 5)**.

Figure 5 Distribution and Installation Methods panel



4 Select the distribution method that you prefer:

- **Electronic** generates JCL that will download products from the BMC Software ESD site.



NOTE

The ESD site is password protected. The Installation System will prompt you for a user ID and password when you initiate the electronic download procedure. Contact your BMC Customer Support representative for a valid user ID and password.

- **Tape** generates JCL that will unload products from one or more distribution tapes. If you select **Tape**, also select one of the following options:

- **3490**
- **3480**



NOTE

If you later decide to change the distribution method for products or maintenance, you must create a new customized installation library and indicate the appropriate distribution method. In that case, when the checkpoint panel is displayed, choose to start over.

5 Select the installation method that you want to use:

- **Custom** generates JCL to perform a full SMP/E installation.
- **Express** generates JCL to perform an SMP/E installation using IEBCOPY.

6 Press **Enter** to continue.

7 Specify a name for your customized installation library, provide job card information as requested, and press **Enter**.

8 Provide product distribution information:

- If you selected the electronic distribution method, specify information that establishes a connection to the ESD site.



NOTE

Be prepared to provide the proxy information that your site requires and the user ID and password that you received from your BMC Customer Support representative.

If the Installation System cannot get past your firewall, the system displays a prompt and assists you in obtaining the product files manually from the ESD site.

- If you selected the tape distribution method, specify the first VOLSER in the product distribution tape series.



NOTE

See “Volume serial number ID” on page 28 for VOLSER naming information.

- 9 When the system displays the JCL that creates your customized installation library, review the comments at the beginning of the job.
- 10 Submit the JCL to create the customized installation library.



NOTE

If you need to end this procedure and return to the initial panel, press **F3**.

Proceed to “Starting and preparing the Installation System.”

Starting and preparing the Installation System

After creating your customized installation library, you are now ready to complete the following installation tasks:

1. Start the Installation System (“Starting the Installation System” on page 48).
2. Set up installation profiles (“Creating an installation profile repository and installation profiles” on page 50).

You can create a new installation profile repository and installation profile to save your installation variables, or you can reuse an existing repository and existing profiles.

3. Specify user options (“Specifying user options” on page 54).

This section explains how to start the Installation System and complete these tasks.

Starting the Installation System

Use the following procedure to access the Installation System’s Main Menu.

Before you begin

Ensure that you have obtained the base installation libraries and created your customized installation library as instructed in “[Setting up the installation libraries](#)” on page 38.

To start the Installation System

- 1 From the TSO Commands panel, enter the following command:

```
EX 'HLQ.INSTALL(BMCINSTL)'
```

The Installation Configuration Initial Menu is displayed ([Figure 6](#)).

Figure 6 Installation Configuration Initial Menu

```

BMC Software Installation Configuration V2.2.45 Initial Menu
Command ===> _____

Welcome to the BMC Software Installation and Customization System. The first
step of this process is the setup of a Customized Installation Library. It
is from within this library that you will unload, customize, and maintain the
BMC Software products and solutions that you have purchased.

If you are executing this process for the first time for this release,
select setup to create a new Customized Installation Library. Otherwise,
select to Install and Customize your BMC Software Products and Solutions.

Select an option then press Enter to continue.

  _ Setup New Customized Installation Library
  S Install and Customize Products and Solutions

Install notes: F1=Help, F3=Exit, F7 & 8=Table Scroll, F10=List, F11=XML code
next Product/Category, F12=Previous Panel
Selection is by / or S unless panel states otherwise

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```

- 2 Select **Install and Customize Products and Solutions** and press **Enter**.

The Main Menu is displayed ([Figure 7 on page 50](#)).

Figure 7 Installation System Main Menu

```

BMC Software Installation System V2.2.45 - Main Menu
Command ==>> _____

Select an option. Press Enter to continue.

S  Manage Repository/Profile  Create, Browse, Copy or Delete Existing Profile.
_  User Options                Specify User Parameters for Installation.
_  Product Install            Specify Product(s) to Unload or Download.
_  Product Customization      Specify Product(s) to Customize.
_  Additional Options         Product Cloning, Maintenance, Authorization, etc.
_  Runtime Enablement         Create Runtime Enablement Libraries

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Business Machines Corp.
    
```

3 To create an installation profile repository, proceed to [“Creating an installation profile repository and installation profiles.”](#)

Creating an installation profile repository and installation profiles

An installation profile is a data set that contains installation variables and customization options. The installation profile repository is a sequential file that acts as an index to the profile data sets. The Installation System stores the profile repository data set name in the ISPF profile data set that is associated with your user ID.

Use the instructions in this section to complete one of the following tasks:

- Create a new installation profile repository (if the repository does not yet exist) and a new installation profile.
- Copy or select an existing installation profile to replicate an earlier installation ([“To reuse an existing profile”](#) on page 52).

To create a new installation profile

- 1** Start the Installation System as described in [“Starting the Installation System”](#) on page 48.
- 2** From the Main Menu, select **Manage Repository/Profile** and press **Enter**.

The system displays the Repository/Profile Options panel (Figure 8).

Figure 8 Repository/Profile Options panel

```

BMC Software Install Repository/Profile Options
Command ==> _____

Change options as necessary. Press Enter to continue.

Repository Data Set . . . . . HLQ.CUSTOMER.DEFINED.BMCREPO
Repository Storage Class . . . _____ (Specify Value if Required for SMS)
Repository Management Class . . _____ (Specify Value if Required for SMS)
Repository Data Class . . . . . _____ (Specify Value if Required for SMS)
Repository Unit . . . . . _____ (Blank to use Installation Unit)
Repository VOLSER . . . . . _____

Repository Profile ID . . . . . BMCI ID containing Installation Parameters
** To create a new Profile, type over the Profile ID shown above. **
Profile System Name . . . . . <systemID>
Profile Data Set HLQ . . . . . _____ (30 char. max)
Profile Data Set Description . . _____

Manage Profiles . . . . . Y (Y/N)

Entry Field Delimiter . . . . . 3 (1.Underscore 2.Reverse Video 3.None)

```

3 If the **Repository Data Set** field is blank, type a repository data set name:

- If your profile repository data set already exists, enter that name.
- If the data set does not exist, enter **HLQ.BMCREPO** to create the data set (replacing **HLQ** with your high-level identifier).

4 (optional) If required for the Storage Management System (SMS), type values for the following fields:

- **Repository Storage Class**
- **Repository Management Class**
- **Repository Data Class**

5 (optional) In the **Repository Unit** field, type the repository unit.

6 (optional) In the **Repository VOLSER** field, type the ID of the VOLSER that corresponds to the VOLSER of the repository.

7 In the **Repository Profile ID** field, type a four-character ID for the installation profile.

The Installation System will use this ID and the HLQ that you choose in [step 9](#) to create the name for the installation profile data set.

8 In the **Profile System Name** field, type your system ID.

- 9** In the **Profile Data Set HLQ** field, type a high-level qualifier for the profile data set.

The Installation System uses this HLQ and the profile ID that you chose in [step 7](#) to name the installation profile data set, as follows:

HLQ.IDPROF

For example, if you type **MY.PDY** in this step and **MYNA** in [step 7](#), the Installation System creates a profile data set with the following name:

MY.PDY.MYNAPROF

The Installation System stores the profile ID in the following locations:

- output JCL data set that you name when you specify user options
 - ISPF profile data set (ISPPROF) that is associated with your user ID
 - customized installation library that you created
- 10** In the **Profile Data Set Description** field, type a description of your profile data set.
 - 11** In the **Manage Profiles** field, type **N** to create a new installation profile data set.
 - 12** After verifying that the values on the Repository/Profile Options menu are correct, press **Enter** to return to the Main Menu.
 - 13** To specify user options, proceed to [“Specifying user options” on page 54](#).

To reuse an existing profile

- 1** Start the Installation System as described in [“Starting the Installation System” on page 48](#).
- 2** From the Main Menu, select **Manage Repository/Profile** and press **Enter**.

The Repository/Profile Options panel ([Figure 8 on page 51](#)) is displayed.

- 3** In the **Manage Profiles** field, type **Y** and press **Enter**.

The Repository Listing panel is displayed ([Figure 9](#)). The profiles are listed chronologically, beginning with the most recently used profile. You can view, copy, delete, or reuse any of the listed profiles.

Figure 9 Repository Listing panel

```

BMIPREPR ----- Repository Listing ----- Row 1 to 12 of 35
COMMAND ==> _____ SCROLL ==> CSR

      Profile Libraries found in TIS.IVP820.OZI2040.BMCREPO
      Enter S or / to view Profile Information
      Enter P to Create Print JCL for the Profile Report
      Enter C to Create a copy of requested Profile
      Enter D to Delete a Profile from the Repository
      Enter U to Use a specific profile
      Press F12 to return to the Install

```

Sel	Created	Prof	Description	System
-	02/26/2008	XXXX	DEBH TAPE FULL DIRECT COPY PROFILE TEST	DEBH
-	02/21/2008	REOR	REORG INSTALL	DB2A
-	02/22/2008	MHA3	SDFD ACT INSTALL	DB2B
-	02/24/2008	MHA1	DHA 1 COPY OF RDALWO.IVP7401.OZI2012.UHA	DB2A
-	02/23/2008	MGA2	INDIRECT COPY ACT ACM	DB2A
-	02/23/2008	MGA1	THIS PROFILE IS A COPY OF MBA1	DB2A
-	02/17/2008	MDC3	DBDC - 3 ALU FULL DIRECT V8	DB2A
-	02/17/2008	MDC2	DBDC - 2 AAD FULL DIRECT V8	DB2A
-	02/14/2008	MDC1	DBDC - 1 DAD FULL DIRECT V8	DB2A
-	02/27/2008	MCS2	DECS - 2 SSID USING COPY OF MDC2	DB2A
-	02/27/2008	MCS1	DECS - 1 MSSID USING COPY OF MDC1	DB2A
-	02/23/2008	MCR2	FULL DIRECT ACT ACP AMU AFR ADU	MCR2

4 In the selection field for the profile that you want to reuse, enter **U**.



WARNING

When using an existing profile, you must review the installation parameters carefully. If the previous person who installed the product changed a BMC Software default value to a user-specified value, you must change the user-specified value when you reuse the profile. The value must be a BMC default value or a different user-specified value. *If you do not change the required unique parameters during the new installation procedure, severe errors result when you submit the installation JCL.*

For example, if you do not change the user-specified value for a DB2 plan name from the value that was specified during a previous installation, you can overwrite the plan that your current installation uses.

5 To return to the Repository/Profile Options menu, press **Enter**.

6 After verifying that the values on the Repository/Profile Options menu are correct, press **Enter** to return to the Main Menu.

7 To specify user options, proceed to [“Specifying user options” on page 54](#).

Specifying user options

You need to specify user options that determine how the Installation System runs and where it stores the installation JCL. If you are running the Installation System for the first time, you must specify options before continuing with any task. User options that you specify remain in effect for all subsequent installation tasks until you or someone else changes them.

Before you begin

Ensure that you have completed the following tasks:

- Obtained the base installation libraries and created your customized installation library as instructed in “[Setting up the installation libraries](#)” on page 38.
- Started the Installation System, as instructed in “[Starting the Installation System](#)” on page 48.
- Created a profile and profile repository, as instructed in “[Creating an installation profile repository and installation profiles](#)” on page 50.

To specify user options

- 1 From the Main Menu, select **User Options** and press **Enter**.
- 2 Specify an installation JCL data set to contain the JCL that the Installation System generates.

NOTE

Use a data set name of your choice. The output JCL data set contains the following items:

- all jobs that are used to install the selected products
 - most CLISTs that are used to run the selected products
- Some products do not require CLISTs in the installation JCL.
-

WARNING

If installation JCL already exists in the specified data set, that JCL is overwritten.

- 3 *(optional)* Specify the storage class, management class, and data class for the installation JCL if required for SMS.
- 4 *(optional)* Specify the unit for the installation JCL if required for SMS.



- 5** *(optional)* Specify the installation JCL VOLSER.
- 6** *(optional)* Specify the data set options are used to unload the compressed product files.

Specify **Y** to define the data set options that are used to unload the compressed product files to DASD and decompress them. Provide the following values:

- High Level Qualifier
- Unit Name
- Volume Serial Num
- Storage Class
- Management Class
- Data Class

Specify **N** to accept the default data set options for unloading the compressed formatted product files to DASD and decompressing them.

- 7** To save your changes and return to the Installation System Main Menu, press **Enter**.
- 8** Specify the high-level qualifier (HLQ) that you used for creating temporary data sets in the unloading process.

The default value is your user ID. See [“Obtaining the base installation libraries” on page 38](#).

- 9** *(optional)* Specify the unit name.

The default value is SYSALLDA.

- 10** *(optional)* Specify a volume for the temporary data sets.
- 11** *(optional)* Specify the storage class, management class, and data class for the temporary files that you used to decompress the product data sets if required for SMS.
- 12** *(optional)* Specify the output class for automatic purging of the noncritical output from the decompression process.

You are now ready to unload products from the distribution media, as instructed in [Chapter 3, “Installing product libraries.”](#)

Installing product libraries

This chapter contains the following topics:

Overview	57
Generating installation JCL	57
Running JCL for an Express installation.	60
Running Express installation JCL	60
Setting up the SMP/E environment for Express installations	61
Running JCL for a Custom installation.	63
Checking for PTFs in error	64
Processing PTF hold data	64
Setting up the SMP/E environment for Custom installations	65
Installing the product libraries with SMP/E.	68
Allocating and constructing product data sets with SMP/E	70
Canceling the installation	74

Overview

After setting up your installation libraries, profiles, and user options ([Chapter 2, “Setting up the Installation System”](#)), you can generate installation jobs in your *HLQ*.JCL library. This chapter guides you through generating, reviewing, and running the JCL to unload and install products.

Generating installation JCL

After you have supplied user options, you are ready to select products to unload from the distribution media. This procedure generates installation batch jobs (JCL) that you can review and edit if necessary. Running the JCL will unload the products that you selected into your environment.

Before you begin

Ensure that you have completed the following tasks:

- Obtained the base installation libraries and created your customized installation library as instructed in “[Installation System overview](#)” on page 15.
- Started the Installation System as instructed in “[Starting the Installation System](#)” on page 48.
- Specified user options as instructed in “[Specifying user options](#)” on page 54.

To generate the installation JCL

- 1 From the Main Menu, choose **Product Install** and press **Enter**.

NOTE



If you have previously run the Installation System, a checkpoint panel is displayed. You can stop your installation at a checkpoint. You can then start over, or you can resume the installation from one of the listed checkpoints.

The Product Selection panel lists all products that are available in the customized installation library that you created when you first ran the Installation System.

- 2 On the Product Selection panel, select the products that you want to install and press **Enter** to continue.

A panel displays the selected products.

- 3 Verify that the displayed products are correct, and press **Enter** to continue.

NOTE



If you select some products and solutions that do support runtime enablement and some that do not, the Installation System issues a warning. If you want to use runtime enablement, you must return to the product selection screen and select only products that support runtime enablement.

Several panels are displayed, requesting information about your selections.

- 4 For each product, provide the requested information (modifying the displayed values, if necessary), and press **Enter** to continue.
- 5 After completing the product and solution panels, generate the installation jobs to unload the products from the distribution media:



NOTE

Downloading and decompressing products from the BMC ESD site requires approximately twice the DASD as a tape unload. The Installation System recovers this space after the decompression procedure is complete.

A On the JCL Generation Option panel, specify one of the following options:

- Generate installation jobs in the data set that you entered in “[Specifying user options](#)” on page 54.

The Installation System generates jobs that unload the product libraries from the media, overwriting any installation jobs that already exist in the specified data set. The panel displays the current status of the JCL generation.

- Skip the installation job generation, and continue to the next panel.

For example, you might skip the installation job generation if you have already generated jobs and simply want to review the information that you provided for the installation.

NOTE



If you skip the job generation, no installation jobs are created. Instead, the Installation System skips to step 5C.

B Press **Enter** to generate the installation jobs.

The installation jobs for the product or products are created.

C When all required jobs are generated, press **Enter** to display the list of generated jobs.

D Review the product documentation for additional installation requirements.

NOTE



When you generate installation JCL, jobs are automatically created that will restore your system to conditions that were in place before the installation. These jobs are located in the installation JCL library that you specified when you provided user options. See “[Canceling the installation](#)” on page 74 for more information.

6 Run the generated JCL to complete the installation:

- If you are performing an Express installation, see “[Running JCL for an Express installation](#)” on page 60.

- If you are performing a Custom installation, see “[Running JCL for a Custom installation](#)” on page 63.



NOTE

You should run the installation JCL before customizing your products because some of the customization steps for some products require installed product files.

Running JCL for an Express installation

To install products from tapes by using the Express installation method, run the JCL shown in [Table 3 on page 60](#). The remainder of this section provides instructions for running installation JCL and setting up the SMP/E environment.

Running Express installation JCL

This procedure explains how to run JCL to unload BMC Software products from tapes for the Express installation method. If you are using the Custom installation, see “[Running JCL for a Custom installation](#)” on page 63.

Before you begin

Ensure that you have generated the JCL as instructed in “[Generating installation JCL](#)” on page 57.

Before running the JCL, set NUMBERS OFF on the ISPF **Command** line.

To run Express installation JCL

- 1 Review the JCL that the Installation System generated in your *HLQ*.JCL library ([Table 3](#)).

You can modify the JCL if necessary. When you are satisfied that the JCL is correct, proceed to the next step.

Table 3 Generated jobs for a Express installation (part 1 of 2)

Job	Description
\$B00DOC	provides documentation relevant to the unload JCL
\$B04DCMP	decompresses the images from tape sets and creates the data sets used for \$B05UNLD

Table 3 Generated jobs for a Express installation (part 2 of 2)

Job	Description
\$B04DWNL	downloads the images from the ESD site and creates the data sets used for \$B05UNLD
\$B05UNLD	allocates libraries and unloads the products that you selected for this installation
LIBUPR	converts certain libraries from lowercase to uppercase Note: This job is automatically created only for the products that offer this conversion. The LIBUPR job is not automatically displayed with the unload jobs.
\$B90SMPE	creates an SMP/E environment for future maintenance
\$B99CLNU	deletes UCLIN libraries that are left from the installation if you do not run \$B90SMPE

- 2 Run the \$B04DCMP or \$B04DWNL job to decompress or download the product files from the selected media.
- 3 Run the \$B05UNLD job to unload the product data sets.

The product unload is now complete. The product libraries reside in the data sets that you specified in your user options (“[Specifying user options](#)” on page 54).

Where to go from here

To set up your SMP/E environment, go to “[Setting up the SMP/E environment for Express installations](#)” on page 61.

Most products require customization before you can run them. For more information, see [Chapter 4, “Customizing products.”](#)

Setting up the SMP/E environment for Express installations

You need to complete this procedure only if you performed an Express installation.



NOTE

If you performed a Custom installation, see “[Setting up the SMP/E environment for Custom installations](#)” on page 65.

During Express installation, the Installation System creates the \$B90SMPE job, which prepares products and environments for SMP/E maintenance. \$B90SMPE builds and populates zones, initializes the SMP/E environment, and allocates and populates SMP/E support data sets and distribution libraries.

Before you begin

Verify that the \$B90SMPE job is in your *HLQ*.JCL library.

Before running the JCL, set NUMBERS OFF on the ISPF **Command** line.

To prepare for SMP/E maintenance (Express installations only)

- 1 Assign a job class or specify a time parameter that allows sufficient CPU time for the \$B90SMPE job to complete.

The required CPU time varies, depending on how many products you are installing.

- 2 Run the \$B90SMPE job.

NOTE

The VSMALLOC step in this job might complete with a return code of 8. This return code is normal and does not indicate an error condition.



After \$B90SMPE is completed, the SMPLOG data set contains many UCLIN records. You can manage the SMPLOG data set in the following ways:

- Rename the SMPLOG data set following successful completion of \$B90SMPE, and allocate a new data set for ongoing SMP/E processing.
- Use DISP=OLD instead of DISP=MOD so that existing SMPLOG data set space is rewritten.
- Make the SMPLOG a dummy data set by coding either DSN=NULLFILE, or DD DUMMY.

Where to go from here

Most products require customization before you can run them. For more information, see [Chapter 4, “Customizing products.”](#)

Running JCL for a Custom installation

If you are installing products by using the Custom method, you must complete several tasks that use the JCL that is generated by the Installation System.

1. Check for PTFs that may be in error ([page 64](#)).
2. If hold data exists for PTFs in error, move that data to a hold data set ([page 64](#)).
3. Set up your SMP/E environment to prepare for installing the product libraries ([page 65](#)).
4. Install the products libraries ([page 68](#)).
5. Allocate and construct the product data sets ([page 70](#)).

Before proceeding, note the following general guidelines for installing BMC products in an SMP/E environment:

- The SMP/E utility is described in these IBM publications:
 - *System Modification Program Extended User's Guide*
 - *System Modification Program Extended Reference*
- BMC products have common components. When installing multiple BMC products into your SMP/E environment, you should install them into one set of target and distribution zones. SMP/E can then control the relationships among the components. Future products (and enhancements to existing products) might also share components that were distributed previously.

WARNING



- BMC Software recommends that you do not install BMC products in zones that contain products that were distributed or manufactured by other vendors. Naming conventions between vendors is not guaranteed and zone separation will avoid potential conflicts.

For example, if you install MAINVIEW AutoOPERATOR in the same zone as IBM products, name conflicts can occur with elements WTO and SUB.

- When you install any MAINVIEW product into an existing zone that contains an existing installation of the MAINVIEW AutoOPERATOR or BMC Impact Integration for z/OS products, the installation of the MAINVIEW product automatically upgrades the MAINVIEW AutoOPERATOR and BMC Impact Integration for z/OS FMID BBOIMxx. Therefore, you should always plan to upgrade MAINVIEW AutoOPERATOR and BMC Impact Integration for z/OS to the latest release along with the other MAINVIEW products that you are installing into the existing zone.
-

**NOTE**

Before submitting JCL, set NUMBERS OFF on the ISPF **Command** line.

Checking for PTFs in error

You should not apply PTFs that are in error to your system. To determine whether your products have PTFs in error, check the most recent technical bulletins or flashes on the Customer Support website at http://www.bmc.com/support_home.

The technical bulletins might indicate hold data for PTFs that are in error. Use the following procedure (“[Processing PTF hold data](#)”) to process them. If none of your products have PTFs in error, proceed to “[Setting up the SMP/E environment for Custom installations](#)” on page 65.

Processing PTF hold data

If you determine that hold data exists for PTFs in error, use the following procedure to move that data to a hold data set.

To process PTF hold data

- 1 Create a data set for hold data processing as described in the IBM book *System Modification Program Extended Reference*.
- 2 Use the following modification control statements (MCSs) to enter exception SYSMOD hold data in your data set:

```

++HOLD(_____)
FMID(_____)
DATE(_____)
ERROR REASON(_____)
COMMENT(_____)

```

**NOTE**

The Installation System generates JCL members \$B50HOLD and \$B55LIST in the *HLQ.JCL* library to process hold data. For descriptions of these jobs, see [Table 6 on page 69](#).

- 3 To process hold data from your data set and list the exception SYSMODs, use JCL members \$B50HOLD and \$B55LIST.

- 4 Review the hardcopy listings to determine whether you need to take any further action.

Setting up the SMP/E environment for Custom installations

To use SMP/E, you must set up your SMP/E environment to prepare for installing the product libraries. The jobs that are in the *HLQ.JCL* data set install BMC products into an existing environment or a new environment, depending on your responses on the installation panels.

For users who performed a Custom installation, this section provides step-by-step instructions for preparing an existing environment (“[Preparing an existing SMP/E environment](#)” on page 65) or for creating a new environment (“[Creating a new SMP/E environment](#)” on page 67.)

NOTE



If you performed an Express installation, see “[Setting up the SMP/E environment for Express installations](#)” on page 61.

Upon completing the Custom installation panel, the information job \$B00DOC is generated. Select this job for browsing or offline printing. Review the contents for critical information about this installation.

WARNING



Before running the RECEIVE and APPLY processes on new products or maintenance in an existing environment, run the ACCEPT process on all previously installed products and maintenance.

Preparing an existing SMP/E environment

During the installation process, if you chose to install your BMC products into an existing SMP/E environment, the Installation System generated JCL in *HLQ.JCL* to create new target and distribution zones as necessary, and to relate them to an existing global zone. This procedure describes the generated jobs and considerations for running them.

Before you begin

Ensure that you have generated the JCL as instructed in “[To generate the installation JCL](#)” on page 58.

The SMP/E environment can have several installation configurations that use

- existing global, target, and distribution zones
- existing global zones with new target and distribution zones

Review the following considerations for SMP/E zones.

Considerations for all SMP/E environments with existing zones

For all SMP/E environments with existing zones, you must consider the number of directory blocks to allocate. Provide 400 directory blocks for the SMPTLIB. Failure to allocate these directory blocks can result in SMP/E errors. Verify that your DSSPACE parameters are as follows, where your site determines the xxx values: DSSPACE (xxx,xxx,400). The last parameter must be 400.

You can use the following sample UCLIN to make the correct allocation:

```
SET BDY(GLOBAL)
UCLIN.
REP OPTIONS(BAB)
DSSPACE(200,120,400)
ENDUCL.
```

Ensure that the global zone is updated with a BMC entry. When new target and distribution zones share the same global zone, an SREL(BOOL) entry must be included in the global zone before you can install your products. The Installation System generates the \$B20RELT job, which includes an SREL(BOOL) entry. If an SREL(BOOL) entry is found in your global zone, its presence indicates that BMC products have been installed on your system previously.

Considerations for existing global, target, and distribution zones

The target libraries contain multiple products. When multiple products share libraries, use the same high-level prefix for the target libraries that you used previously. Common components between products, such as BBIIS25 or BBISS26, are installed only once, and maintenance needs to be applied only once.

Considerations for existing global zones with new target and distribution zones

For a global zone connected to two sets of target and distribution zones, common components are installed twice. Maintenance can be received once in that global zone, but it must be applied to both sets of target and distribution zones. If you want to run multiple products together, you need to concatenate the target libraries.

To install your products and apply maintenance, the new target and distribution zones must be related to the existing global zone. The Installation System generates jobs \$B10CCSI and \$B25RELT, which allocate new target and distribution zones that are related to the same global zone.

To prepare the existing SMP/E environment

- 1 Review the jobs that are listed in [Table 4](#) and make modifications as necessary.

Table 4 Jobs to prepare the SMP/E environment

Job	Description
\$B10CCSI	creates new target and distribution zones The Installation System generates and requires this job only when you are creating separate target and distribution zones.
\$B25RELT	relates new target and distribution zones to an existing global zone and updates the global, target, and distribution zones with an SREL(BOOL) entry

- 2 Submit the jobs in the order listed.
- 3 Proceed to [“Installing the product libraries with SMP/E” on page 68](#) to install your products in the SMP/E target and distribution zones.

Creating a new SMP/E environment

If you chose to create a new SMP/E environment during the installation process, the Installation System generated JCL to define new global, target, and distribution zones and non-VSAM data sets to SMP/E. This procedure describes the generated jobs and considerations for running them.

Before you begin

Ensure that you have generated the JCL as instructed in [“To generate the installation JCL” on page 58](#).

Before running the JCL, set **NUMBERS OFF** on the ISPF **Command** line.

To create a new SMP/E environment

- 1 Review the jobs that are listed in [Table 5](#) and make modifications as necessary.

Table 5 Jobs to create a new SMP/E environment

Job	Description
\$B05CGBL	creates a global zone If AutoCustomization (MAINVIEW products only) is used, the prefix for the product libraries must not be the same as the TSO user ID of the person who is conducting the installation.
\$B10CCSI	creates new, separate target and distribution zones
\$B15CSMP	allocates non-VSAM data sets
\$B20RELT	defines BMC options to be used for RECEIVE, APPLY, and ACCEPT processing and relates new BMC target and distribution zones to a global zone To create new target and distribution zones only for BMC products, you must relate these zones to the global zone. A return code of 4 and ADD ASSUMED messages are normal. If the job ends with a higher return code, check the output and call BMC Customer Support.

- 2 Submit the jobs in the order listed.
- 3 Proceed to “[Installing the product libraries with SMP/E](#)” to install your products in the SMP/E target and distribution zones.

Installing the product libraries with SMP/E

This procedure explains how to unload product libraries with SMP/E. Specifically, it explains how to receive, apply, and accept product functions and maintenance, and how to define target and distribution libraries by using jobs that the Installation System generates.

Before you begin

Ensure that you have completed a Custom installation as described in “[To generate the installation JCL](#)” on page 58.

To install product libraries

- 1 Review the jobs that are listed in [Table 6](#) and make modifications as necessary.



NOTE

These jobs require special consideration before you submit them. Review all descriptions and notes.

Table 6 Jobs to install product libraries (part 1 of 2)

Job	Description
\$B04DCMP	decompresses the images from the media and creates the data sets that are used for \$B30RECP
\$B30RECP	receives downloaded and decompressed product functions You should use the \$B35LIST and \$B40REJT instructions only if you are installing your products in the same target and distribution libraries as other BMC products.
\$B35LIST	lists the functions received but not applied to the specified target zone When you are installing newer functions into existing functions, SMP/E requires a SELECT operand for the following operations: <ul style="list-style-type: none"> ■ APPLY CHECK (\$B75APCK) ■ APPLY (\$B76APLY) ■ ACCEPT CHECK (\$B80ACCK) ■ ACCEPT (\$B81ACPT) Obtain the list of function IDs (FMIDs) that are needed to construct the SELECT operand from the \$B35LIST output. Note: The Installation System generates this member only if you are installing BMC products into existing SMP/E data sets.
\$B40REJT	rejects the functions that were previously received, applied, and accepted If a subsequent SMP/E receive of functions contains REWORK dates later than the previously applied and accepted functions, these functions are not processed. Reject these functions selectively. Warning: Do not reinstall previously installed functions that are shipped with product upgrades. Note: The Installation System generates this member only if you are installing one or more products in the same target and distribution libraries as other BMC products.

Table 6 Jobs to install product libraries (part 2 of 2)

Job	Description
\$B45RECS	<p>receives the PTFs from the cumulative maintenance tape or program update maintenance tapes</p> <p>After \$B45RECS is completed, you can review system and error hold information by reviewing the RECEIVE ++HOLD/++RELEASE SUMMARY REPORT. You can also generate the system and error hold information by submitting \$B55LIST and viewing the output.</p> <p>Because the maintenance tape includes maintenance for most BMC products, output from \$B45RECS might include ++VER messages, indicating that maintenance for other products was not received.</p> <p>Note: These diagnostic messages cause a step return code of 4.</p>
\$B50HOLD	<p>receives HOLD statements that are stored in your data set</p> <p>Note: You should run this job only if you received hold data from BMC Customer Support. (See “Checking for PTFs in error” on page 64.)</p>
\$B55LIST	<p>lists hold data</p> <p>SYSMODs that are held because of errors are released automatically when an APAR or PTF resolves the error. SYSMODs that are held for documentation or action must be released with the BYPASS keyword in the APPLY JCL at the end of the \$B76APLY job.</p>
\$B60DOCL	<p>contains JCL to print PTF documentation from the maintenance tape</p> <p>Keep the product documentation, and insert it into the appropriate book.</p>

- 2 Submit the jobs in the order that is listed.
- 3 Proceed to “[Allocating and constructing product data sets with SMP/E](#)” to finish the installation process.

Allocating and constructing product data sets with SMP/E

To complete a Custom installation, you must allocate product data sets in target and distribution zones, and you must apply and accept all functions and maintenance. The Installation System generates JCL that accomplishes these tasks. The following procedures provide considerations and instructions for running the jobs.

Before you begin

Ensure that you have completed the installation process for a Custom installation as described in “[Generating installation JCL](#)” on page 57.

The Installation System generates JCL to allocate and construct product data sets. Review the generated jobs that are listed in the following table:

Table 7 Jobs to allocate and construct product data sets

Job	Description
\$B18ALOC	allocates target and distribution data sets for products
\$B27FSET	defines FMIDSETs for new target and distribution zones
\$B70DDEF	defines data sets to SMP/E by using DDDEF statements
\$B75APCK	performs APPLY CHECK for all functions and maintenance
\$B76APLY	applies all functions and maintenance
\$B80ACCK	performs ACCEPT CHECK for functions and maintenance for a new installation
\$B81ACPT	accepts functions, PTFs, and APARs during a new installation

To create a product FMIDSET

NOTE



Follow these steps only if you selected to create a product FMIDSET on the product installation panels.

- 1 Review the comments near the beginning of the \$B27FSET job.
- 2 Submit the \$B27FSET job.

To allocate target and distribution data sets

- 1 Review the comments near the beginning of the \$B18ALOC job.
- 2 Submit the \$B18ALOC job to allocate target and distribution data sets for products.

NOTE



Perform the following steps only if you selected to allocate data sets with DDDEF statements on the product installation panels.

- 3 Review the comments near the beginning of the \$B70DDEF job.
- 4 Submit the \$B70DDEF job to allocate data sets with DDDEF statements.

To apply all functions and maintenance



NOTE

In general, all previously applied SYSMODs should be accepted before applying new maintenance.

1 Perform APPLY checking before applying functions and maintenance.

A Review the comments near the beginning of the \$B75APCK job.

B Use the list of FMIDs that \$B35LIST produced in the APPLY SELECT list.

C Change the BYPASS keyword as needed to take appropriate action for system holds, as in the following example:

```
BYPASS(HOLDSYS(DOC, ACTION, DELETE, DEP))
```

This example releases SYSMODs that were held for documentation and action.

D Submit the \$B75APCK job to perform APPLY checking.

E Review the \$B75APCK output to verify that the \$B76APLY job will apply the expected functions and maintenance.

NOTE

A return code of 4 is normal. If the job ends with a higher return code, check the output and call BMC Customer Support for assistance.



2 Perform APPLY processing:

A Review the comments near the beginning of the \$B76APLY job.

B Use the same APPLY 'SELECT' list that was used for \$B75APCK.

C Use the same 'BYPASS' that was used for \$B75APCK.

D Submit the \$B76APLY job to perform APPLY checking.

E Review the \$B76APLY output to verify that the \$B76APLY job has applied the expected functions and maintenance.

NOTE

A return code of 4 is normal. If the job ends with a higher return code, check the output and call BMC Customer Support for assistance.



3 Submit the \$B76APLY job to run the apply.



NOTE

A return code of 4 is normal. If the job ends with a higher return code, check the output and call BMC Customer Support for assistance.

The target libraries are defined by product line, not by product. Some products within a product line do not need all of the target libraries for that line. For this reason, the SMP/E APPLY might not use some target libraries. You can delete the unused target libraries if you do not plan to install other BMC products. However, do not delete the distribution libraries at this time; they are needed for ACCEPT processing.

To accept functions, PTFs, and APARs



NOTE

In general, all previously applied SYSMODs should be accepted before applying new maintenance.

1 Perform ACCEPT checking before accepting functions and maintenance:

- A** Review the comments near the beginning of the \$B80ACCK job.
- B** Use the list of FMIDs that \$B35LIST produces in the ACCEPT SELECT list.
- C** Change the BYPASS keyword to take appropriate action for system HOLDS, as in the following example:

```
BYPASS(HOLDSYS(DOC, ACTION, DELETE, DEP))
```

This example releases SYSMODs held for documentation and action.

- D** Submit the \$B80ACCK job to perform ACCEPT checking.
- E** Review the \$B80ACCK output to verify that the \$B81ACPT job accepted all the expected functions and maintenance.



NOTE

A return code of 4 is normal. If the job ends with a higher return code, check the output and call BMC Customer Support for assistance.

2 Perform ACCEPT processing:

- A** Review the comments near the beginning of the \$B81ACPT job.
- B** Use the same ACCEPT SELECT list that you used for \$B80ACCK.
- C** Use the same BYPASS that you used for \$B80ACCK.
- D** Submit the \$B81ACPT job to perform ACCEPT checking.
- E** Review the \$B81ACPT output to verify that the \$B81ACPT job accepted the expected functions and maintenance.

NOTE

A return code of 4 is normal. If the job ends with a higher return code, check the output and call BMC Customer Support for assistance.



Where to go from here

Most products require customization before you can run them. For more information, see [Chapter 4, “Customizing products.”](#)

Canceling the installation

When you generate installation JCL, jobs are automatically created that will restore your system to conditions that were in place before the installation. These jobs are located in the installation JCL library that you specified when you provided user options. [Table 8](#) describes these utility jobs.

Table 8 Installation System restore jobs (part 1 of 2)

Job	Description
\$B00DOC	contains relevant information about the installation and descriptions of generated jobs Read this member before submitting any JCL.
\$B99CLNU	deletes SMP/E input data sets that the \$B90SMPE job would have used to populate the SMP/E environment with the products and components that were selected Run this job only if \$B90SMPE job was not executed.
#D98DCSI	deletes global, target, and distribution zones that were created during an SMP/E installation
#D98DTGT	removes all product data sets from your SMP/E target libraries
#D98USR	deletes all user data sets that \$C05ALOC created

Table 8 Installation System restore jobs (part 2 of 2)

Job	Description
#D99DDL	removes all product data sets from your SMP/E distribution libraries
#D98DROP	drops all DB2 data structures and frees all packages and plans that were created during installation Run this job only when you want to remove the installed products from your environment. As a safeguard, you must edit the job before it will run.
#D99DVSM	deletes all VSAM data sets that \$C10VSAM created Run this job only when you want to remove the installed products from your environment. As a safeguard, you must edit the job before it will run.
#D99RTE	deletes all runtime data sets that \$R05RTEC created

To cancel an installation

- 1 Determine which jobs you need to run from [Table 8](#).
- 2 Run the selected jobs.

Customizing products

This chapter contains the following topics:

Overview	77
Customizing products with Standard customization	78
Generating Standard customization JCL	78
Running Standard customization JCL	80
Customizing products with AutoCustomization	84

Overview

Customization assigns values to default options and prepares a product for execution. The Installation System controls the customization process, but the assigned values are specific to your product and environment. BMC Software supports the following customization procedures:

- Standard customization
- AutoCustomization (used with MAINVIEW products)

When you complete the customization panels, the Installation System generates customization JCL in your installation JCL library.

The procedure to customize a product is determined automatically. When you choose to customize products from the Main Menu, available products are displayed in association with the appropriate procedure. Depending on the mix of products you installed, you may or may not be prompted to select a customization type. If all products being installed use the same customization type, the correct customization type will start without a prompt.

When you select the products to be customized, the panel will direct you through the Standard customization or the AutoCustomization procedure. If both customization procedures are required for your products, you can choose which procedure to perform first. After completing the procedure, the Installation System returns to the panel of available products, where you can choose to continue customization or exit.

Before beginning the customization process, locate the resources that you might need:

- product release notes
- product installation requirements

The specific documentation varies, depending on your products.

Customizing products with Standard customization

The Standard customization process consists of the following tasks:

1. Generate Standard customization JCL (“[Generating Standard customization JCL](#)” on page 78).
2. Run the Standard customization JCL (“[Running Standard customization JCL](#)” on page 80).

Generating Standard customization JCL

The Standard customization procedure generates JCL that assigns initial operating parameter values to products that are not customized by using AutoCustomization.

Before you begin

Ensure that you have unloaded your BMC products as instructed in “[Generating installation JCL](#)” on page 57.

Run the installation JCL as instructed in “[Running JCL for an Express installation](#)” on page 60 or “[Running JCL for a Custom installation](#)” on page 63. Some of the customization steps for some products require installed product files.

To customize installed products with Standard customization

- 1 From the Installation System's Main Menu, choose **Product Customization** and press **Enter**.
- 2 If you are installing products that require both types of customization, the Product and Solutions Verification panel lists the selected products and the appropriate customization procedure for each. If you are prompted to select the customization type, select **Standard customization** to customize products.

If all the products that you are installing use Standard customization, the Installation System proceeds with Standard customization without prompting you for the customization type.

The Installation System presents a series of panels that request information about your current system and the products that you are installing. Be prepared to supply release levels of installed products, library names and locations, and other information.

- 3 When prompted, supply the requested information or verify the displayed information. To continue, press **Enter**.

NOTE

For more information about the options on each panel, press **F1** to access the online Help that is available with the Installation System.



When you have completed the customization panels, the Final Tasks panel is displayed.

Figure 10 Install System - Final Tasks panel

```

Install System - Final Tasks
Command ==> _____

Select one or more options then press Enter to continue.

_ Product Authorization          Apply Product Passwords.
_ Review Customization          Review Values Selected During Customization.
_ JCL Generation                Generate Jobs to Perform Customization.

```

- 4 From the Final Tasks panel, select **JCL Generation**.

Choose this option to generate the customization JCL. After you choose this option, a panel similar to the panel shown in [Figure 11](#) is displayed. If you choose to generate installation JCL, the Installation System generates the JCL used to customize the product and components.

NOTE



If the jobs already exist in your library, the Installation System will overwrite them if you generate the installation JCL.

Figure 11 Install System JCL Generation Option panel

```

                                Install System JCL Generation Option Panel
Command ==> _____

Select an option. Press Enter to continue.

S Generate install JCL in RDAVEM4.XBM.JCL
_ Skip generation process and display next panel

Member Status Function

$C00DOC      Customization Documentation
$C20APF      Copy Load Modls to an APF Lib
$C10VSAM     Process VSAM datasets
CLISTS       Product Invocation Clists
DROPVSAM     Delete VSAM Files
  
```

After the Installation System generates the JCL, press **Enter** to continue. The Installation System then displays the name of the library that contains the JCL. Press **Enter** again to display an Edit member list that you can use to edit or submit the generated JCL, as necessary. See [“Running Standard customization JCL”](#) for more information about these jobs.

- 5 When you have finished working with the options at the Final Tasks panel, press **F3** to return to the Main Menu.
- 6 Run the customization JCL as directed in [“Running Standard customization JCL”](#) on page 80.

Running Standard customization JCL

This procedure explains how to run the JCL that was generated when you followed the Standard Customization panels.

The customization jobs that are generated vary, depending on the products that you install and the customization features that you choose. The Installation System generates customization JCL in your *HLQ*.JCL library. Table 9 lists typical customization jobs. Review the comment section near the beginning of each generated job for function details.

Table 9 Generated JCL for Standard customization (part 1 of 2)

Job	Description
\$C00DOC	provides documentation relevant to the customization JCL
\$C05ALOC	creates the user libraries that contain members used to execute and customize the products
\$C10VSAM	defines the VSAM data sets that are required for the products that you have selected for this installation
\$C15PSWD	applies product or solution passwords in preparation for execution
\$C20APF	copies load modules to an APF-authorized library
\$C26XIMP	copies the XIM parameter member to the data PDS
\$C30DOPT	creates and assembles the installation options modules for the products that you have selected for this installation You should verify that the parameter names and the data definition names in this job are compatible with your site requirements.
\$C31CPYS	copies the generated RECOVERY MANAGER for DB2 options to the ARMSOPTS member in the HLQ.*.DBCNTL file
\$C31HIST	allocates the &DTVSGSPN DB2 history and LOGRANGE files if they do not exist
\$C32SOPT	creates and assembles the installation options module for BMCSORT, the BMC sort engine
\$C34INIT	establishes the base AUTOEDIT variables in Control-O
\$C35BNDI	binds the plan that is needed to install DB2 products This job processes the installation worklist that contains data definition language (DDL) and BIND plan statements.
\$C38ALTR	alters the tables, adding columns to each table if they do not already exist
\$C38INDX	builds additional indexes for existing common utility tables
\$C39ALTR	alters the common utility tables to the latest configuration
\$C40ALTR	alters the ALTER or CHANGE MANAGER product tables and builds additional objects
\$C40INST	executes a series of worklists to create the DB2 environment for the products that you selected for this installation This job creates DB2 objects and binds application plans. The BMC product load library must be APF authorized for this job to complete successfully.
\$C45CNTL	copies generated control members to the CNTL library
\$C45COMD	assembles the command table for BMC CATALOG MANAGER for DB2 product

Table 9 Generated JCL for Standard customization (part 2 of 2)

Job	Description
\$C45COPY	copies JCL generated members to the libraries where they will be used
\$C46EDIT	tailors job skeletons that are copied to the CNTL library
\$C56LDRU	loads the Japanese rule set to the product RULES table
\$C60GRNT	grants user authority to the various product tables and plans
\$C63MIGP	migrates data for the Performance products
\$C64INIT	initializes and allocates various files that are required for the BMC products for IMS
\$C65MIG	unloads data from a previous release of the product
\$C66MIG	loads data from a previous release of the product into the new environment
\$C66TBLD	loads the initialization data for DASD MANAGER PLUS and loads the CATALOG MANAGER product tables
\$C67COPY	produces an image copy of the new environment after migrating data from a previous release
\$C68ALP	migrates data from previous releases of the BMC Log Master for DB2 product to the new environment in the specified DB2 subsystem
\$C68DOM	migrates VSAM data for BMC Performance products
\$C70IVP	<p>runs the installation verification procedure (IVP) for several BMC Utility and Backup and Recovery products</p> <p>This job performs the following tasks:</p> <ul style="list-style-type: none"> ■ builds all required DB2 objects ■ loads the required data ■ verifies that the \$B90SMPE job (Express installation) or the \$B76APLY job (Custom installation) ran to create an SMP/E environment for maintenance ■ deletes the temporary database that it uses for its own testing <p>Note: BMC recommends that you do not run this job until after you have completed all other customization and configuration tasks.</p> <p>See “Setting up the SMP/E environment for Express installations” on page 61 for more information on the \$B90SMPE job.</p>
\$C79BBVC	runs the BMC StopX37/II stand-alone customization
\$C79TMPD	builds a temporary database that several products require (only for DB2 version 8)
\$C81PERF	creates database and tablespace for dynamic Explain
\$C97IA	provides a post-installation procedure for the BMC Performance products

Before you begin

Before running the customization JCL, complete the following tasks:

- Ensure that you have generated the customization JCL as instructed in “Customizing products with Standard customization” on page 78.
- Before running JCL, set NUMBERS OFF on the ISPF **Command** line.
- Some products have specific requirements for submitting the customization batch jobs. For each product that you are installing, check the following sources to determine specific requirements:
 - the \$C00DOC member of the installation batch jobs
 - release notes, flashes, and technical bulletins for the product
 - additional customization procedures in this chapter

To run standard customization JCL

- 1 Review the generated customization jobs in your *HLQ.JCL* library.

You can modify the JCL if necessary. When you are satisfied that the jobs are correct, proceed to the next step.

- 2 Run the jobs in the order listed (or as instructed in \$C00DOC or other customization procedures).

Return codes greater than 0

Return codes greater than 0 are specific to the job that is run and the products that are referenced. Refer to the comment block near the beginning of each customization job and its members for information about return codes greater than 0.

The bind steps of customization jobs for some products might generate return code 4. In most cases, return code 4 does not indicate a problem with your installation.

Runtime enablement

If you are using the runtime enablement option, you will run the \$R05RTEC job that creates the runtime enablement data sets when you have successfully completed the customization jobs.



NOTE

BMC Software recommends that you apply any available maintenance before you run the \$R05RTEC job.

Where to go from here

If you have not already done so, you should apply passwords next. For more information, see [Chapter 5, “Applying product passwords.”](#)

Also, after generating and running your customization jobs, BMC strongly recommends that you apply maintenance to your installed products to ensure that your products are running at the most current level. For information about applying maintenance, see [Chapter 6, “Applying maintenance.”](#)

Customizing products with AutoCustomization



NOTE

The AutoCustomization information in this section applies only to the MAINVIEW family of products.

AutoCustomization assigns the initial operating parameter values to products. AutoCustomization is an interactive, online ISPF panel that BMC provides for customizing BMC products. AutoCustomization minimizes mistakes, propagates information for shared customization steps, allows you to browse steps before you perform them, and marks each step as it is completed. You can also bypass steps that you prefer to perform manually.

You can get help at any time during AutoCustomization by typing **HELP** on the **Command** line or pressing the Help key (**F1**). Requesting help at the first customization panel provides an overview of AutoCustomization.

When you select one or more products, AutoCustomization presents a comprehensive list of sequentially numbered steps that you must complete before the product is operational. The number of steps varies, depending on the product. Most of the steps are required, but some are optional.



TIP

BMC recommends that you browse all AutoCustomization steps and compile a list of questions or required information before selecting steps. Having all of the information in advance allows you to answer the questions promptly and proceed through the AutoCustomization process efficiently.



NOTE

Although you can browse steps in any order, you must select and complete steps in the listed order, because many steps share information from previous steps. You must select each step, even if a step is optional and will be bypassed.

When all of the required steps are marked as completed, the product is operational. When you return to the product list from the step list, the status of the product changes from UNMODIFIED to OPERATIONAL.

If you bypass any required steps in the list of numbered steps and return to the product list, the status of the product changes to INCOMPLETE and the product is not operational.

Before you begin

Ensure that you have unloaded your BMC products as described in [“Generating installation JCL”](#) on page 57.

To run AutoCustomization, you must use ISPF/PDF 2.3 or later. Also, you must ensure write access to the following items:

- SYS1.PARMLIB
- JES procedure library (SYS1.PROCLIB or equivalent)
- previously APF-authorized load library
- SYS1.VTAMLST or equivalent for MAINVIEW Alternate Access

For any additional authorization requirements for the product that you are customizing, see the documents that shipped with your product. Those documents also describe any additional customization that you must perform to implement optional product functions.

NOTE



If you installed BMC products in multiple target and distribution zones, you must run AutoCustomization for each set of target libraries and distribution libraries.

You can run AutoCustomization through the Installation System or from an ISPF **Command** line, independent of the Installation System. Use one of the following tasks to run AutoCustomization:

- “To run AutoCustomization through the Installation System” on page 86
- “To run AutoCustomization from an ISPF command line” on page 89

TIP



Both methods for running AutoCustomization execute the following CLIST:

HLQ.BBCLIB(BBCUST)

You will get the same results running AutoCustomization with either method.

To run AutoCustomization through the Installation System

- 1 From the Installation System Main Menu, choose Product Customization and press **Enter**.

The products that you have unloaded are listed with the appropriate customization procedure.

Depending on the mix of products you installed, you may or may not be prompted to select a customization type. There are two different customization types Standard and AutoCustomization. If all products being installed use the same customization type, the correct customization type will start without a prompt.

- 2 To customize the listed products, select **AutoCustomization**.
- 3 If you are prompted, enter the high-level qualifier (HLQ) of your product libraries and press **Enter**.

The Product Customization menu displays the status of each product. A sample Product Customization menu is shown in [Figure 12 on page 87](#).

Figure 12 Sample Product Customization menu (AutoCustomization)

```

BMC Software ----- PRODUCT CUSTOMIZATION ----- Row 1 of 29
COMMAND ===>                                     SCROLL ===> HALF

Valid line command:                               Valid primary commands:
S - Select a product for customization            MAINT - Recustomize all products
      (Make your selection(s) by                  after applying SMPE
      scrolling forward and/or backward.          maintenance
      Press ENTER to process your
      selection(s).)                               HELP - Display an overview of this
                                                    product customization dialog

Product                                           Status
-----
_MAINVIEW INFRASTRUCTURE                        INCOMPLETE
AUTOOPERATOR                                    INCOMPLETE
CMF MONITOR                                     INCOMPLETE
Discovery for z/OS                              INCOMPLETE
ENERGIZER FOR CICS                             OPERATIONAL
MAINVIEW ALARM                                  INCOMPLETE
MAINVIEW FOCAL POINT                           INCOMPLETE
MAINVIEW FOR CICS                              INCOMPLETE
MAINVIEW FOR DBCTL                             INCOMPLETE
MAINVIEW FOR DB2                               INCOMPLETE
MAINVIEW FOR DB2 - PR                          INCOMPLETE
MAINVIEW FOR IMS OFFLINE                       INCOMPLETE
MAINVIEW FOR IMS ONLINE                       INCOMPLETE
MAINVIEW FOR IP                                INCOMPLETE
MAINVIEW FOR LINUX                             INCOMPLETE
MAINVIEW FOR MQSERIES                          INCOMPLETE
MAINVIEW FOR USS                               INCOMPLETE
MAINVIEW FOR VM SYS CLONE                      INCOMPLETE
MAINVIEW FOR VTAM                             INCOMPLETE
PF 1=HELP      2=SPLIT      3=EXIT      4=CKPANELS      9=SWAP      12=CANCEL
    
```

4 Select a product to customize, and press **Enter**.

NOTE



You are required to customize the MAINVIEW INFRASTRUCTURE component. Select and customize MAINVIEW INFRASTRUCTURE before you customize other products.

The Product Customization Steps menu (Figure 13) displays the steps that are required for customizing a product and the status of the customization.

Figure 13 Sample Product Customization Steps menu (AutoCustomization)

```

BMC Software ----- PRODUCT CUSTOMIZATION STEPS ----- Row 1 of 20
COMMAND ==>                                           SCROLL ==> HALF

Valid line commands:                                Status (S)      Flag (F)

S - Select a step (Must be selected in sequence)   -----
B - Browse a step (No action is taken; step may    + completed    o optional
   be browsed out of sequence)                    - bypassed
N - Bypass an optional step

Step S F Description                                     Product
-----
 1  +  Specify JOBCARD and other operational defaults          SHR
 2  + o Generate JCL to run Installation Verification Program  SHR
 3  - o Implement Katakana terminal support                   SHR
 4  +  Create site data sets for use with MAINVIEW products  SHR
 5  +  Create site security data set                         SHR
 6  - o Have AutoCust add the BMC load library to your system APF list  SHR
 7  - o Have AutoCust add the BMC load library to your system link list  SHR
 8  -  Create CLIST for invoking MAINVIEW products          SHR
 9  + o Allocate Integrated Alarm Management HFS or zFS file system  SHR
10  -  Create the CAS (Coordinating Address Space) startup procedure  SHR
11  -  Create Host Server startup procedure                  SHR
12  -  Customize Alternate Access to Mainview products        BBV
13  - o Customize Alternate Access environment for ISPF        BBV
14  - o Customize VTAM for Alternate Access                  BBV
15  - o Create TAS initialization parms and startup procedure  BBV
16  - o Create LAS initialization parms and startup procedure  BBV
17  - o Migrate BBMTYB00 (CAS definitions) to new MVI Library  MVI
18  - o Verify MAINVIEW Logger Data Sets                     MVI
19  - o Create MAINVIEW Logger LOGGERxx Parmlib Member       MVI
PF 1=HELP      2=SPLIT      3=EXIT      4=CKPANELS  9=SWAP      12=CANCEL
    
```

Step numbers are listed on the left side of the menu. To the right of each step number is the status indicator:

- A plus sign (+) indicates that the step was completed.
- A minus sign (-) indicates that the step was bypassed.
- A lowercase *o* indicates that the step is optional.

The Product step indicator (on the far right of the menu) shows whether the step is shared (indicated by SHR) or product specific. In [Figure 13 on page 88](#), step 1 through step 12 are shared steps. Step 13 through step 15 are product-specific steps (indicated by the product name abbreviation).

5 Browse or select customization steps as follows:

- To browse a customization step, type **B** in the space to the left of the step number that you want to browse, and press **Enter**.



NOTE

You can browse steps in any order.

When you browse a step, AutoCustomization displays a screen containing information that is specific to that product. Each step might have several screens, each with questions about customizing the installation of the product.

- To select a customization step, type **S** in the space to the left of the step number that you want to select, and press **Enter**.



NOTE

You must select steps in the listed order. Because the information that you provide in one step might be used in a later step, you must complete each step before continuing to the next step.

When the step is complete (or bypassed), AutoCustomization returns to the list of steps. The status of the selected step is updated.

You may exit AutoCustomization before completing the customization of a product.

The status of each step remains as you left it until you continue AutoCustomization. The status of the product on the Product Customization menu changes to **INCOMPLETE**. When all of the required steps are marked as complete, the product status changes from **UNMODIFIED** to **OPERATIONAL**.

To run AutoCustomization from an ISPF command line

You do not need to allocate any libraries or modify panels before running AutoCustomization from the **Command** line.

- 1 On any ISPF panel **Command** line, type the following command and press **Enter**:

```
TSO EX 'HLQ.BBCLIB(BBCUST)'
```

- 2 Supply the high-level qualifier (*HLQ*) of your target libraries, as requested by AutoCustomization, and press **Enter**.



NOTE

As an alternative to step 2, you can supply the HLQ of your target libraries by providing a prefix parameter as follows:

```
TSO EX 'HLQ.BBCLIB(BBCUST)' 'PREFIX(HLQ)'
```

- 3 When AutoCustomization displays the Product Customization menu, choose a product to customize.

Manually customizing products

Although AutoCustomization allows you to perform the minimum steps required to make your product operational, manual customization allows you to customize your products to best suit your needs. The *MAINVIEW Common Customization Guide* contains detailed information about manually customizing your products, including a list of all products that you can manually customize.

Where to go from here

Perform any other required steps for implementing each specific product, and then verify that the product works properly by using it as described in the appropriate reference or user guide for that product.

For any additional authorization requirements for the product that you are customizing, see the documents that shipped with your products. Those documents also describe any additional customization that you must perform to implement optional product functions. For more information about product passwords, see [Chapter 5, “Applying product passwords.”](#)

Applying product passwords

This chapter contains the following topics:

Overview	91
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Overview

When processing a license agreement for a product, Customer Password Response of BMC Software issues *CPU authorization passwords*. These passwords authorize specific CPUs (also referred to as *processors*) to run the licensed product. Because BMC licenses its products for use on individual CPUs, the passwords are product specific and CPU specific (one license per product per CPU). You must also have a password to delete or replace an authorized CPU.

You use the BMC Product Authorization utility to apply passwords and to change your CPU configuration. You can apply passwords in either of the following ways:

- as part of an online procedure
- in a batch interface that uses a job which is supplied on the product distribution tape



NOTE

The Product Authorization utility does not apply to all BMC products. Some products are authorized during product customization. To determine whether unique licensing requirements and authorization procedures are applicable, review your product's release notes.

This chapter describes the process that you use to apply passwords and to reconfigure your CPU, permanently or temporarily. If you have questions or concerns about the Product Authorization utility or the authorization process, contact your BMC sales representative.

How licensing works

BMC offers *temporary passwords* and *permanent passwords*.

Temporary passwords

During a trial period for a BMC product, you can install and use the product on any CPU by using the temporary password that you obtained from your BMC sales representative. (You can also obtain a temporary password in other special circumstances, such as when a hardware failure prevents you from using an authorized CPU.) Because each temporary password has an expiration date (typically 30 days after the password is issued), you should apply temporary passwords as soon as possible after receiving them.

Valid passwords can include the following characters:

- alphanumeric character set, excluding the letters *I* and *O* to avoid confusion with the numbers one (1) and zero (0)
- equal sign (=), “at” sign (@), and plus sign (+)



NOTE

If your keyboard does not have the “at” sign (@), you can use the asterisk (*) in place of @. You can use these two characters (@ and *) interchangeably when typing passwords.

Permanent passwords

When you finish the trial and want to obtain a product license, the following rules apply:

- You must purchase a product license for each CPU on which you will run the product.
- BMC Software Customer Password Response issues a permanent password for each combination of CPU and licensed product.
- To enable a product on a CPU, you must add the permanent password that is issued for that CPU. You do *not* need to reinstall and retest the product.
- You can install multiple passwords in the same password library. This capability lets you use the same password library to run a product on multiple CPUs or to install a product at a central site and run it at remote sites.

NOTE



BMC products expect to find passwords in the library that is indicated in the product BMCPSWD DD statement or in the product load library. Passwords are saved in the corresponding library during execution of the installation dialog.

BMC also issues permanent passwords when you need to delete or replace a CPU or to modify the properties of a CPU or the product authorization.

NOTE



A password is an activation key for the software license, not the software license itself.

You do not need to apply passwords or update CPU authorization when you install product maintenance or version upgrades. Although the Product Authorization utility is not required for product maintenance and version upgrades, you must consider certain issues that are associated with these upgrades. For more information, see “[Product maintenance or version upgrades](#)” on page 97.

Scenarios for obtaining passwords

Table 10 provides details about each situation in which you must obtain passwords. For each scenario, the table indicates the type of password that you need (temporary or permanent), what the password does, and how to obtain it.

Table 10 Password scenarios

Scenario	Password type	Password function	How to obtain
You want to begin a free trial period.	temporary	temporarily bypasses authorization checking and lets you run the product on any CPU for a limited time	BMC sales representative
You purchase a license for a new product.	permanent	adds a designated CPU to the list of CPUs that are authorized to run a licensed product	BMC sales representative or Customer Password Response (800 841 2031)
You stop using an authorized CPU.	permanent	removes a designated CPU from the list of CPUs that are authorized to run a licensed product	BMC sales representative or Customer Password Response (800 841 2031)
You upgrade to a new CPU.	permanent	authorizes the transfer of a license from one CPU to another CPU	BMC sales representative or Customer Password Response (800 841 2031)
You want to run the product on an additional CPU.	permanent	adds a designated CPU to the list of CPUs that are authorized to run a licensed product	BMC sales representative or Customer Password Response (800 841 2031)
The authorized CPU is not available because of an emergency (such as hardware failure).	temporary	temporarily bypasses authorization checking and lets you run the product on any CPU for a limited time	BMC sales representative, Customer Password Response (800 841 2031), or BMC Customer Support (800 537 1813)

If you have installed the Product Authorization utility and have created the password library, you can apply the new passwords before you completely install the product. Also, you can apply the passwords even if the product is not yet running on a specific CPU. For example, your installation process might require that you install and run the product on a test system before migrating the product to the production system. In that case, you can apply the password for the production system CPU, even though the product is not yet running there.

Overview of the Product Authorization utility

You must use the Product Authorization utility in the following situations:

- for product trials and permanent licensing
- when upgrading to a new CPU
- when an authorized CPU fails



NOTE

Although you do not need the Product Authorization utility for product maintenance and version upgrades, you must consider certain issues that are associated with these upgrades. For more information, see [“Product maintenance or version upgrades” on page 97](#).

When you apply passwords, the Product Authorization utility builds or updates the product authorization tables. Those tables contain entries that define the authorization for the relevant products. The utility also uses the applied passwords to validate software licenses. The types of product authorization tables are as follows:

- When you install or apply a permanent password, the utility builds or updates a *permanent product authorization table*. The permanent table controls which CPUs are licensed to run the product, based on serial, model, and submodel numbers.
- When you apply a temporary password, the utility builds or updates a *temporary product authorization table*.

For more information about permanent and temporary passwords, see [“How licensing works” on page 92](#).

Product authorization tables are product specific and are identified by a three-character product code (*prd* in the following examples):

- *prdTBL3P* (permanent)
- *prdTBL3T* (temporary)

Problem involving authorization table installation

Do not install the product authorization tables into load modules that are extended partitioned data sets (PDSEs). PDSE files cannot contain load modules and data type objects in the same file. The product authorization tables are data files and typically are stored in the product load library. Installing product authorization tables into load module PDSEs causes a failure when you try to apply a password to the product library.

Detailed error message

This failure issues the following error messages:

```
13.10.20 JOB05439  IEC036I
          002-CC,IGC0005E,RDACAL2S,BLFSEC3B,SYSLIB,582B,DEVS97,
13.10.21 JOB05439  IEA995I SYMPTOM DUMP OUTPUT
          SYSTEM COMPLETION CODE=002 REASON CODE=000000CC
```

Solution

BMC plans to correct this problem in a future version of the Product Authorization utility. To avoid the problem now, specify a library that does not contain the load modules for the product authorization tables. Allocate a separate PDS or PDSE for the authorization table, and specify this PDS or PDSE when installing the password. If you have questions about the problem or the workaround, contact BMC Customer Support.

Product trials and permanent licensing

Permanent passwords update the permanent authorization table for a product. Each permanent password authorizes one of the functions that are described in [Table 11](#). When you apply a permanent password, the Product Authorization utility automatically recognizes the function of the password and prompts you accordingly.

Table 11 Permanent password functions

Function	Description
Add	authorizes one new CPU to run the product
Delete	removes one CPU from the product authorization table, preventing that CPU from running the product
Replace	replaces one CPU in the table with another CPU, allowing the new CPU to run the product in place of the old CPU
Modify	modifies one or more properties of one CPU that exists in the product authorization table
Reset	modifies the global properties of the product authorization tables

CPU upgrades

When you upgrade to a new CPU, you must obtain a new permanent password for each product that you want to use on that CPU. When you install the new password, the old entry in the authorization table for the product is replaced. The new table entry defines the authorization for the product.

CPU failures

If a hardware failure or a disaster-recovery situation prevents the use of a licensed CPU, BMC can provide a temporary password that lets the product run on a backup CPU for a limited time. Before the temporary password expires, you must acquire a permanent password for the backup CPU or you must resume using the original CPU. At the end of the grace period, you can no longer run the affected product on the backup CPU. If the grace period ends, you must obtain a new password to reset the grace period.

Updating product authorization tables

To trigger the grace period, the license validation process must update the authorization tables. If the password library must be write-protected, problems could occur with updates. To avoid problems, you can place the authorization tables in another data set and concatenate that data set to the password library.

The concatenated authorization table library should have the same DCB attributes as the product load library. (The RECFM for the table library must be *U*.)

TIP



If you have several BMC products, you might want to dedicate one library that includes all authorization tables for all products.

Before updating the library that contains the authorization tables, the license-validation process determines whether the data set is in LNKLST. If the data set is in LNKLST, the license-validation process does not attempt an update.

Running a product on an unlicensed processor

When you run a product on an unlicensed processor, a 15-calendar-day grace period can be triggered. When this grace period ends, the product will not run or will run with diminished functionality.

NOTE



The product will continue to function normally when you run it on a licensed CPU, even if the grace period has been triggered or has ended.

To prevent this situation, you should obtain a RESET password from BMC Customer Password Response. If you apply the Reset password before the grace period ends, the password updates the product authorization table and makes another 15-calendar-day grace period available.

When the grace period is triggered, the Product Authorization utility (online or in batch mode) and the affected product issue a message that advises you of the expiration date.

Product maintenance or version upgrades

Installing a new maintenance level or upgrading the version or release level of a product has no effect on product authorization. No new passwords are required. However, you must ensure that your authorization tables reside in the new production libraries.

If you install products in a test environment before moving them to production, the product authorization tables must also reside in the test libraries. If you try to run a product on a different CPU, that CPU must also be licensed. Copy the product authorization tables from the *old* library to the *new* library that contains the product maintenance or upgrade.

Although the product authorization tables typically reside in the password library, these tables are not load modules. If you are running ISPF version 4.2 or later, you might not be able to copy these tables by using the ISPF Move/Copy utility (option 3.3). You might receive a STOW error or one or more of the following error messages:

```
IEW2515W 4731 DIRECTORY ENTRY FOR prdTBL3n IDENTIFIED BY DDNAME
ISPddname IS NOT MARKED AS LOAD MODULE.
```

```
IEW2522E 470E MEMBER prdTBL3n IDENTIFIED BY DDNAME ISPddname... IS
NOT A LOAD MODULE- (INVALID RECORD TYPE).
```

```
IEW2307S 1032 CURRENT INPUT MODULE NOT INCLUDED BECAUSE OF INVALID
DATA.
```

```
COPY FAILED FOR MEMBER prdTBL3n. FAILURE IN IEWBIND INCLUDE, RETURN
CODE 8 REASON CODE 83000507
```

In these messages, the variable *prd* is the three-character product code and *n* is *P* (permanent) or *T* (temporary). For more information, see [“How licensing works” on page 92](#).

If you receive any of these messages, use the IEBCOPY utility to copy the product authorization tables. Do not use the IEBCOPY COPYMOD parameter when copying the tables.

Products that the Installation System supports

Table 12 lists the products and product components that the Installation System supports. The table provides the following information:

- complete BMC product name
- three-character product code that is referenced in the product security panel
- security or licensing mechanism that is in effect for each product:
 - *V3 password* means that the product is accessible through the typical BMC security panel and JCL.
 - *BBKeys* means that the product is accessible exclusively through the AutoCustomization process.

Table 12 Installation System supported products and components (part 1 of 3)

Product or component name	Product code	Security (licensing) access
3270 SUPEROPTIMIZER/CICS	CSO	V3 password
Administrative Assistant for DB2 [®]	AAD	V3 password
ALTER for DB2 [®]	ALU	V3 password
Apply Plus See High-speed Apply Engine	not applicable	not applicable
APPTUNE for DB2 [®]	ASQ	V3 password
Backup and Recovery Solution for IMS [®]	BRI	V3 password
BMCDSN	ABU	none
CATALOG MANAGER for DB2 [®]	ACT	V3 password
CATALOG MANAGER for DB2 [®] (Browse only)	no password required	none
CHANGE ACCUMULATION PLUS	CAP	V3 password
CHANGE MANAGER for DB2 [®]	ACM	V3 password
CHANGE RECORDING FACILITY for IMS [®]	CRF	V3 password
CHECK PLUS for DB2 [®]	ACK	V3 password
CMF MONITOR	BFZ	V3 password
COPY PLUS for DB2 [®]	ACP	V3 password
Cross-System Image Manager	XIM	V3 password
DASD MANAGER PLUS for DB2 [®]	ASU	V3 password
DATA PACKER for DB2 [®]	DPD	V3 password
Database Administration for DB2 [®]	DAD	V3 password
DATABASE INTEGRITY PLUS	DBI	V3 password
Database Performance for DB2 [®]	DFD	V3 password
BMC Discovery for z/OS	MDZ	V3 password
Energizer for CICS	ECS	V3 password
EXTENDED BUFFER MANAGER for DB2 [®]	XBM	V3 password
EXTENDED BUFFER MANAGER for IMS [®]	XBI	V3 password
FAST REORG FACILITY	FRF	V3 password
FAST REORG FACILITY/EP	HRF	V3 password
High-speed Apply Engine	APT	V3 password
IMAGE COPY PLUS	ICP	V3 password
BMC Impact Integration for z/OS	BIZ	V3 password
LOADPLUS for DB2	AMU	V3 password
LOADPLUS for IMS	LDP	V3 password
LOADPLUS/EP for IMS	HLD	V3 password
Log Master for DB2 [®]	ALP	V3 password
MAINVIEW for WebSphere MQ Integrator	MQJ	V3 password

Table 12 Installation System supported products and components (part 2 of 3)

Product or component name	Product code	Security (licensing) access
MAINVIEW AutoOPERATOR Access NV (version 6.4 or later)	BKG	V3 password
MAINVIEW AutoOPERATOR for CICS (version 6.4 or later)	BCC	V3 password
MAINVIEW AutoOPERATOR for IMS [®] (version 6.4 or later)	BCD	V3 password
MAINVIEW AutoOPERATOR for SAP High Availability (version 6.4 or later)	SHA	V3 password
MAINVIEW AutoOPERATOR for WebSphere MQ (version 6.4 or later)	BCI	V3 password
MAINVIEW AutoOPERATOR for z/OS (version 6.4 or later)	BCE	V3 password
MAINVIEW AutoOPERATOR TapeSHARE (version 6.4 or later)	BCG	V3 password
MAINVIEW FOCAL POINT	BDQ	V3 password
MAINVIEW for CICS	BDR	V3 password
MAINVIEW for DB2 [®] MAINVIEW for DB2 [®] - Data Collector	SPD or BDS	V3 password
Note: If you have a license to use System Performance for DB2, use the product password code SPD. If you do not have a license for System Performance for DB2, use the product password code BDS.		
MAINVIEW for DBCTL	DBC	V3 password
MAINVIEW for IMS [®] Offline	IOF	V3 password
MAINVIEW for IMS [®] Online	ION	V3 password
MAINVIEW for IP	BFX	V3 password
MAINVIEW for Linux - Servers	MML	V3 password
MAINVIEW for z/OS	BEH	V3 password
MAINVIEW for UNIX System Services	BFH	V3 password
MAINVIEW for VM Systems Cloning	MTA	V3 password
MAINVIEW for VTAM	BFW	V3 password
MAINVIEW for WebSphere Application Server	MVW	V3 password
MAINVIEW for WebSphere MQ	BCL	V3 password
MAINVIEW Infrastructure	BFV	none
MAINVIEW Storage Resource Manager	BRO	V3 password
MAINVIEW SYSPROG Services	BEW	V3 password
MAINVIEW Transaction Analyzer	MTA	V3 password
MAINVIEW VistaPoint	BEZ	V3 password
MAXM Database Advisor for IMS [®]	MXA	V3 password

Table 12 Installation System supported products and components (part 3 of 3)

Product or component name	Product code	Security (licensing) access
MAXM Reorg for IMS [®]	MXC	V3 password
MAXM Reorg for IMS [®] with Online/Defrag Feature	MXB	V3 password
MAXM Reorg/EP Express for IMS [®]	MXP	V3 password
MAXM Reorg/EP for IMS [®]	MXE	V3 password
MAXM Reorg/EP for IMS [®] with Online/Defrag Feature	MXH	V3 password
MAXM Reorg/Online for IMS [®]	MXO	V3 password
OPERTUNE for DB2 [®]	DDT	V3 password
PACLOG for DB2 [®]	ALM	V3 password
PATROL for WebSphere MQ for z/OS and OS/390	WMZ	V3 password
POINTER CHECKER PLUS	PCP	V3 password
Pool Advisor for DB2	PMD	V3 password
PREFIX RESOLUTION PLUS	PRP	V3 password
R+/CHANGE ACCUM for DB2 [®]	ACA	V3 password
RECOVER PLUS for DB2 [®]	AFR	V3 password
Recovery Management for DB2 [®]	RMD	V3 password
RECOVERY MANAGER for DB2 [®]	ARM	V3 password
RECOVERY MANAGER for IMS [®]	IRM	V3 password
RECOVERY PLUS for IMS [®]	RVP	V3 password
REORG PLUS for DB2 [®]	ARU	V3 password
RxD2/FlexTools	BEY	V3 password
RxD2/LINK	BEX	V3 password
SECONDARY INDEX UTILITY	SIU	V3 password
SECONDARY INDEX UTILITY/EP	HIU	V3 password
SNAPSHOT UPGRADE FEATURE for DB2 [®]	XBS	V3 password
SNAPSHOT UPGRADE FEATURE for IMS [®]	XBU	V3 password
SNAPSHOT UPGRADE FEATURE for VSAM	XBA	V3 password
SQL Explorer for DB2 [®]	PSS	V3 password
SQL Performance for DB2 [®]	AFD	V3 password
BMC System Performance for DB2 [®]	SPD	V3 password
ULTRAOPT/CICS	ULC	V3 password
ULTRAOPT/IMS [®]	ULI	V3 password
UNLOAD PLUS for DB2 [®]	ADU	V3 password
UNLOAD PLUS for IMS [®]	ULP	V3 password
UNLOAD PLUS/EP for IMS [®]	HUL	V3 password

CPU password worksheet

When you request a permanent product license from BMC Software, you must furnish information about the affected CPUs.

NOTE



CPU information is not required for temporary passwords.

For each product that you license, use the worksheet in [Table 13](#) to record the CPU information and the passwords that you receive from BMC. The first line of the table provides a sample entry for a 9X2 model with three processors and a CPU ID of 10309-9021-DA.

Table 13 Product Authorization worksheet

CPU serial	CPU type	Version code	CPU model	Number of CPUs	Permanent password
10309	9021	DA	9X2	3	123,456,789,ABC
_____	_____	___	_____	___	_____,_____,_____,_____
_____	_____	___	_____	___	_____,_____,_____,_____
_____	_____	___	_____	___	_____,_____,_____,_____
_____	_____	___	_____	___	_____,_____,_____,_____
_____	_____	___	_____	___	_____,_____,_____,_____

For information about determining your CPU ID, see [“Displaying current processor information” on page 115](#) or use the LIST option of the batch Product Authorization utility.

Applying passwords with the online interface

This section provides instructions for using the online ISPF interface to manage product authorizations. To use the batch interface to manage authorizations, see “Applying passwords with the batch interface” on page 116.

Starting the online Product Authorization utility

Use this procedure to start the Product Authorization utility from the ISPF interface.

Before you begin

Ensure that you have completed the following tasks:

- Specify user options as described in “Specifying user options” on page 54.
- Obtain your BMC product authorization passwords.

To start the online Product Authorization utility

- 1 From the Installation System Main Menu, choose **Additional Options**.

The Additional Options Menu (Figure 14) is displayed.

Figure 14 Additional Options Menu

```

BMC Software Installation System Additional Options Menu
Command ===> _____

Select an option. Press Enter to continue.

_ Product Maintenance          Apply SMP/E Maintenance.
_ Product Authorization        Maintain Product Authorization Passwords.
_ Additional Installs          Additional Installs for Administrative Products.
_ Product Cloning              Additional DB2 Subsystem Processing.

```

- 2 From the Additional Options Menu, choose **Product Authorization**.
- 3 From the displayed list of products, select a product that requires authorization.

The Installation System starts the Product Authorization utility and displays the Product Authorization Primary Menu (Figure 15).

Figure 15 Product Authorization Primary Menu (SECEPPRI)

```

SECEPPRI          <productName> Product Authorization Primary Menu
COMMAND  ===> _____

Select an option. Type additional information if applicable. Then press Enter.

Options
_  1. Process password (Requires password library and password)
   2. Display product authorization (Requires password library only)
   3. Display current processor information
   4. Help about...
   5. Exit

Additional information

Password library . . . '<HLQ>.BMCPSWD'

Authorization password . . _ _ _ _

F1=Help   F2=Split  F3=Exit   F7=Bkwd   F8=Fwd    F9=Swap   F12=Cancel
    
```

NOTE



This panel is the only panel that you will use if you are processing a new password for an existing CPU. Additional panels to add, delete, replace, or modify a CPU are displayed only if the password that you enter on this panel provides authorization to perform those functions.

Table 14 describes each option on the primary menu.

Table 14 Product Authorization Primary Menu options (part 1 of 2)

Option	Description
1 (Process password)	<p>processes a password that BMC Customer Password Response provides to you</p> <p>Use this option to complete these tasks:</p> <ul style="list-style-type: none"> ■ process a password on an existing processor ■ add, delete, replace, modify, or reset authorization for a specific processor
2 (Display product authorization)	<p>lists the processors that are authorized to use the product</p> <p>The list also displays the date and time that the authorization was last modified (and by whom) and the trial or temporary expiration date.</p>

Table 14 Product Authorization Primary Menu options (part 2 of 2)

Option	Description
3 (Display current processor information)	displays information about the current processor, including the serial number, the model number, the version code (submodel), and the number of available processors
4 (Help about)	displays version, copyright, and licensing information about the Product Authorization utility
5 (Exit)	exits the Product Authorization utility and returns to the previous menu or panel

Processing a permanent password for an existing processor

This procedure permanently authorizes an existing processor (a CPU that is already listed in your product authorization tables) to run the selected product. To process a temporary password, see [“Processing a temporary password” on page 112](#).

To process a permanent password for an existing processor, perform the following steps:

- 1** Start the Product Authorization utility as instructed in [“To start the online Product Authorization utility” on page 103](#).
- 2** On the Product Authorization Primary Menu, type **1 (Process password)** and press **Tab**.
- 3** In the **Password library** field, type a fully qualified data set name and press **Tab**.

The utility saves the library name in your ISPF profile and uses that name as the default library.

- 4** In the **Authorization password** field, type your permanent password and press **Enter**.
- 5** To exit the Product Authorization utility, press **F3**.

Adding authorization for a new processor

This procedure adds a new processor to your product authorization table.

Before you begin

Ensure that you have received a new ADD password from BMC.

To add authorization for a new processor

1 Access the ADD Authorization for a Processor panel:

A Start the Product Authorization utility as instructed in “To start the online Product Authorization utility” on page 103.

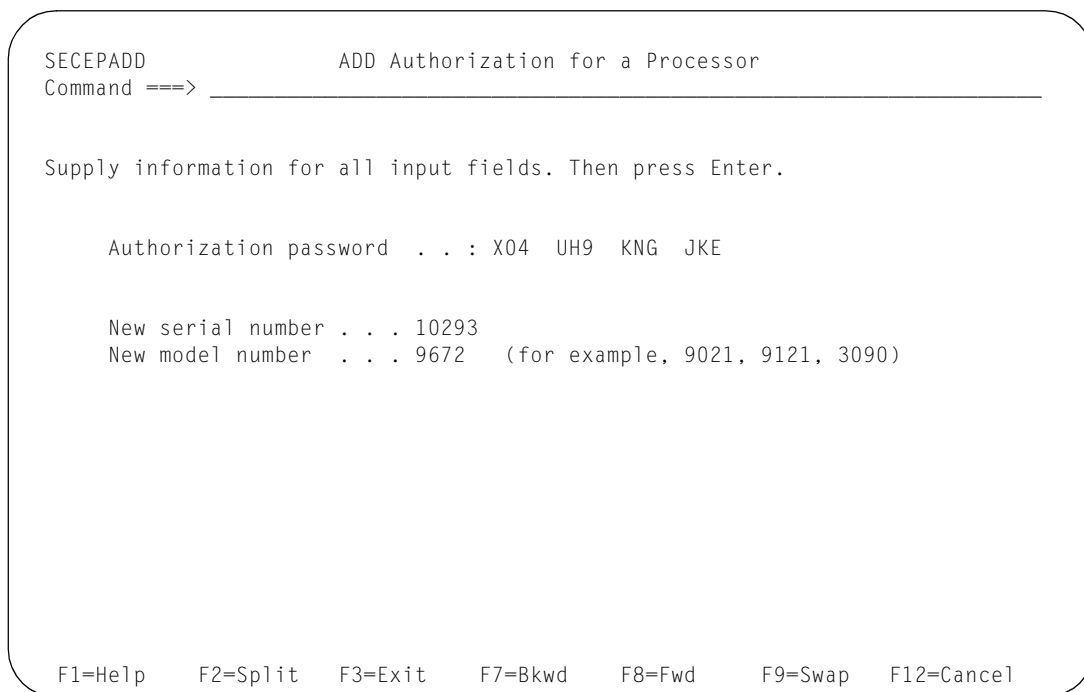
B On the Product Authorization Primary Menu, type **1 (Process password)** and press **Tab**.

C In the **Password library** field, type a fully qualified data set name and press **Tab**.

D In the **Authorization password** field, type your ADD password and press **Enter**.

The ADD Authorization for a Processor panel ([Figure 16](#)) is displayed.

Figure 16 ADD Authorization for a Processor panel (SECEPADD)



2 In the **New serial number** field, type the serial number of the processor for which you are adding authorization.

3 In the **New model number** field, type the model number of the processor for which you are adding authorization and press **Enter**.

A pop-up message on the Product Authorization Primary Menu explains that the product authorization table was updated successfully.

4 To exit the Product Authorization utility, press **F3**.

Deleting authorization for a processor

This procedure removes a processor from your product authorization table.

Before you begin

Ensure that you have received a new DELETE password from BMC.

To delete authorization for a processor

- 1** Access the DELETE Authorization for a Processor panel:
 - A** Start the Product Authorization utility as instructed in “[To start the online Product Authorization utility](#)” on page 103.
 - B** On the Product Authorization Primary Menu, type **1 (Process password)** and press **Tab**.
 - C** In the **Password library** field, type a fully qualified data set name and press **Tab**.
 - D** In the **Authorization password** field, type your DELETE password and press **Enter**.

The DELETE Authorization for a Processor panel ([Figure 17](#)) is displayed.

Figure 17 DELETE Authorization for a Processor panel (SECEPDEL)

```

SECEPDEL          DELETE Authorization for a Processor
Command ==> _____

Supply information for all input fields. Then press Enter.

Authorization password . . . : BFP A=M QG3 =7V

Old serial number . . . 10293
Old model number . . . 9672 (for example, 9021, 9121, 3090)

F1=Help  F2=Split  F3=Exit  F7=Bkwd  F8=Fwd  F9=Swap  F12=Cancel
  
```

- 2** In the **Old serial number** field, type the serial number of the processor for which you are deleting authorization.
- 3** In the **Old model number** field, type the model number of the processor for which you are deleting authorization and press **Enter**.

A pop-up message on the Product Authorization Primary Menu explains that the product authorization table was updated successfully.

- 4** To exit the Product Authorization utility, press **F3**.

Replacing authorization for a processor

This procedure replaces one processor in the product authorization table with another processor. This replacement allows the new processor to run the associated product in place of the old processor.

Before you begin

Ensure that you have received a new REPLACE password from BMC.

To replace authorization for a processor

- 1** Access the REPLACE Authorization for a Processor panel:
 - A** Start the Product Authorization utility as instructed in [“To start the online Product Authorization utility”](#) on page 103.
 - B** On the Product Authorization Primary Menu, type **1 (Process password)** and press **Tab**.
 - C** In the **Password library** field, type a fully qualified data set name and press **Tab**.
 - D** In the **Authorization password** field, type your REPLACE password and press **Enter**.

The REPLACE Authorization for a Processor panel (Figure 18) is displayed.

Figure 18 REPLACE Authorization for a Processor panel (SECEPREP)

```

SECEPREP                REPLACE Authorization for a Processor
Command ==> _____

Supply information for all input fields. Then press Enter.

Authorization password . . . : 4XY YAL AMB 48S

Old serial number . . . 10293
Old model number . . . 9672 (for example, 9021, 9121, 3090)

New serial number . . . 10293
New model number . . . 9652 (for example, 9021, 9121, 3090)

F1=Help  F2=Split  F3=Exit  F7=Bkwd  F8=Fwd  F9=Swap  F12=Cancel

```

- 2** In the **Old serial number** field, type the serial number of the processor to be replaced.
- 3** In the **Old model number** field, type the model number of the processor to be replaced.
- 4** In the **New serial number** field, type the serial number of the processor that will replace the old processor.
- 5** In the **New model number** field, type the model number of the processor that will replace the old processor and press **Enter**.

A pop-up message on the Product Authorization Primary Menu explains that the product authorization table was updated successfully, replacing the old processor with the new processor.

- 6** To exit the Product Authorization utility, press **F3**.

Modifying authorization for an existing processor

This procedure changes one or more properties of a processor in the product authorization table. You can change the following properties:

- number of significant digits for the serial number
- maximum number of processors
- expiration date for the product license

Before you begin

Ensure that you have received a new MODIFY password from BMC.

To modify authorization for a processor

- 1** Access the MODIFY Authorization for an Existing Processor panel:
 - A** Start the Product Authorization utility as instructed in [“To start the online Product Authorization utility” on page 103](#).
 - B** On the Product Authorization Primary Menu, type **1 (Process password)** and press **Tab**.
 - C** In the **Password library** field, type a fully qualified data set name and press **Tab**.
 - D** In the **Authorization password** field, type your MODIFY password and press **Enter**.

The MODIFY Authorization for an Existing Processor panel (Figure 19) is displayed.

Figure 19 MODIFY Authorization for an Existing Processor panel (SECEPUPD)

```

SECEPUPD          MODIFY Authorization for an Existing Processor
Command ==> _____

Supply information for all input fields. Then press Enter.

Authorization password . . . : X3Y Q67 Q06 5U1

Serial number . . . 10293
Model number . . . 9672 (for example, 9021, 9121, 3090)

F1=Help  F2=Split  F3=Exit  F7=Bkwd  F8=Fwd  F9=Swap  F12=Cancel

```

- 2** In the **Serial number** field, type the serial number of the processor for which you want to modify the authorization.
- 3** In the **Model number** field, type the model number of the processor for which you want to modify the authorization and press **Enter**.

The properties are modified automatically. A pop-up message on the Product Authorization Primary Menu explains that the product authorization table was updated successfully.

- 4** To exit the Product Authorization utility, press **F3**.

Resetting authorization for all processors

This procedure resets a global property (one that applies to all CPU IDs) of the authorization table.

Before you begin

Ensure that you have received a new RESET password from BMC.

To reset authorization for all processors

- 1 Start the Product Authorization utility as instructed in “[To start the online Product Authorization utility](#)” on page 103.
- 2 On the Product Authorization Primary Menu, type **1 (Process password)** and press **Tab**.
- 3 In the **Password library** field, type a fully qualified data set name and press **Tab**.
- 4 In the **Authorization password** field, type your permanent password and press **Enter**.

A pop-up message explains that the product authorization table was updated successfully.

- 5 To exit the Product Authorization utility, press **F3**.

Processing a temporary password

This procedure temporarily authorizes a processor to run the selected product. To process a permanent password, see “[Processing a permanent password for an existing processor](#)” on page 105.

To process a temporary password, perform the following steps:

- 1 Start the Product Authorization utility as instructed in “[To start the online Product Authorization utility](#)” on page 103.
- 2 On the Product Authorization Primary Menu, type **1 (Process password)** and press **Tab**.
- 3 In the **Password library** field, type a fully qualified data set name and press **Tab**.
- 4 In the **Authorization password** field, type your temporary password and press **Enter**.

A pop-up message explains that the product authorization table was built or updated successfully.

- 5 To exit the Product Authorization utility, press **F3**.

Displaying product authorization

This procedure displays the current authorization for a product.

To display authorization for a product, perform the following steps:

- 1 Start the Product Authorization utility as instructed in “To start the online Product Authorization utility” on page 103.
- 2 On the Product Authorization Primary Menu, type 2 (Display product authorization) and press Tab.
- 3 In the Password library field, type a fully qualified data set name and press Enter.

The Product Authorization Display panel (Figure 20) is displayed.

Figure 20 Product Authorization Display panel (SECEPTBL)

```

SECEPTBL          Product Authorization Display          ROW 1 TO 1 OF 1
Command ==> _____

Press Enter to continue.

Password library . . . . . : '<HLQ>.BMCP SWD'
Product code . . . . . : DOM
Last changed (mm/dd/yy-hh:mm) . . . . . : 11/19/01-10:11
Last changed by . . . . . : RDHDXJ3
Grace period ends (mm/dd/yyyy) . . . . . : 04/29/2004
Temporary expiration date (mm/dd/yyyy) . : 05/10/2004

Licensed Processors

Serial Model Version Significant Maximum Product
Number Number Code Digits Tier Processors License
Expiration
77403 3090 62 4 018 ALL NONE
10309 9021 D5 4 018 ALL 12/2010
***** Bottom of data *****

F1=Help F2=Split F3=Exit F7=Bkwd F8=Fwd F9=Swap F12=Cancel

```

Table 15 describes the fields on this panel.

Table 15 Field descriptions for the Product Authorization Display panel (part 1 of 2)

Field	Description
Password library	name of the password library
Product code	code that BMC assigns to the product

Table 15 Field descriptions for the Product Authorization Display panel (part 2 of 2)

Field	Description
Last changed (mm/dd/yy- hh:mm)	<p>date and time that the product authorization tables were last modified</p> <p>The variables are as follows:</p> <ul style="list-style-type: none"> ■ <i>mm</i> represents the month (in the range 01–12). ■ <i>dd</i> represents the day (in the range 01–31). ■ <i>yy</i> represents the year (in the range 00–99). ■ <i>hh</i> represents the hour (in the range 00–23). ■ <i>mm</i> represents minutes (in the range 00–59).
Last changed by	user ID or job that requested the modification
Grace period ends (mm/dd/yyyy)	<p>date when the grace period (if triggered) will end</p> <p>The variables are as follows:</p> <ul style="list-style-type: none"> ■ <i>mm</i> represents the month (in the range 01–12). ■ <i>dd</i> represents the day (in the range 01–31). ■ <i>yyyy</i> represents the year (in the range 0001–9999). <p>Note: This line appears only if the failure mode is phased and the grace period has been triggered. The grace period can be triggered when you run a permanently licensed product on an unlicensed processor. You should apply a RESET password to reset the grace period. For assistance, contact your BMC sales representative.</p>
Temporary expiration date (mm/dd/yyyy)	<p>date on which you will no longer be allowed to bypass the CPU ID check or the product</p> <p>The variables are as follows:</p> <ul style="list-style-type: none"> ■ <i>mm</i> represents the month (in the range 01–12) ■ <i>dd</i> represents the day (in the range 01–31) ■ <i>yyyy</i> represents the year (in the range 0001–9999) <p>Note: If this expiration date has not yet been reached, you can run this product on any processor. On the date shown, your trial period will end or (if you have licensed the product) you will be able to run the product only on authorized processors.</p>
Licensed Processors	<p>list of properties for each licensed CPU</p> <p>The Version Code column reflects the hardware representation of the submodel. Significant Digits refers to the number of significant digits for the serial number. The expiration date indicates the month and year through which you are licensed for the specific processor. In most cases, this value is NONE. Most of the remaining processor information is provided for reference in case you need to contact BMC Customer Support.</p>

4 To exit the Product Authorization utility, press **F3**.

Displaying current processor information

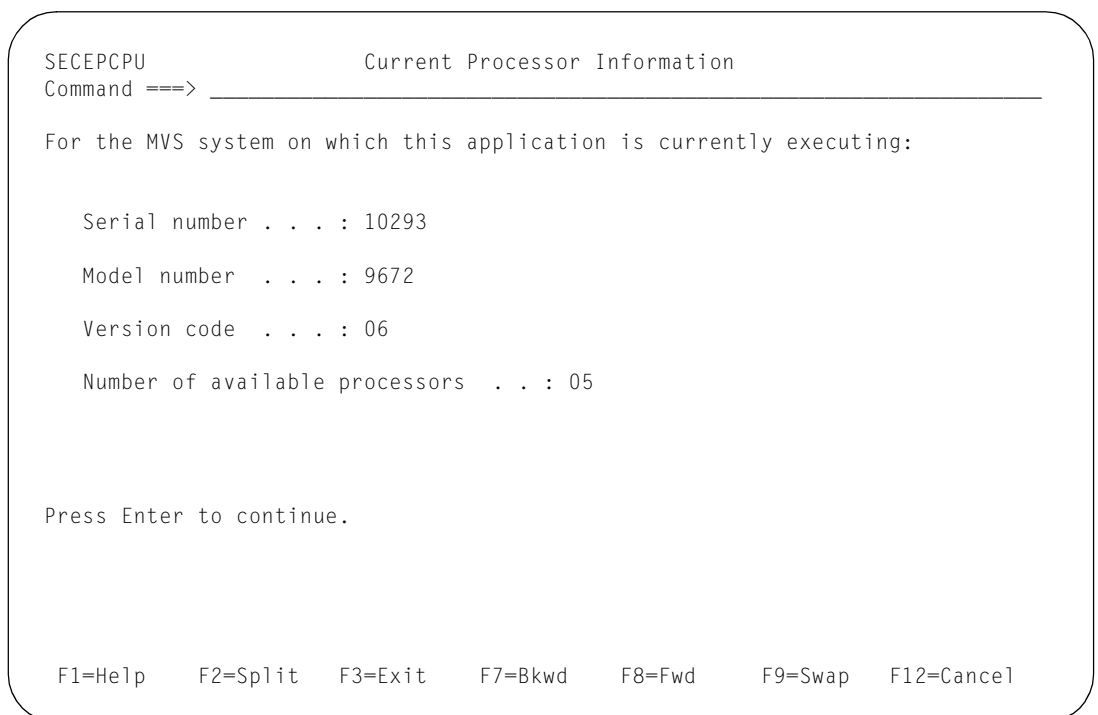
This procedure displays the current authorization for a processor. If you experience problems, BMC Customer Support might require this information.

To display processor information, perform the following steps:

- 1 Start the Product Authorization utility as instructed in “[To start the online Product Authorization utility](#)” on page 103.
- 2 On the Product Authorization Primary Menu, type 3 (**Display current processor information**) and press **Enter**.

The Current Processor Information panel ([Figure 21](#)) is displayed.

Figure 21 Current Processor Information panel (SECEPCPU)



This panel displays the CPU serial and model numbers for the processor on which TSO is running. The panel also displays the version code of the processor. The version code is the hardware representation of the submodel (for example, the 942 in ES/9000-942 or 600 for a 3090-600 processor).



NOTE

Version code X'FF' indicates that MVS is running as a VM guest. Code X'FF' is not the processor version code. To determine the processor version code, run the LIST option of the batch Product Authorization utility from an APF-authorized library. For more information, see [Table 17 on page 121](#).

This panel also displays the number of processors that are online to the current operating system. This information might be relevant to your BMC license agreement.



NOTE

The information that is displayed on this panel might not refer to a computer on which you are licensed to run a BMC product. For example, if you log on to TSO on SYSA but run your BMC product on SYSB, your product authorization entries might refer to SYSB.

- 3 To exit the Product Authorization utility, press F3.

Applying passwords with the batch interface

This section describes the batch interface that you can use for product authorization outside of the Installation System. To use the online interface, see [“Applying passwords with the online interface” on page 103](#).

Using the batch interface, you can perform the following tasks:

- process a password
- obtain current product authorization and processor information
- apply passwords to multiple products at one time

Running the batch Product Authorization utility

You can find product-specific JCL samples in your JCL library and the base installation library. Follow the instructions in the comments of one of the following members:

- ###CPUID (in your JCL library)
- BMISPSWD (in the base installation library)

[Figure 22](#) is a sample JCL script for running batch product authorization.

Figure 22 Sample JCL for running batch product authorization (part 1 of 3)

```

//* MODIFY JOB STATEMENT BELOW AS APPROPRIATE
//CPUAUTH JOB (ACCT),'CPUID AUTHORIZATION',MSGCLASS=X,CLASS=A
//*
//*
//*****
//* BMC SOFTWARE - PRODUCT PASSWORD PROCESSING JCL AND INFORMATION *
//*****
//* PRODUCT PRODUCT
//* _CODE_ _NAME_____
//* XBA SNAPSHOT UPGRADE FEATURE for VSAM
//* XBI EXTENDED BUFFER MANAGER for IMS
//* XBM EXTENDED BUFFER MANAGER
//* XBU SNAPSHOT UPGRADE FEATURE for IMS
//* XBS SNAPSHOT UPGRADE FEATURE
//* ACT CATALOG MANAGER for DB2
//* ACP COPY PLUS for DB2
//*****
//* I N S T R U C T I O N S *
//*****
//* --> MODIFY THE STEPLIB AND SYSLIB STATEMENTS BELOW. *
//* STEPLIB SHOULD SPECIFY THE NAME OF THE DATASET WHERE THE *
//* PROGRAM BLFSEC3B RESIDES. *
//* SYSLIB SHOULD SPECIFY THE NAME OF THE PASSWORD LIBRARY *
//-----*
// *
//* VALID KEYWORDS AND EXAMPLES ARE: *
//* PSWD ==> PSWD=XXX,XXX,XXX,XXX *
//* WHERE XXX,XXX,XXX,XXX IS THE PASSWORD *
//* *
//* OLDCPUID ==> OLDCPUID=SSSS-MMMM *
//* WHERE SSSSS IS THE CPU SERIAL NUMBER OF *
//* YOUR "OLD" CPU *
//* MMMM IS THE CPU MODEL NUMBER OF *
//* YOUR "OLD" CPU *
//* THE "OLDCPUID" KEYWORD IS USED WITH "DELETE", "REPLACE", *
//* AND "MODIFY" PASSWORDS. *
//* *
//* NEWCPUID ==> NEWCPUID=CCCC-NNNN *
//* WHERE CCCCC IS THE CPU SERIAL NUMBER OF *
//* YOUR "NEW" OR CURRENT CPU *
//* NNNN IS THE CPU MODEL NUMBER OF *
//* YOUR "NEW" OR CURRENT CPU *
//* THIS KEYWORD IS USED WITH "ADD" AND "REPLACE" PASSWORDS *
//* *
//* LIST ==> LIST *
//* THIS KEYWORD WILL LIST ALL OF THE ENTRIES *
//* IN THE PRODUCT AUTHORIZATION TABLE. *

```

Figure 22 Sample JCL for running batch product authorization (part 2 of 3)

```

//*                                                                 *
//* KEYWORD SYNTAX FOR PSWD, NEWCPUID, OLDCPUID:                    *
//*   THE SYNTAX FOR THE PSWD, NEWCPUID, AND OLDCPUID KEYWORDS IS  *
//*   FREE FORM.  THESE KEYWORDS MAY START IN ANY COLUMN AND IN ANY *
//*   ORDER AS LONG AS THE STATEMENT DOES NOT EXCEED COLUMN 72.    *
//*   ALL KEYWORDS MUST BE SPECIFIED ON A SINGLE LINE WITHOUT      *
//*   COMMENTS.  THE SYSIN CONTROL STATEMENT CANNOT BE CONTINUED. *
//*   MULTIPLE SYSIN CONTROL STATEMENTS CAN BE PROCESSED IN A      *
//*   SINGLE JOB STEP.                                              *
//*                                                                 *
//* KEYWORD SYNTAX FOR LIST:                                        *
//*   THE LIST KEYWORD CANNOT BE SPECIFIED WITH ANY OTHER KEYWORD. *
//*   IF SPECIFIED IN CONJUNCTION WITH OTHER KEYWORDS, IT WILL BE  *
//*   IGNORED AND WILL NOT BE PROCESSED.  THE LIST KEYWORD SHOULD  *
//*   NOT EXCEED COLUMN 72.                                         *
//*                                                                 *
//* MULTIPLE PRODUCTS / SINGLE JOBSTEPS:                          *
//*   RESPLACE PARM=PRODCODE WITH SPACES;  IE:  PARM='  '          *
//*   ADD PRODUCT CODE TO PASSWORD LINE IN COLS 1-3 (COLS4 IS BLANK) *
//*   WHERE 'PPP' IS THREE LETTER PRODUCT CODE.                    *
//*   PPP PSWD=123,456,789,ABC          NEWCPUID=98765-4321        *
//*   PPP LIST                                                                    *
//*-----*
//* EXAMPLES:                                                                 *
//*   PROCESS AN "ADD" PASSWORD:                                             *
//*     PSWD=123,456,789,ABC          NEWCPUID=98765-4321            *
//*                                                                 *
//*   PROCESS A "DELETE" PASSWORD:                                          *
//*     PSWD=123,456,789,ABC          OLDCPUID=98765-4321          *
//*                                                                 *
//*   PROCESS A "MODIFY" PASSWORD:                                           *
//*     PSWD=123,456,789,ABC          OLDCPUID=98765-4321          *
//*                                                                 *
//*   PROCESS A "REPLACE" PASSWORD:                                          *
//*     PSWD=123,456,789,ABC OLDCPUID=98765-4321 NEWCPUID=98777-4321 *
//*                                                                 *
//*   PROCESS A "RESET" PASSWORD:                                            *
//*     PSWD=123,456,789,ABC                                             *
//*                                                                 *
//*   PROCESS A "TEMPORARY" PASSWORD:                                        *
//*     PSWD=123,456,789,ABC                                             *
//*                                                                 *
//*   REPORT PROCESSOR INFORMATION AND AUTHORIZATION:                       *
//*     LIST                                                                *
//*****
//APPLYPW EXEC PGM=BLFSEC3B,PARM='PPP'          <= INSERT PRODUCT CODE
//STEPLIB DD DSN=HLQ.BBLINK,
//          DISP=SHR
//SYSLIB DD DSN=<PASSWORD LIBRARY>,          <= INSERT PASSWORD LIBRARY
//          DISP=SHR
//SYSPRINT DD SYSOUT=*,DCB=RECFM=FBA

```

Figure 22 Sample JCL for running batch product authorization (part 3 of 3)

```
//SYSUDUMP DD SYSOUT=*
//SYSIN DD *
REPLACE THIS LINE WITH PASSWORD CONTROL STATEMENT
/*
```

Table 16 lists information that is required for the JCL script.

Table 16 Sample JCL script information

JCL statement	Description
JOB	varies, depending on your system
EXEC	identifies the program (BLFSEC3B) and displays a BMC product code in the PARM field Replace <i>PPP</i> with the three-character product code.
STEPLIB DD	identifies the load library in which BLFSEC3B resides This statement is optional if BLFSEC3B resides in LNKST or is specified in JOBLIB.
SYSLIB DD	identifies the password library Product authorization tables are stored and updated in this data set.
SYSPRINT DD	enables the product to issue messages and output from the LIST control statement
SYSIN DD	identifies the location of the control statements that define which actions the program should take For a description of these control statements, see “Using control statements and keywords” on page 121.

NOTE

The passwords that are created with the PGM=BLFSEC3B program are compatible with the passwords that are created with the SECSEC3B program.

You can apply passwords to multiple products in one batch operation by using the batch product authorization utility. Figure 23 is a sample JCL script for applying passwords to multiple products.

Figure 23 Sample JCL for applying passwords to multiple products

```
//APPLYPW EXEC PGM=BLFSEC3B,PARM='PPP' <= PRODUCT CODE
//STEPLIB DD DSN=HLQ.BBLINK, <= BLFSEC3B LOADLIB
// DISP=SHR
//SYSLIB DD DSN=HLQ.BMCPWD, <= PASSWORD LIBRARY
// DISP=SHR
//SYSPRINT DD SYSOUT=*,DCB=RECFM=FBA
```

Figure 23 Sample JCL for applying passwords to multiple products

```
//SYSUDUMP DD SYSOUT=*
//SYSIN DD *
PPP PSWD=XXX,XXX,XXX,XXX NEWCPUID=CCCCC-NNNN
PPP PSWD=XXX,XXX,XXX,XXX NEWCPUID=CCCCC-NNNN
PPP PSWD=XXX,XXX,XXX,XXX NEWCPUID=CCCCC-NNNN
/*
```

To apply passwords to multiple products in one batch operation, perform the following steps:

- 1 Replace *PPP* in the BLFSEC3B line with three spaces, as follows:

```
//BLFSEC3B EXEC PGM=BLFSEC3B,PARM=' '
```

- 2 Replace *PPP* with the product code in each PSWD line:

```
PPP PSWD=123,456,789,ABC NEWCPUID=98765-4321
```

Ensure that the product code is in columns 1 through 3, and that column 4 is blank.

- 3 In each PSWD line, replace *XXX,XXX,XXX,XXX* with the new password, and replace *CCCCC-NNNN* with the new CPU ID.

Figure 24 is an example of these changes.

Figure 24 Sample JCL with changes

```
//APPLYPW EXEC PGM=BLFSEC3B,PARM=' ' <= PRODUCT CODE
//STEPLIB DD DSN=BMC.V2060.BBLINK, <= BLFSEC3B LOADLIB
// DISP=SHR
//SYSLIB DD DSN=BMC.V2060.BMCPSWD, <= PASSWORD LIBRARY
// DISP=SHR
//SYSPRINT DD SYSOUT=*,DCB=RECFM=FBA
//SYSUDUMP DD SYSOUT=*
//SYSIN DD *
SPD PSWD=123,456,789,ABC NEWCPUID=98765-4321
AFD PSWD=456,789,ABC,123 NEWCPUID=87659-4213
DFD PSWD=123,789,ABC,456 NEWCPUID=97658-4312
/*
```


Using control statements and keywords

Some tasks require different input parameters, depending on the type of password that you are installing. The sample JCL shown in [Figure 22 on page 117](#) shows various tasks that you can perform by using the batch version of product authorization. You must modify the JCL to include only the tasks that you want to perform.

The following syntax rules apply to the control statements:

- Control statements can begin in any column.
- Uppercase letters are required.
- You must insert at least one blank space between individual keywords and data fields. Multiple blank spaces are acceptable.
- To insert comments, type an asterisk (*) in column 1 of each line that contains the comment. Comments following keywords are not allowed.
- You cannot specify the LIST keyword on the same line as PSWD, NEWCPUID, or OLDCPUID.

[Table 17](#) describes the control statement keywords.

Table 17 Control statement keywords

Keyword	Data	Explanation
PSWD	12-character password that is formatted as four fields of three characters each, separated by a comma or a blank See the sample JCL in Figure 22 on page 117 . Twelve continuous characters are also acceptable.	Valid characters are alphanumeric (excluding letters <i>I</i> and <i>O</i>). Valid special characters are =, +, and @. You can substitute the asterisk (*) for the “at” sign (@) when @ is not available on the keyboard.
NEWCPUID	five-digit serial number, followed by a hyphen and a four-digit model number	The serial number and the model number must be hexadecimal characters and must be separated by a single hyphen.
OLDCPUID	five-digit serial number, followed by a hyphen and a four-digit model number	The serial number and the model number must be hexadecimal characters and must be separated by a single hyphen.
LIST	not applicable	This keyword prints a report that shows the contents of the product authorization tables and information about the processor on which the job ran.

Checking return codes

After you run a batch job to perform product authorization, check the job's return code to ensure that the job completed successfully. [Table 18](#) lists the return codes that the batch Production Authorization utility generates.

Table 18 Return codes from the batch Product Authorization utility

Keyword	Explanation
0	All requests completed successfully. See the SYSPRINT output for messages about each operation.
4	A LIST was requested, but no tables were in the load library.
8	An error prevented completion of some or all of your requests. See the SYSPRINT output for messages about the error and any completed operations.

Applying maintenance

This chapter contains the following topics:

Overview	123
Applying SMP/E maintenance	124
Generating jobs to perform SMP/E maintenance	124
Running jobs to apply SMP/E maintenance	127
Obtaining maintenance from eFix	132

Overview

BMC Software delivers maintenance to upgrade products or repair problems. Maintenance is usually delivered by Program Update (PUT) maintenance or individual PTFs from the eFix PTF Distribution Services.

You *must* use SMP/E maintenance.

- If you used the Express installation method, you must set up the SMP/E environment by running the \$B90SMPE job as discussed in [“Setting up the SMP/E environment for Express installations”](#) on page 61.
- If you used the Custom installation method, the SMP/E environment is set up during the installation process.

You can obtain PUT maintenance from a distribution tape or from the ESD site.

You can obtain fixes from the Knowledge Database on the BMC Support website, from BMC Software eFix PTF Distribution Services, or as instructed in associated flashes or technical bulletins.

Applying SMP/E maintenance

SMP/E maintenance is available for all products installed with the Installation System. However, if you used the Express installation method, you must enable your products for SMP/E maintenance by running the \$B90SMPE job as discussed in [“Setting up the SMP/E environment for Express installations” on page 61](#).

After you generate SMP/E jobs in your installation JCL library, running the jobs applies maintenance to your products.

Generating jobs to perform SMP/E maintenance

This procedure produces SMP/E batch jobs in your installation JCL library.

Before you begin

If you installed the product by using the Express installation, you must run the \$B90SMPE job before using this procedure. For instructions, see [“Setting up the SMP/E environment for Express installations” on page 61](#).

PUT maintenance is available on distribution tapes and from the ESD site. The method of PUT maintenance distribution that you choose must be compatible with the distribution method you selected when you created your customized installation library. If you are choosing a different method for receiving PUT maintenance, perform the following steps:

1. Run the installation setup procedure to create a customized installation library as described in [“Creating a customized installation library” on page 44](#):
 - Select the electronic distribution method if you are accessing PUT maintenance from the ESD site.
 - Select the tape distribution method if you are accessing PUT maintenance from a distribution tape.
2. Run the Installation System as described in [“Starting the Installation System” on page 48](#).



TIP

If you select the installation profile that you used to install and create the SMP/E environment that you are maintaining, the Installation System displays information for that environment.

To preserve the original installation profile, you might want to make a copy of the original profile and use the copy to perform SMP/E maintenance.

You can use the JCL library from the original installation or create a new JCL library if you want to preserve the original JCL.

Proceed through the Main Menu choices in the order listed to activate each subsequent menu choice.



NOTE

To access the Additional Options Menu, you must first select **Product Install**. However, when the system displays a list of available products, *do not select a product*.

3. Press **F3** to return to the Main Menu.

The **Additional Options** choice is now selectable.

To generate SMP/E maintenance jobs

- 1 From the Installation System's Main Menu, choose **Additional Options** and press **Enter**.

The Additional Options Menu is displayed.

- 2 Select **Product Maintenance** and press **Enter**.

The Installation System requests job card information.

- 3 Provide the requested job card information and press **Enter**.

- 4 Select to receive PUT maintenance from a distribution tape, from BMC Software eFix Distribution Services, or from the ESD site.



NOTE

Electronic PUT maintenance is available as a download from the ESD site.

- To receive PUT maintenance from a distribution tape, you must provide the maintenance tape VOLSER.

- To receive PUT maintenance through eFix distribution, you must provide a data set name for the maintenance that you downloaded from the BMC Customer Support site.
- To receive PUT maintenance from the ESD site, the Installation System generates JCL that downloads the latest maintenance.

5 When prompted, supply all required information.

6 To apply maintenance to installed products, generate the JCL jobs:

A In the JCL Generation Option panel, specify one of the following options:

- Generate installation jobs in the data set that you entered in “[Specifying user options](#)” on page 54.

The Installation System generates JCL that applies maintenance to your installed products, overwriting any maintenance batch jobs that already exist in the specified data set. The status of the JCL generation is updated on the panel as it occurs.

- Skip JCL generation, and display the next panel. In this case, no installation jobs are created.

B To generate the JCL, press **Enter**.

The Installation System creates the job streams that are used for applying product maintenance.

C When all required jobs are generated, press **Enter** to display a list of generated jobs.

The Installation System generates and displays the JCL that applies maintenance to your products. The maintenance jobs are located in the JCL library that you designated in your user options and are identified with the prefix \$M.

7 Review the generated jobs.

NOTE

You can edit the jobs if necessary.



8 To run the maintenance jobs, proceed to “[Running jobs to apply SMP/E maintenance](#).”

**NOTE**

You do not have to submit the generated jobs from within this procedure. You can submit them from your JCL library at any convenient time.

Running jobs to apply SMP/E maintenance

After you generate maintenance jobs in your *HLQ.JCL* library (as instructed in “[Generating jobs to perform SMP/E maintenance](#)” on [page 124](#)), running the jobs applies maintenance to your products. Run these tasks in the specified order:

1. Receive the SYSMOD hold data ([page 128](#)).

This procedure is required if technical bulletins indicate that exception SYSMOD hold data exists.

2. Receive the maintenance data ([page 129](#)).
3. List the SYSMODS that have a status of HOLD ([page 129](#)).
4. Print the PTF documentation ([page 129](#)).
5. Apply the maintenance ([page 129](#)).
6. Accept the maintenance data ([page 130](#)).

Before you begin

Ensure that you completed the necessary procedure to prepare your products and environments for SMP/E maintenance:

- If you used a Custom installation, the procedure is in “[Setting up the SMP/E environment for Custom installations](#)” on [page 65](#).
- If you used an Express installation, the procedure is in “[Setting up the SMP/E environment for Express installations](#)” on [page 61](#).

Also, ensure that you generated SMP/E maintenance JCL as discussed in “[Generating jobs to perform SMP/E maintenance](#)” on [page 124](#).

Obtain the most recent technical bulletins or flashes for your products from the BMC Customer Support website. The technical bulletins or flashes might indicate that you need to receive exception SYSMOD hold data (as described in [“To receive SYSMOD hold data” on page 128](#)) before applying maintenance. Technical bulletins or flashes might also contain other information that was made available after your maintenance tape was produced.

Table 19 lists the typical jobs created for SMP/E maintenance.

Table 19 Generated JCL for SMP/E maintenance

Job	Description
\$M42DWNL	download PUT maintenance files
\$M45RECV	receive maintenance
\$M50HOLD	receive hold statements
\$M55LIST	list hold data
\$M60DOCL	print PTF doc from tape
\$M65CLNU	clean pp maintenance input files
\$M75APCK	apply check job
\$M76APLY	apply job
\$M80ACCK	accept check job
\$M81ACPT	accept job

To receive SYSMOD hold data

If technical bulletins or flashes indicate that exception SYSMOD hold data exists, complete this procedure.

- 1 Create an FB/80 data set.
- 2 Use the following modification control statements (MCSs) to enter exception SYSMOD hold data in the FB/80 data set:

```

++HOLD(_____)
FMID(_____)
DATE(_____)
ERROR REASON(_____)
COMMENT(_____).
    
```

- 3 Submit the \$M50HLD job to receive HOLD statements that are stored in your data set.

To receive maintenance data

Submit the \$M45RECV job to receive SMP/E maintenance data service or PUT maintenance data.



NOTE

Because the maintenance tape includes maintenance for all BMC products, the output may include ++VER messages that indicate that maintenance for other products was not received. Therefore, the submitted job receives diagnostic messages with a step return code of 4. These messages do not require any action.

To list SYSMODS with a HOLD status

- 1 Submit the \$M55LST job to list any SYSMODs that have a HOLD status.



NOTE

SYSMODs that are held because of errors are automatically released when an APAR or PTF resolves the error. SYSMODs held for documentation or action are released by specifying BYPASS(HOLDSYS) in the following jobs:

- \$M75APCK
- \$M76APLY
- \$M80ACCK
- \$M81ACPT

- 2 Review the hardcopy listings to determine whether you need to take any action.

To print PTF documentation

- 1 Submit the \$M60DOC job to print PTF documentation from tape.
- 2 Keep the product documentation and insert it into the appropriate book.

To apply maintenance

- 1 Perform APPLY checking before applying maintenance:
 - A Review comments near the beginning of the \$M75APCK job.
 - B Submit the \$M75APCK job to perform APPLY checking.
 - C Review the \$M75APCK output to verify that the expected maintenance will be applied by the \$M76APLY job.
- 2 Review the comments near the beginning of the \$M76APLY job.

- 3 Change the BYPASS keyword to take appropriate action for system HOLDS, as in the following example:

```
BYPASS(HOLDSYS(DOC, ACTION))
```

This statement releases SYSMODs that are held for documentation and action.

- 4 Save your changes.
- 5 Submit the \$M76APLY job to run the APPLY.

NOTE

\$M76APLY applies a selected list of PTFs and their prerequisites.



To accept maintenance data

- 1 Perform ACCEPT checking before accepting maintenance:
 - A Review the comments near the beginning of the \$M80ACCK job.
 - B Submit the \$M80ACCK job to perform ACCEPT checking.
 - C Review the \$M80ACCK output to verify that the expected maintenance will be accepted by the \$M81ACPT job.
- 2 Review the comments near the beginning of the \$M81ACPT job.
- 3 Change the BYPASS keyword to take appropriate action for system HOLDS, as in the following example:

```
BYPASS(HOLDSYS(DOC, ACTION))
```

This statement releases SYSMODs that are held for documentation and action.

- 4 Save your changes.
- 5 Submit \$M81ACPT to run the ACCEPT.



NOTE

You should accept PTFs and APARs before applying the next maintenance tape for the following reasons:

- Accepting PTFs and APARs removes them from the SMPPTS data set and makes the space available for additional use. The data set must be compressed.
 - Accepting the PTFs and APARs will reduce the required effort if you need to restore future PTFs.
 - The prerequisite chains will become long and complex if you defer ACCEPT processing.
-

- 6** If you need to recustomize your products in order to implement the applied maintenance, repeat the appropriate steps in the customization procedures that you used when customizing your products originally.

If you used AutoCustomization to make your products operational, use the following steps:

- A** Start AutoCustomization as described in [“Customizing products with AutoCustomization”](#) on page 84.

- B** In the **Command** line of the main AutoCustomization panel that lists the BMC products, type **MAINT** and press **Enter**.

If additional steps are necessary, another panel appears; follow the steps shown. If a blank screen appears, no additional steps are necessary, and your products are ready for use.

- 7** If you are using the runtime enablement option or your own runtime data sets, you must copy the updated data sets from your SMP/E target libraries to your runtime data sets.

If you are using the runtime enablement option, you can edit the SR05RTEC job that created the runtime enablement data sets to help you copy the data sets from you SMP/E target libraries to your runtime data sets.

Where to go from here

To check for new maintenance (released after your installation media was prepared), see [“Obtaining maintenance from eFix.”](#)

Obtaining maintenance from eFix

The PUT-level maintenance is current as of the date of your installation media. However, new fixes might have occurred since then. BMC recommends checking the Customer Support website for recent technical bulletins or flashes that are related to your products. If new fixes are available, you can download them from eFix PTF Distribution Services (part of the Support website).

TIP



Use eFix to download individual PTFs and any associated PTFs. If you are going to apply PUT-level maintenance, use the PUT media, not eFix.

Before you begin

If you installed this product by using the Express installation method, and you are downloading a PTF from eFix, ensure that you have run the \$B90SMPE job to set up an SMP/E environment file for your product.

To download and apply new maintenance from eFix

- 1 Go to eFix PTF Distribution Services at <http://www.bmc.com/support/efix.cgi>.

If you are not logged on to the Customer Support website, you will be prompted to enter your user ID and password.

- 2 Specify your search parameters in the query fields and run the query.

For more details and tutorials demonstrating the use of eFix, click **Help** at the top of the eFix page.

- 3 Download the PTFs to your hard drive:

A Select the PTFs in the list and click **Download selected PTFs on this Page**.

B In the File Download dialog box, click **Save**.

C In the Save As dialog box, save the zipped file on your system.

D Extract the zipped file on your system.

The zipped file contains a PTF file and an HOL file (if applicable). The PTF file contains the PTFs, and the HOL file contains the hold data.

4 Transfer the extracted files to your mainframe:

- A** Transfer the files that contain the PTF and hold data information to mainframe data sets with the settings LRECL=80 and either RECFM=F or RECFM=FB. This transfer *must* be a binary transfer, without specifying ASCII/EBCDIC translation or CR/LF.
- B** You can use the Installation System to generate JCL to process the PTF or manually edit the SMP/E RECEIVE job.

In the SMP/E RECEIVE job, use the following guidelines to edit the DD cards for the data sets for the PTF and HOLD files:

- Edit the SMPPTFIN DD card to point to the data set that contains the PTF.
- If applicable, edit the SMPHOLD DD card to point to the data set that contains the hold data.

The following example shows the steps in the RECEIVE job that process these data sets:

```
//SMPSTEP EXEC smpProc      <== Name of the SMP procedure
//SMPPTFIN DD DISP=SHR,DSN=your.upload.ptf.dataSet
//SMPHOLD DD DISP=SHR,DSN=your.upload.holdData.dataSet
//SMPCNTL DD *
    SET BDY(GLOBAL).
    RECEIVE LIST.
    SET BDY(targetZone).    <== Name of the target zone
    APPLY S(ptfNum1, ptfNum2,.....) CHECK.
/*
```

C Complete RECEIVE and APPLY processing.

For more information, see [“Running JCL for a Custom installation”](#) on page 63.

5 Repeat steps 2 through 4 for each product or component.

Product Authorization messages

This appendix presents the following topics:

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Message format	135
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Product Authorization messages	136
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Overview

This appendix lists messages that you may encounter when installing BMC products.

Message format

The Product Authorization utility issues messages that consist of a message identifier and message text. These messages use the following format:

- Variable text is italicized and enclosed in angle brackets (<*example*>). The utility determines the appropriate text when issuing the message.
- Words that are enclosed in brackets and separated by vertical bars ([ON | OFF]) indicate alternating fixed values, one of which will be displayed on your screen.

Message severity codes

Messages from the Product Authorization utility use the following severity codes:

Table 20 Message severity codes

Code	Meaning
A (action)	Immediate action is required.
E (error)	The function that you requested was not completed.
I (information)	The purpose of the message is solely to provide information. No action is required.
R (reply)	You must reply to the message before the system can continue.
S (severe)	A severe error occurred.
W (warning)	The system is still operating, and no immediate action is required. When time is available, more investigation is needed.

All messages that use severity code *E* are sent to the system console. Some messages that use severity code *A* or *I* are also sent to the system console.

Product Authorization messages

The Product Authorization utility can issue the following error messages.

BMC89000A **PASSWORD LIBRARY IS A REQUIRED FIELD.**

Explanation: You must specify the password library.

User Response: Enter the data set name for the password library, and retry the action.

BMC89001A **PASSWORD IS A REQUIRED FIELD.**

Explanation: The action that you requested requires that you specify a password.

User Response: Enter the password, and retry the action. If you do not have a password, contact your BMC sales representative.

BMC89002E **PASSWORD MAY NOT CONTAIN BLANK CHARACTERS.**

Explanation: A blank is not a valid password character. Valid characters are A to Z (excluding I and O), 0 to 9, @, +, and =.

**NOTE**

Some keyboards do not have the “at” sign (@). The asterisk (*) is a synonym for @. You can use these two characters (@ and *) interchangeably when typing passwords.

User Response: Correct the password, and retry the action.

BMC89003A **SERIAL NUMBER IS A REQUIRED FIELD.**

Explanation: A valid CPU serial number has not been specified. Valid CPU serial numbers consist of five hexadecimal digits. No blanks or special characters are allowed.

User Response: Enter a valid CPU serial number, and retry the action.

BMC89004E **SERIAL NUMBER FIELD CONTAINS INVALID CHARACTERS.**

Explanation: The specified CPU serial number contains invalid characters. Valid CPU serial numbers consist of five hexadecimal digits. No blanks or special characters are allowed.

User Response: Enter a valid CPU serial number, and retry the action.

BMC89005E **SERIAL NUMBER MAY NOT CONTAIN BLANK CHARACTERS.**

Explanation: The specified CPU serial number contains a blank character and is invalid. Valid CPU serial numbers consist of five hexadecimal digits. No blanks or special characters are allowed.

User Response: Enter a valid CPU serial number, and retry the action.

BMC89006A **MODEL NUMBER IS A REQUIRED FIELD.**

Explanation: A valid CPU model number has not been specified. Valid CPU model numbers consist of four hexadecimal digits. No blanks or special characters are allowed.

User Response: Enter a valid CPU model number, and retry the action.

BMC89007E **MODEL NUMBER FIELD CONTAINS INVALID CHARACTERS.**

Explanation: The specified CPU model number contains invalid characters. Valid CPU model numbers consist of four hexadecimal digits. No blanks or special characters are allowed.

User Response: Enter a valid CPU model number, and retry the action.

BMC89008E MODEL NUMBER MAY NOT CONTAIN BLANK CHARACTERS.

Explanation: The specified CPU model number contains a blank. Valid CPU model numbers consist of four hexadecimal digits. No blanks or special characters are allowed.

User Response: Correct the model number, and retry the action.

BMC89009E DATA SET NAME IS INVALID.

Explanation: The specified data set name is invalid. The data set does not exist, or it is not cataloged.

User Response: Correct the data set name, and retry the action.

BMC89010A OPTION IS A REQUIRED FIELD. VALID VALUES ARE 1, 2, 3, 4, OR 5.

Explanation: No menu option has been specified. All functions are suppressed.

User Response: Enter a valid option number in the selection field, and retry the action.

BMC89011E INVALID OPTION. PLEASE ENTER 1, 2, 3, 4, OR 5.

Explanation: The specified option is invalid. All functions are suppressed.

User Response: Enter a valid option number in the selection field, and retry the action.

BMC89012E OPTION IS REQUIRED. VALID VALUES ARE 1, 2, OR 3.

Explanation: No menu option has been specified. All functions are suppressed.

User Response: Enter a valid option number in the selection field, and retry the action.

BMC89013E <command> IS NOT A VALID COMMAND.

Explanation: The specified command is invalid.

User Response: Correct the command, or remove the command from the **Command** line.

BMC89019E YOU MAY VIEW PRODUCT AUTHORIZATION FOR THIS PRODUCT FROM ONLY ONE LOGICAL SCREEN AT A TIME.

Explanation: Because the Product Authorization utility is open on another panel, you cannot open it.

User Response: Use the panel that is currently displaying Product Authorization, or cancel that panel and resubmit the job from this panel.

- BMC89021E** **ERROR DURING DYNAMIC ALLOCATION. PASSWORD LIBRARY WAS NOT ALLOCATED, ERROR CODE=<code>, INFO. CODE=<code>, DDNAME=SYSLIB.**
- Explanation:* The Product Authorization interface and the Product Authorization utility were unable to allocate the password library dynamically. For descriptions of the error codes and information codes that the DYNALLOC macro returns, see the IBM book *Authorized Assembler Programming Guide* and the appendixes of the ISPF Help tutorial panels.
- The action fails, or the batch (utility) job terminates.
- User Response:* Verify that you specified the correct data set name for the password library and that the data set exists and is cataloged on DASD. Retry the action. If failure persists, contact BMC Customer Support.
- BMC89022E** **ERROR IN INPUT DSN. PLEASE CONTACT BMC PRODUCT SUPPORT.**
- Explanation:* The data set name for the Product Authorization table was not found. All functions are suppressed.
- User Response:* If the data set name is wrong, correct it and resubmit the job. If the data set name is correct, contact BMC Customer Support.
- BMC89029I** **PRODUCT AUTHORIZATION TABLE WAS SUCCESSFULLY UPDATED. PRESS ENTER TO CONTINUE.**
- Explanation:* The table is updated, and all functions are processed.
- User Response:* Press **Enter** to continue.
- BMC89050E** **THE BMC PRODUCT CODE IS MISSING OR IS INVALID. CHECK PARM= ON JCL EXEC STATEMENT.**
- Explanation:* The JCL did not specify a product code (or an invalid product code) in the PARM parameter of the JCL. The password is not processed.
- User Response:* Add or correct the product code in the PARM parameter of the JCL EXEC statement. For assistance with syntax, see the applying passwords chapter.
- BMC89051E** **UNRECOGNIZABLE OR INCOMPLETE PARAMETER ON THE CURRENT INPUT CONTROL STATEMENT.**
- Explanation:* A parameter on the input control statement is incorrect. The password is not processed.
- User Response:* Correct the parameter, and retry the action. For assistance with syntax, see the applying passwords chapter.

BMC89052E MODEL NUMBER CANNOT BE LONGER THAN FOUR CHARACTERS.

Explanation: A CPU model number of more than four characters was specified in the batch. CPU model numbers cannot exceed four characters. The password is not processed.

User Response: Correct the model number, and retry the action. For assistance with syntax, see the applying passwords chapter.

BMC89053E SERIAL NUMBER MUST BE 5 HEXADECIMAL CHARACTERS WITH DELIMITING HYPHEN.

Explanation: The CPU serial number must be followed by a delimiting hyphen (-). The password is not processed.

User Response: Insert a hyphen between the serial number and the model number, and retry the action. For assistance with syntax, see the applying passwords chapter.

BMC89054E THE FIRST CHARACTER OF THE BMC PRODUCT CODE CANNOT BE A NUMBER. PLEASE CORRECT AND RERUN THE JOB.

Explanation: The first character of the product code is invalid. The password is not processed.

User Response: Correct the first character of the product code in the PARM field on the JCL EXEC statement. For assistance with syntax, see the applying passwords chapter.

BMC89055E THE PASSWORD MUST BE FORMATTED AS "PSWD=PPP,PPP,PPP,PPP" OR "PSWD=PPPPPPPPPP" OR "PPP PPP PPP PPP."

Explanation: The password in the batch is incorrect. Use any of the following formats for the password:

- twelve consecutive characters without spaces
- four sets of three characters, with each set separated by a comma or a blank space.

The password is not processed.

User Response: Correct the password, and resubmit the job. For assistance with syntax, see the applying passwords chapter.

BMC89057E OPEN FAILURE FOR DDNAME=SYSIN.

Explanation: The Product Authorization utility batch program was unable to open the data set that the SYSIN DD statement specified. The batch program terminates.

User Response: Correct the data set name in the SYSIN DD statement, and resubmit the job. For assistance with syntax, see the applying passwords chapter.

BMC89058E MODEL NUMBER CONTAINS INVALID CHARACTERS.

Explanation: At least one character in the CPU model number that you specified in the batch JCL is invalid. Only hexadecimal characters (0 to 9 and A to F) are allowed in the model number. The password is not processed.

User Response: Correct the model number, and resubmit the job. For assistance with syntax, see the applying passwords chapter.

BMC89059E SERIAL NUMBER CONTAINS INVALID CHARACTERS.

Explanation: At least one character in the CPU serial number that you specified in the batch JCL is invalid. Only hexadecimal characters (0 to 9 and A to F) are allowed in the serial number. The password is not processed.

User Response: Correct the serial number, and resubmit the job. For assistance with syntax, see the applying passwords chapter.

BMC89060E THIS PASSWORD REQUIRES “NEWCPUID” KEYWORD FOR THE CPU ID TO BE ADDED.

Explanation: The Add password that is being processed requires specification of the NEWCPUID keyword. The password is not processed.

User Response: Specify the NEWCPUID keyword on your input control statement. For assistance with syntax, see the applying passwords chapter.

BMC89061E THIS PASSWORD REQUIRES “OLDCPUID” KEYWORD FOR THE CPU ID TO BE DELETED.

Explanation: The DELETE password that is being processed requires specification of the OLDCPUID keyword. The password is not processed.

User Response: Specify the OLDCPUID keyword on your input control statement. For assistance with syntax, see the applying passwords chapter.

BMC89062E PASSWORD TO UPDATE AN EXISTING CPU ID ENTRY REQUIRES “OLDCPUID” KEYWORD.

Explanation: The UPDATE password that is being processed requires specification of the OLDCPUID keyword. The password is not processed.

User Response: Specify the OLDCPUID keyword on your input control statement. For assistance with syntax, see the applying passwords chapter.

BMC89063E THIS PASSWORD REQUIRES “NEWCPUID” AND “OLDCPUID” KEYWORDS.

Explanation: The REPLACE password that is being processed requires specification of the NEWCPUID and OLDCPUID keywords. The password is not processed.

User Response: Specify the NEWCPUID and OLDCPUID keywords on your input control statement. For assistance with syntax, see the applying passwords chapter.

BMC89064W

ERRORS CAUSED TERMINATION. SOME OR ALL REQUESTS DID NOT COMPLETE SUCCESSFULLY.

Explanation: The input data contains one or more errors. Processing terminates at the point of the error.

User Response: Examine the input control statements for errors. For assistance with syntax, see the applying passwords chapter. If you cannot locate the errors, contact BMC Customer Support for assistance.

BMC89065I

ALL REQUESTS COMPLETED SUCCESSFULLY.

Explanation: All requested functions have been processed. The product load library is updated.

User Response: No action is required.

BMC89069E

PERMANENT PRODUCT AUTHORIZATION TABLE'S GRACE PERIOD IS INVALID. PLEASE CONTACT BMC PRODUCT SUPPORT.

Explanation: An error occurred that invalidated the table's grace period. The table must be rebuilt. All functions are suppressed.

User Response: Contact BMC Customer Support for assistance.

BMC89070E

ISPF V3 REQUIRED. USE BATCH UPDATE PGM INSTEAD.

Explanation: ISPF version 3 (or later) is required to run the online customer interface. The online customer interface terminates.

User Response: Use the batch update program.

BMC89100E

INTERNAL ERROR, RC = <returnCode>. PLEASE CONTACT BMC PRODUCT SUPPORT.

Explanation: A processing error occurred. The function is not performed.

User Response: Note the return code, and contact BMC Customer Support for assistance.

BMC89101E

PASSWORD CONTAINS INVALID CHARACTERS.

Explanation: The password contains one or more invalid special characters. Valid special characters are @, =, and +. The password is not processed.

User Response: Correct the password, and resubmit the job.

BMC89102E

PASSWORD CONTAINS ILLEGAL CHARACTERS (I AND/OR O).

Explanation: The password contains the letter I, O, or both. These letters are not permitted in passwords. The password is not processed.

User Response: Correct the password, and resubmit the job.

BMC89104E PASSWORD DOES NOT MATCH SERIAL NUMBER AND MODEL NUMBER.

Explanation: The message can have either of the following causes:

- The specified password is not correct for the specified CPU serial number and model number
- The product code in the PARM statement is not correct (applicable only if you used the batch interface).

User Response: To obtain your CPU serial and model numbers, log on to the processor and perform one of the following actions:

- From the Product Authorization Primary Menu ([Figure 15 on page 104](#)), select the **Display current processor information** option and submit the Product Authorization batch program with the LIST option. For assistance with syntax, see the applying passwords chapter.
- From the system console, issue the MVS operator command **D M=CPU**.

User Response: Verify that the specified CPU serial number and model number are correct. If the numbers are incorrect, retry the action, specifying the proper numbers. If the numbers are correct, contact BMC Customer Support for assistance.

If you used the batch program, verify that the three-character product code specified in the PARM statement is correct. If the product code is correct, but the job still fails, contact BMC Customer Support for assistance.

BMC89105E PASSWORD IS INCORRECT. PLEASE VERIFY AND RE-ENTER THE PASSWORD.

Explanation: The specified password is not correct. The password is rejected.

User Response: Correct the password and retry the action. If the error persists, contact BMC Customer Support for assistance.

BMC89106E COULD NOT FIND THE EXISTING CPU ID ENTRY THAT WAS TO BE DELETED.

Explanation: The Product Authorization utility attempted to delete an entry in the Product Authorization table, but could not find the entries. This error usually indicates that the wrong product library was specified. No changes are made to the Product Authorization table.

User Response: Enter the correct product load library and retry the action. You can view entries in the Product Authorization table by selecting the **Display product authorization** option ([Figure 20 on page 113](#)) or by submitting the Product Authorization batch program with the LIST option.

BMC89107E

ATTEMPTING TO ADD A CPU ID THAT IS ALREADY IN THE TABLE.

Explanation: This CPU is already authorized for this product. The password is not processed.

User Response: Determine whether the CPU ID is correct. You might need to display current processor information.

BMC89108W

PRODUCT IS NOT AUTHORIZED TO EXECUTE. PLEASE ENTER BMC-SUPPLIED PASSWORDS.

Explanation: The password library lists no authorized CPUs. The product cannot run.

User Response: Use a password to add an entry for the correct processor to the product load library.

BMC89110I

PRODUCT AUTHORIZATION TABLE WAS SUCCESSFULLY BUILT/UPDATED. YOU ARE NOW AUTHORIZED TO EXECUTE THIS PRODUCT ON ANY PROCESSOR UNTIL <mm/dd/yyyy>. PRESS ENTER TO CONTINUE.

Explanation: The Product Authorization table has been modified to allow execution of this product temporarily (until the indicated date).

User Response: No action is required. If you have a permanent license for this product, contact your BMC sales representative to obtain a permanent password.

BMC89111E

RC=<n> WHILE ATTEMPTING TO DECODE THE EXPIRATION DATE.

Explanation: The Product Authorization utility was unable to decode the expiration date because of an internal error. The action fails, or the batch job terminates.

User Response: Note the return code, and contact BMC Customer Support for assistance.

BMC89112W

THERE ARE NO ENTRIES FOR LICENSED PROCESSORS.

Explanation: The password library lists no authorized CPUs. The product cannot run.

User Response: Use a password to add an entry for the correct processor to the password library.

BMC89113E

DATA SET DOES NOT EXIST OR IS NOT CATALOGED.

Explanation: The specified password library cannot be found. The action fails, or the batch job terminates.

User Response: Correct the data set name for the password library or catalog the data set, and retry the action.

BMC89114E OBTAIN ERROR. DATA SET MAY BE ARCHIVED.

Explanation: The specified password library cannot be found and might be archived. The action fails, or the batch job terminates.

User Response: Enter the correct data set name for the password library or restore the data set, and retry the action.

BMC89115E DATA SET IS NOT A VALID LOAD LIBRARY.

Explanation: The specified password library is not a partitioned data set. The Product Authorization interface and Product Authorization utility expect the product load library to be a partitioned data set. The action fails, or the batch (utility) job terminates.

User Response: Verify that you specified the data set name for the correct password library. If the data set is not partitioned, check to ensure that the product was correctly installed. Retry the action. If the error persists, contact BMC Customer Support for assistance.

BMC89116E THIS TEMPORARY AUTHORIZATION PASSWORD CONTAINS AN EXPIRATION DATE THAT HAS ALREADY EXPIRED.

Explanation: To be valid, the expiration date for the temporary password must be equal to or greater than the current date. The password is not processed.

User Response: Contact your BMC sales representative.

BMC89117E THE PRODUCT AUTHORIZATION TABLE IS FULL. NO NEW CPU IDS CAN BE ADDED.

Explanation: The maximum number of CPUs have been stored in this Product Authorization table. The password is not processed.

User Response: If some CPUs in the table are no longer being used, you can delete them to make room for this one. To obtain a DELETE password, contact your BMC sales representative. If no CPUs can be deleted, call BMC Customer Support for assistance.

BMC89118E TEMPORARY AUTHORIZATION PASSWORD DOES NOT CORRESPOND TO THE CURRENT BMC PRODUCT.

Explanation: The temporary authorization in your Product Authorization library is for a product other than the one that you are attempting to run. The product does not run.

User Response: Contact BMC Customer Support for assistance.

BMC89119E I/O ERROR WHILE ATTEMPTING TO READ PRODUCT AUTHORIZATION TABLE (DDNAME=SYSLIB).

Explanation: The utility is unable to read the product authorization table. All functions are suppressed.

User Response: Retry the action. If the error persists, you might have to rebuild the table. Contact BMC Customer Support for assistance.

BMC89120E COULD NOT FIND THE EXISTING CPU ID ENTRY THAT WAS TO BE REPLACED.

Explanation: An attempt was made to apply a REPLACE password, but the CPU to be replaced in the product authorization table cannot be found. The password is not processed.

User Response: The old CPU ID or the password was specified incorrectly. Correct the specification, and retry the action. If the error persists, contact BMC Customer Support for assistance.

BMC89121E PERMANENT PRODUCT AUTHORIZATION TABLE WAS NOT FOUND, BUT THE PASSWORD SPECIFIES A "DELETE" OR "REPLACE" ACTION.

Explanation: An attempt was made to apply a DELETE password or a REPLACE password, but the system cannot locate a product authorization table for this product. The password is not processed.

User Response: Contact BMC Customer Support for assistance.

BMC89122E ATTEMPTING TO ADD A NEW CPU ID TO A NEW TABLE, BUT SERIAL NUMBER AND MODEL NUMBER WERE NOT SPECIFIED.

Explanation: The utility requires the CPU serial number and model number to process the password.

User Response: Add the CPU ID and the model number, and resubmit the job.

BMC89123E PERMANENT PRODUCT AUTHORIZATION TABLE IS INVALID. PLEASE CONTACT BMC PRODUCT SUPPORT.

Explanation: An error invalidated the product authorization table. You must rebuild the table. All functions are suppressed.

User Response: Contact BMC Customer Support for assistance.

BMC89124E TEMPORARY PRODUCT AUTHORIZATION TABLE IS INVALID. PLEASE CONTACT BMC PRODUCT SUPPORT.

Explanation: An error invalidated the product authorization table. You must rebuild the table. All functions are suppressed.

User Response: Contact BMC Customer Support for assistance.

BMC89125E **THIS PASSWORD IS NO LONGER VALID. IT CANNOT BE USED TO ACTIVATE OR CHANGE YOUR PRODUCT LICENSE. PLEASE CONTACT YOUR BMC SALES REPRESENTATIVE.**

Explanation: The password has expired. The password is not processed.

User Response: Contact your BMC sales representative or BMC Customer Support for assistance.

BMC89126E **I/O ERROR WHILE ATTEMPTING TO WRITE PRODUCT AUTHORIZATION TABLE (DDNAME=SYSLIB).**

Explanation: A write error occurred. All functions are suppressed.

User Response: Verify that the data set name is correct and that the data set is partitioned. If you are unable to resolve the problem, contact BMC Customer Support for assistance.

BMC89127I **PROCESSOR WAS SUCCESSFULLY ADDED TO THE PRODUCT AUTHORIZATION TABLE. YOU ARE NOW AUTHORIZED TO EXECUTE THIS PRODUCT ON SERIAL NUMBER <nnnnn>, MODEL NUMBER <mmmm>. PRESS ENTER TO CONTINUE.**

Explanation: The ADD password has been processed. The product authorization table was modified to allow this product to run on the CPU that has the specified serial number and model numbers.

User Response: No action is required.

BMC89128I **PROCESSOR (SERIAL NUMBER <nnnnn>, MODEL NUMBER <mmmm>) WAS SUCCESSFULLY DELETED FROM THE PRODUCT AUTHORIZATION TABLE. PRESS ENTER TO CONTINUE.**

Explanation: The DELETE password has been processed. You can no longer run this product on the CPU that has the specified the serial and model numbers.

User Response: No action is required.

BMC89129I **PROCESSOR WAS SUCCESSFULLY REPLACED IN THE PRODUCT AUTHORIZATION TABLE. YOU ARE NOW AUTHORIZED TO EXECUTE THIS PRODUCT ON SERIAL NUMBER <nnnnn>, MODEL NUMBER <mmmm>. PRESS ENTER TO CONTINUE.**

Explanation: The REPLACE password has been processed. The CPU with the serial and model numbers indicated is now authorized to use this product.

User Response: No action is required.

BMC89130I

PROCESSOR (SERIAL NUMBER <nnnnn>, MODEL NUMBER <mmmm>) WAS SUCCESSFULLY MODIFIED IN THE PRODUCT AUTHORIZATION TABLE. PRESS ENTER TO CONTINUE.

Explanation: The MODIFY password has been processed. The product authorization table has been modified for the CPU with the specified serial and model numbers.

User Response: No action is required.

Runtime messages

The following error messages might be issued by certain mainframe products during initialization.



NOTE

Unlike the Product Authorization messages, the runtime messages do not contain the severity code indicator in the last character.

BBAPWD01

<productID> BMC DATABASE IS BROKEN, CALL BMC SOFTWARE FOR TECHNICAL SUPPORT RC = <nnnn>

Explanation: A problem occurred with the BMC password database for the product. The file is corrupted. You might need to rebuild it. The product will not run.

User Response: Contact BMC Customer Support.

BBAPWD02

<productID> UNABLE TO FIND PASSWORD FOR THIS PRODUCT, INSTALL PASSWORD FOR PRODUCT.

Explanation: No password is installed for the specified product. You must install a password before the product will run. This message can have either of the following causes:

- The library where the password was installed is not available to the product.
- The password member has been deleted.

The product will not run.

User Response: Install the product password or call BMC Customer Support.

- BBAPWD03** **<productID> PASSWORD LOGIC ERROR, CALL BMC SOFTWARE FOR TECHNICAL SUPPORT RC = <nnnn>**
- Explanation:* An internal error occurred in password processing. The product will not run.
- User Response:* Contact BMC Customer Support.
- BBAPWD04** **<productID> I/O PROBLEM READING BMC DATABASE, CALL BMC SOFTWARE FOR TECHNICAL SUPPORT RC = <nnnn>**
- Explanation:* The specified product received an I/O error while reading the password database. The product will not run.
- User Response:* Contact BMC Customer Support.
- BBAPWD06** **<productID> BMC PASSWORD NOT FOUND IN DDNAME <ddname> NOR WAS IT FOUND IN STEPLIB...LINKLIST**
- Explanation:* The specified product attempted to locate a password to which the specified ddname points in the data set. The product was unable to open the ddname. The product was also unable to find a password in any library that is concatenated to TASKLIB, STEPLIB, JOBLIB, or in the LINKLIST. The product will not run.
- User Response:* Install the password in a library that is available to the product.
- BBAPWD07** **<productID> YOUR LICENSE TO EXECUTE THIS PRODUCT WILL EXPIRE IN <nn> DAYS.**
- Explanation:* The specified product has a permanent license that will expire in the specified number of days. The product will continue to run.
- User Response:* Contact your BMC sales representative.
- BBAPWD08** **<productID> YOUR GRACE PERIOD TO EXECUTE THIS PRODUCT WILL EXPIRE IN <nn> DAYS.**
- Explanation:* The specified product has begun its grace period. The grace period will expire in the specified number of days. The product will continue to run.
- User Response:* Contact BMC to reset your grace period.
- BBAPWD09** **<productID> THE PRODUCT TRIAL FOR THIS PRODUCT WILL EXPIRE IN <nn> DAYS.**
- Explanation:* The trial period for the specified product will expire in the specified number of days. The product will continue to run.
- User Response:* Contact your sales representative.

- BBAPWD10** **<productID> YOUR PRODUCT TRIAL PERIOD HAS EXPIRED, CALL BMC SOFTWARE FOR ASSISTANCE.**
- Explanation:* The trial period for the specified product has expired. The product will not run.
- User Response:* Contact your sales representative.
- BBAPWD11** **<productID> IS RUNNING ON AN UNLICENSED PROCESSOR, ACCESS IS DENIED**
- Explanation:* The specified product is running on a processor for which it is not licensed. The product will not run.
- User Response:* Contact your sales representative.
- BBAPWD12** **<productID> IS RUNNING ON A PROCESSOR WITH TOO MANY CPUS, ACCESS IS DENIED.**
- Explanation:* The specified product is running on a processor that has more CPUs than your license allows. The product will not run.
- User Response:* Contact your sales representative.
- BBAPWD13** **<productID> YOUR LICENSE HAS EXPIRED, ACCESS IS DENIED**
- Explanation:* The license for the specified product has expired. The product will not run.
- User Response:* Contact your sales representative.
- BBAPWD14** **<productID> IS RUNNING ON AN UNLICENSED PROCESSOR, ACCESS IS GRANTED**
- Explanation:* The specified product is running on a processor for which the product is not licensed. The product will continue to run.
- User Response:* Contact your sales representative.
- BBAPWD15** **<productID> IS RUNNING ON A PROCESSOR WITH TOO MANY CPUS, ACCESS IS GRANTED.**
- Explanation:* The specified product is running on a processor that has more CPUs than your license allows. The product will continue to run.
- User Response:* Contact your sales representative.
- BBAPWD16** **<productID> YOUR LICENSE HAS EXPIRED, ACCESS IS GRANTED**
- Explanation:* The license for the specified product has expired. The product will continue to run.
- User Response:* Contact your sales representative.

- BBAPWD17** **<productID> IS RUNNING ON AN UNLICENSED PROCESSOR, GRACE PERIOD ENDED, ACCESS IS DENIED**
- Explanation:* The specified product is running on a processor for which the product is not licensed. The product will not run.
- User Response:* Contact your sales representative.
- BBAPWD18** **<productID> IS RUNNING ON A PROCESSOR WITH TOO MANY CPUS, GRACE PERIOD IS ENDED, ACCESS IS DENIED.**
- Explanation:* The specified product is running on a processor that has more CPUs than your license allows. The product will not run.
- User Response:* Contact your sales representative.
- BBAPWD19** **<productID> YOUR LICENSE HAS EXPIRED, GRACE PERIOD IS ENDED, ACCESS IS DENIED**
- Explanation:* The license for the specified product has expired. The product will not run.
- User Response:* Contact your sales representative.
- BBAPWD20** **<productID> IS RUNNING ON AN UNLICENSED PROCESSOR, UNABLE TO GRANT GRACE PERIOD, ACCESS IS DENIED**
- Explanation:* The specified product is running on a processor for which the product is not licensed. An attempt was made to grant a grace period, but security prevented that update from taking place. The product will not run.
- User Response:* Contact your sales representative, or authorize the product to update the load library where the password table resides.
- BBAPWD21** **<productID> IS RUNNING ON A PROCESSOR WITH TOO MANY CPUS, UNABLE TO GRANT GRACE PERIOD, ACCESS IS DENIED.**
- Explanation:* The specified product is running on a processor that has more CPUs than your license allows. An attempt was made to grant a grace period, but security prevented that update from taking place. The product will not run.
- User Response:* Contact your sales representative, or authorize the product to update the load library where the password table resides.
- BBAPWD22** **<productID> YOUR LICENSE HAS EXPIRED, UNABLE TO GRANT GRACE PERIOD, ACCESS IS DENIED**
- Explanation:* The license for the specified product has expired. An attempt was made to grant a grace period, but security prevented that update from taking place. The product will not run.
- User Response:* Contact your sales representative, or authorize the product to update the load library where the password table resides.

BBAPWD23 **<productID> IS RUNNING ON AN UNLICENSED PROCESSOR, GRACE PERIOD WILL EXPIRE IN <nn> DAYS**

Explanation: The specified product is running on a processor for which it is not licensed. The grace period that was granted to you will expire in the specified number of days. The product will continue to run.

User Response: Contact your sales representative.

BBAPWD24 **<productID> IS RUNNING ON A PROCESSOR WITH TOO MANY CPUS, GRACE PERIOD WILL EXPIRE IN <nn> DAYS,**

Explanation: The specified product is running on a processor that has more CPUs than your license allows. The grace period that was granted to you will expire in the specified number of days. The product will continue to run.

User Response: Contact your sales representative.

BBAPWD25 **<productID> YOUR LICENSE HAS EXPIRED, GRACE PERIOD WILL EXPIRE IN <nn> DAYS**

Explanation: The license for the specified product has expired. The grace period that was granted to you will expire in the specified number of days. The product will continue to run.

User Response: Contact your sales representative.

BBAPWD26 **<productID> IS RUNNING ON AN UNLICENSED PROCESSOR, TRIAL PERIOD WILL EXPIRE IN <nn> DAYS**

Explanation: The specified product is running on a processor for which it is not licensed. The temporary authorization that was granted to you will expire in the specified number of days. The product will continue to run.

User Response: Contact your sales representative.

BBAPWD27 **<productID> IS RUNNING ON A PROCESSOR WITH TOO MANY CPUS, TRIAL PERIOD WILL EXPIRE IN <nn> DAYS,**

Explanation: The specified product is running on a processor that has more CPUs than your license allows. The temporary authorization that was granted to you will expire in the specified number of days. The product will continue to run.

User Response: Contact your sales representative.

BBAPWD28 **<productID> YOUR LICENSE HAS EXPIRED, TRIAL PERIOD WILL EXPIRE IN <nn> DAYS**

Explanation: The license for the specified product has expired. The temporary authorization that was granted to you will expire in the specified number of days. The product will continue to run.

User Response: Contact your sales representative.

Typical installation jobs

The Installation System creates different jobs, depending on the installation media, installation method, and your environment. This section lists the installation jobs that the Installation System typically creates for the most common combinations of media and installation methods:

Distribution method	Installation method	Environment	Reference
ESD	Custom	JES2	Table 21 on page 153
	Express	JES2	Table 22 on page 154
	Custom	JES3	Table 23 on page 154
	Express	JES3	Table 24 on page 155
tape	Custom	JES2	Table 25 on page 155
	Express	JES2	Table 26 on page 156
	Custom	JES3	Table 27 on page 156
	Express	JES3	Table 28 on page 157

NOTE



You might get slightly different jobs, depending on which combination of products you are installing.

Table 21 Jobs for an ESD–Custom installation on JES2 (part 1 of 2)

Job	Description
\$B00DOC	unload documentation files
\$B04DWNL	download product files
\$B05CGBL	define global zone
\$B10CCSI	define CSI zones
\$B15CSMP	define SMP/E auxiliary data sets
\$B18ALOC	allocate data sets

Table 21 Jobs for an ESD–Custom installation on JES2 (part 2 of 2)

Job	Description
\$B20RELT	relate new zones
\$B30RECP	receive products
\$B45RECS	receive maintenance
\$B50HOLD	receive hold statements
\$B55LIST	list hold data
\$B60DOCL	print PTF documentation from maintenance files
\$B65MNTE	clean up maintenance input files
\$B70DDEF	create DDDEFs
\$B75APCK	apply check job
\$B76APLY	apply job
\$B80ACCK	accept check job
\$B81ACPT	accept job
<i>BACKOUT</i> jobs	remove products for restart The BACKOUT jobs include the #D98 and #D99 jobs.

Table 22 Jobs for an ESD–Express installation on JES2

Job	Description
\$B00DOC	unload documentation files
\$B04DWNL	download product files
\$B05UNLD	unload product files
\$B90SMPE	unload SMP/E auxiliary files
\$B99CLNU	clean up SMP/E auxiliary input
\$B99DUCL	clean up UCLIN input files
<i>BACKOUT</i> jobs	remove products for restart The BACKOUT jobs include the #D98 and #D99 jobs.
LIBUPR	convert certain libraries from lowercase to uppercase

Table 23 Jobs for an ESD–Custom installation on JES3 (part 1 of 2)

Job	Description
\$B00DOC	unload documentation files
\$B03DWNL	JES3-download of product files
\$B04DCMP	JES3-decompress product files
\$B05CGBL	define global zone
\$B10CCSI	define CSI zones
\$B15CSMP	define SMP/E auxiliary data sets
\$B18ALOC	allocate data sets
\$B20RELT	relate new zones

Table 23 Jobs for an ESD–Custom installation on JES3 (part 2 of 2)

Job	Description
\$B30RECP	receive products
\$B45RECS	receive maintenance
\$B50HOLD	receive hold statements
\$B55LIST	list hold data
\$B60DOCL	print PTF documentation from maintenance files
\$B65MNTD	clean up maintenance input files
\$B70DDEF	create DDDEFs
\$B75APCK	apply check job
\$B76APLY	apply job
\$B80ACCK	accept check job
\$B81ACPT	accept job
<i>BACKOUT</i> jobs	remove products for restart The <i>BACKOUT</i> jobs include the #D98 and #D99 jobs.

Table 24 Jobs for an ESD–Express installation on JES3

Job	Description
\$B00DOC	unload documentation files
\$B03DWNL	JES3-download of product files
\$B04DCMP	JES3-decompress product files
\$B05UNLD	unload product files
\$B90SMPE	unload SMP/E auxiliary files
\$B91SMPE	allocate and load SMP/E environment
DELETE	delete Installation System data set
\$B99CLNU	clean up SMP/E auxiliary input
\$B99DUCL	clean up UCLIN input files
<i>BACKOUT</i> jobs	remove products for restart The <i>BACKOUT</i> jobs include the #D98 and #D99 jobs.
LIBUPR	convert certain libraries from lowercase to uppercase

Table 25 Jobs for a tape distribution–Custom installation on JES2 (part 1 of 2)

Job	Description
\$B00DOC	unload documentation files
\$B04DCMP	decompress product files
\$B05CGBL	define global zone
\$B10CCSI	define CSI zones
\$B15CSMP	define SMP/E auxiliary data sets
\$B18ALOC	allocate data sets

Table 25 Jobs for a tape distribution–Custom installation on JES2 (part 2 of 2)

Job	Description
\$B20RELT	relate new zones
\$B30RECP	receive products
\$B45RECS	receive maintenance
\$B50HOLD	receive hold statements
\$B55LIST	list hold data
\$B60DOCL	print PTF documentation from the maintenance files
\$B70DDEF	create DDDEFs
\$B75APCK	apply check job
\$B76APLY	apply job
\$B80ACCK	accept check job
\$B81ACPT	accept job
<i>BACKOUT</i> jobs	remove products for restart The BACKOUT jobs include the #D98 and #D99 jobs.

Table 26 Jobs for a tape distribution–Express installation on JES2

Job	Description
\$B00DOC	unload documentation files
\$B04DCMP	decompress the images from tape sets and create the data sets for \$B05UNLD
\$B04DWNL	download product files and create the data sets for \$B05UNLD
\$B05UNLD	unload product files
\$B90SMPE	unload SMP/E auxiliary files
\$B99CLNU	clean up SMP/E auxiliary input
\$B99DUCL	clean up UCLIN input files
<i>BACKOUT</i> jobs	remove products for restart The BACKOUT jobs include the #D98 and #D99 jobs.
LIBUPR	convert certain libraries from lowercase to uppercase

Table 27 Jobs for a tape distribution–Custom Installation on JES3 (part 1 of 2)

Job / Member Name	Description
\$B00DOC	unload documentation files
\$B04DCMP	decompress product files
\$B05CGBL	define global zone
\$B10CCSI	define CSI zones
\$B15CSMP	define SMP/E auxiliary data sets
\$B18ALOC	allocate data sets
\$B20RELT	relate new zones

Table 27 Jobs for a tape distribution–Custom Installation on JES3 (part 2 of 2)

Job / Member Name	Description
\$B30RECP	receive products
\$B45RECS	receive maintenance
\$B50HOLD	receive hold statements
\$B55LIST	list hold data
\$B60DOCL	print PTF documentation from maintenance files
\$B70DDEF	create DDDEFs
\$B75APCK	apply check job
\$B76APLY	apply job
\$B80ACCK	accept check job
\$B81ACPT	accept job
<i>BACKOUT</i> jobs	remove products for restart The <i>BACKOUT</i> jobs include the #D98 and #D99 jobs.

Table 28 Jobs for a tape distribution–Express installation on JES3

Job	Description
\$B00DOC	unload documentation files
\$B04DCMP	decompress product files
\$B05UNLD	unload product files
\$B90SMPE	unload SMP/E auxiliary files
\$B91SMPE	allocate and load SMP/E environment
DELETE	delete Installation System data set
\$B99CLNU	clean up SMP/E auxiliary input
\$B99DUCL	clean up UCLIN input files
<i>BACKOUT</i> jobs	remove products for restart The <i>BACKOUT</i> jobs include the #D98 and #D99 jobs.
LIBUPR	convert certain libraries from lowercase to uppercase

Installation CLISTs

Table 29 describes the CLISTs that the Installation System provides.

Table 29 Installation System CLISTs

CLIST	Description
READREPO	<p>enables you to review installation profiles</p> <p>To use the READREPO CLIST, copy it from your custom installation library to a CLIST library from which you can run it.</p> <p>The READREPO CLIST is used outside the Installation System.</p>
FIXSQNUM	<p>enables you to verify and fix SQL worklists sequencing</p> <p>To use the FIXSQNUM CLIST, copy it from your installation library to a CLIST library from which you can run it.</p> <p>The FIXSQNUM CLIST is used outside the Installation System.</p>
CKSQNUM	<p>enables you to verify SQL worklists sequencing</p> <p>To use the CKSQNUM CLIST, copy it from your installation library to a CLIST library from which you can run it.</p> <p>The CKSQNUM CLIST is used outside the Installation System.</p>
BMCMSG	<p>enables you to display messages for the BMC Software products for DB2</p> <p>To use the BMCMSG CLIST, copy it from your installation library to a CLIST library from which you can run it.</p> <p>The BMCMSG CLIST is used with the BMC products for DB2.</p>

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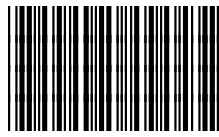
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