Installation System Quick Start

Supporting
Version 3.0.00 and later of Installation System
September 2016
Contacting BMC Software

Several methods are available for contacting BMC Software.

You can access the BMC Software website at http://www.bmc.com. From this website, you can obtain information about the company, its products, corporate offices, special events, and career opportunities.

United States and Canada

<table>
<thead>
<tr>
<th>Address</th>
<th>Telephone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC SOFTWARE INC</td>
<td>1 713 918 8800</td>
<td>1 713 918 8000</td>
</tr>
<tr>
<td>2103 CITYWEST BLVD</td>
<td>or</td>
<td></td>
</tr>
<tr>
<td>HOUSTON TX 77042-2827 USA</td>
<td></td>
<td>1 800 841 2031</td>
</tr>
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</table>

Outside United States and Canada

<table>
<thead>
<tr>
<th>Telephone</th>
<th>Fax</th>
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<tbody>
<tr>
<td>+01 713 918 8800</td>
<td>+01 713 918 8000</td>
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</tbody>
</table>

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Customer support

Support website
You can obtain technical support from BMC 24 hours a day, 7 days a week at http://www.bmc.com/support. From this website, you can:

■ Read overviews about support services and programs that BMC offers
■ Find the most current information about BMC products
■ Search a database for problems similar to yours and possible solutions
■ Order or download product documentation
■ Download products and maintenance
■ Report a problem or ask a question
■ Subscribe to receive proactive e-mail alerts
■ 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 1 800 537 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 problem
■ Commands and options that you used
■ Messages received (and the time and date that you received them)
  — Product error messages
  — Messages from the operating system
  — Messages from related software
License key and password information

If you have questions about your license key or password, contact Customer Support through one of the following methods:

- Send an e-mail message to customer_support@bmc.com. (In the Subject line, enter SupID:yourSupportContractID, such as SupID:12345.)
- In the United States and Canada, call 1 800 537 1813. Outside the United States and Canada, contact your local support center for assistance.

Installation System Quick Start
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About this book

This book contains detailed information about the associated product or products. This preface explains the special conventions that the book uses, and how to access related publications.

If applicable, the preface also summarizes the major changes included in the latest release of the product.

Related publications

From the BMC Support Central website, you can use the following methods to access related publications that support your product or solution:


- View Quick Course videos (short overviews of selected product concepts, tasks, or features), which are available from the following locations:
  — Documentation Center (primary center and secured center)
  — Support Central (at http://www.bmc.com/support/mainframe-demonstrations)
  — BMC Mainframe YouTube channel (https://www.youtube.com/user/BMCSoftwareMainframe)


Products with online interfaces also offer online Help via the F1 key or, for graphical user interfaces (GUIs), via a Help button.
Tip

If you prefer hardcopy documentation, you can order it from your BMC sales representative or from Support Central. Also, from Support Central you can subscribe to receive proactive e-mail alerts when BMC issues notices.
Overview of the installation process

You use the Installation System to install and maintain BMC MainView products, cost optimization products, most BMC products for the IBM DB2 environment, and most BMC products for the IBM IMS environment. After gathering information, the Installation System generates all of the jobs that you need to install your products.

For more information, view the Quick Course "BMC Installation System - Installation System Overview."
Installation process flow

The following figure depicts the overall flow for installing a product:

Figure 1: Installation flow

1. Set up Installation System
   - Obtain Installation System set up
   - Decompress Installation System set up
   - Run the Installation System set up
   - Run the generated JCL

2. Prepare for installation
   - Prepare installation repository
   - Review installation requirements

3. Start an installation
   - Start Installation System
   - Define site-wide installation values
   - Create or select project

4. Generate installation jobs
   - Select products to install
   - Specify information for SMP/E
   - Specify JCL for installation jobs
   - Generate installation jobs

5. Generate configuration jobs
   - Specify information for runtime data sets
   - Specify configuration information
   - Specify JCL for configuration jobs
   - Generate configuration jobs

6. Run generated jobs
   - Review generated jobs and files
   - Perform tasks in generated checklists

Navigation, function keys, and commands

Use the following information to navigate the Installation System panels.
Quick Clear and Quick Fill fields

Some panels include the Quick Clear and Quick Fill fields. Use the fields as follows:

- **Quick Clear**
  
  Erase all the fields in a column. Enter a slash (/) in the field and press Enter to erase all the values in the column.

- **Quick Fill**
  
  Fill in all the fields in a column with the same information. Type the common information you want propagated to the other fields in the column and press Enter. The information is copied into the remaining blank fields (existing values are not overwritten). You can then make changes as needed before proceeding to the next panel.

- Use both fields at the same time to replace existing values.

Function keys

In the Installation System panels, use the following function keys:

- **F1 (HELP)** displays the Help panel for the current panel.
  
  Within a Help panel, highlighted words are links to additional information, such as field descriptions and commands. To go to the additional information, place the cursor on a highlighted word and press F1.

  **Note**  
  The online Help panels use the standard ISPF keys for navigation. For information about the keys, press F1 while on a Help panel (but not on a highlighted word).

- **F3 (EXIT)** returns to the previous menu, such as the Execute Project panel.
  
  If you are on the Execute Project panel, the project is saved. If you are on the Installation System Main Menu, the Installation System is exited.

- **F12 (BACKUP)** displays the previous panel and in most cases discards the values entered on the current panel.

- **Enter** saves all information on the panel and proceeds to the next panel.
  
  To exit the job lists, use the F3 key.

Considerations for function keys

Consider the following information about the use of function keys in the Installation System:
BMC recommends the use of keylists. If you have keylists disabled, (KEYLIST OFF), you might need to ensure that you have the following function keys set inside of the Installation System to avoid errors:

- F1 HELP
- F3 END
- F12 CANCEL

Type KEYS on the Command line to review your function key settings.

By default, the active function keys are not displayed. To display the active keys, type PFSHOW on the Command line and press Enter.

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.

**Data set naming conventions**

Keep the following information in mind when specifying data set names on the Installation System panels:

- Do not use single or double quote marks.

- All names are used exactly as they are specified. If you use the TSO/E PROFILE PREFIX command, it is ignored.

- The maximum length for a data set name is 44 characters.
Setting up the Installation System

Before you can use the Installation System, you must install it and set it up. Starting with version 3.0.00, the Installation System is installed by using SMP/E.

BMC provides a set up utility to generate the JCL that creates an:

- Isolated Installation System SMP/E environment
- Installation System runtime environment, from which you run the Installation System

After the initial installation and set up, you do not have to perform the set up again. To keep the Installation System current, you apply SMP/E maintenance to the Installation System. For maintenance information, see “Updating the Installation System” on page 22.

The following figure depicts the process to set up the Installation System.

Figure 2: Flow for setup

Obtaining the Installation System setup utility

The direct FTP method downloads the Installation System setup utility image and the job to decompress the image from the BMC Electronic Software Distribution (BMC ESD) FTP site. If you prefer to use another method, see the Installation System Reference Manual. Use the following procedure to use direct FTP:
1 Create a job by copying and modifying the following sample:

```plaintext
//<JOB_NAME> JOB (<ACCOUNT>),'USER COMMENT',
// CLASS=<JOB_CLASS>,MSGCLASS=<MSG_CLASS>,
// TIME=1440,REGION=0M,NOTIFY=&SYSUID
/**
* DESCRIPTION:
* This job downloads the Installation System set-up image
* and sample JCL to decompress the installation set-up image.
* STEPS:
* 1. Customize the jobcard to comply with your site's requirements.
* PARAMETER TO OVERRIDE/CHANGE:
*   Job Name - Change <JOB_NAME> to a valid job name for your site.
*   Job Account - Change <ACCOUNT> to a valid job account for your site.
*   Job Class - Change <JOB_CLASS> to a valid job class for your site.
*   Message Class - Change <MSG_CLASS> to a valid message class for your site.
* 2. Change the FTPGET step parameters to comply with your site requirements. Remove any parameters that are not needed.
*   UNIT - Change <unit> to a valid DASD unit for your site.
*   VOLUME - Change <volume> to a valid VOLUME serial number for YOUR SITE.
*   SMS storage class - CHANGE <smsStorageClass> to a valid SMS storage class for your site.
*   SMS management class - CHANGE <smsManagementClass> to a valid SMS management class for your site.
*   SMS data class - Change <smsDataClass> to a valid SMS data class for your site.
*   Set-up Image - Change <InstallSetupImageDatasetName> to name to be allocated on your host system.
*   Decompress JOB - Change <INSTSetupDCMPDatasetName> to name to be allocated on your host system.
* 3. Make any additional changes that your site requires, such as providing proxy information to get outside firewall.
* 4. Submit this JOB to FTP requested files.
**
/FTPGET EXEC PGM=FTP,REGION=5120K,
 PARM='epddownload.bmc.com (timeout 720 exit=8'
```

Obtaining the Installation System setup utility
Tip

You can also copy the sample JCL for direct FTP from the Installation System web page as follows:

1. Go to http://www.bmc.com/support/reg/installation-system.html. A BMC support user ID and password are required.

2. Click Sample JCL.

3. Click the link under "Sample JCL when using direct FTP."

2 Make the changes described in the following table.

When editing the job:

- Ensure that the JCL is unnumbered; FTP reads all 80 characters.
- Set CAPS OFF and NUM OFF.
- Remove the angle brackets (< >) from around the variables when you update them.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOB statement</td>
<td>Customize the JOBCARD to comply with your site’s requirements.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This job requires a REGION parameter value of 0M.</td>
</tr>
</tbody>
</table>
Variable text in the INPUT DD section

Change the following variables in the INPUT DD section.

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

- `<ESDpassword>` to the ESD password
  
  To view the current password, go to [http://www.bmc.com/support/reg/esd-password.html](http://www.bmc.com/support/reg/esd-password.html). When prompted, provide a valid support user ID and password. To register for a support user ID and password, go to [http://www.bmc.com/support](http://www.bmc.com/support).

- `<unit>`, `<volume>`, and, optionally, the SMS variables to the correct values for your site
  
  If you do not use a variable, delete the line. Do not leave unused lines in the JCL.

- `<InstallSetupImageDataSetName>` to a valid data set name for your site
  
  This data set should *not* already exist. The data set is created when the setup utility file is downloaded.

- `<INSTSetupDCMPDatasetName>` to a valid data set name for your site
  
  This data set should *not* already exist. The data set is created when the setup utility file is downloaded.

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

3  Submit the JCL to perform the download.

### Decompressing the Installation System setup utility

Use the following procedure to decompress the Installation System setup utility:

1  After successfully obtaining the Installation System setup image and decompression job, edit the decompression JCL data set (`<INSTSetupDCMPDatasetName>`) according to the instructions in the job.

   **Note**
   
   The decompression JCL contains a job within a job that is submitted to the internal reader.
2 Submit the edited JCL to decompress the Installation System setup utility.

Decompressing the Installation System setup utility creates the HLQ:BMC.SETUP library.

3 Continue to “Running the Installation System setup utility” on page 17.

Running the Installation System setup utility

The setup utility creates new global, target, and distribution zones for the Installation System. Use the following procedure to run the Installation System setup utility:

**WARNING**

The Installation System must be installed into its own SMP/E zone.

Running the setup utility

1 On the ISPF TSO Commands panel, execute the following command:

```ex
EX 'HLQ.BMC.SETUP(BMCSETUP)'
```

The variable *HLQ* is the high-level qualifier that you assigned to the setup utility data set when you ran the decompression job.

The Installation System SMP/E JCL Options panel is displayed:

![Installation System SMP/E JCL Options panel](image)

Job Card Template:
```
//<JOBID>  JOB (<ACCOUNT>),'<NAME>',
//             CLASS=<CLASS>,MSGCLASS=<MSGCLASS>,
//             NOTIFY=&SYSUID
//*
```

Job Name Options
```
Match generated member names . . . . Y (Y=Yes, N=No) (Both options cannot
```
2 On the panel, supply all the requested information and press **Enter**.

Consider the following information when completing the panel:

- Obtain the Installation System maintenance version from the:
  - Installation System release notes
  - "FMID and version information" section in the release notes for individual products

**Best practice**

If you are installing multiple products and the Installation System maintenance version is different for one or more products, use the highest maintenance version that is available.

- The online Help explains the purpose of each field on the panel.

- The Installation System SMP/E JCL Options panel is a multi-page panel as indicated by the More field (on the right side of the panel, near the top). To scroll through the pages, use **F8** (down) and **F7** (up).

- If you are using distributed FTP or physical media for installation, ensure that you complete the **Local FTP Site Options** fields. These are used to create the jobs you need to obtain the Installation System image.

The list of generated SMP/E jobs is displayed.
You can run the jobs now or later (see “Running the SMP/E JCL for the Installation System” on page 19).

**Note**
If you are using distributed FTP or physical media for installation, do not run the $103DWNL job. Instead use #103GET and #103PUT as explained in “Running the SMP/E JCL for the Installation System” on page 19.

3 Press **F3** to exit the list and the setup utility.

---

**Running the SMP/E JCL for the Installation System**

After the Installation System jobs are created, you must run them to perform the SMP/E installation and create the runtime environment. The jobs perform the following actions:

- $103DWNL, #103GET, and #103PUT download the Installation System image files. Which jobs you run depends on the method you used to obtain the Installation System:
  - If you used direct FTP, run the $103DWNL job.
    Complete the “To run the $103DWNL job” on page 20 procedure.
  - If you used distributed FTP, run #103GET and #103PUT.
    Complete the “To run #103GET” on page 20 and “To run #103PUT” on page 20 procedures.
  - If you used physical media, run #103PUT.
    Complete the “To run #103PUT” on page 20 procedure.

- $1xx jobs build the Installation System SMP/E environment.
  Complete the “To run the remaining jobs” on page 21 procedure.
$205RTEC and $206RTEC jobs build the Installation System runtime environment. Complete the “To run the remaining jobs” on page 21 procedure.

To run the $103DWNL job

1 Run the $103DWNL job.

The Installation System image files are downloaded.

To run #103GET

1 Copy the #103GET file to your workstation by using the transfer program of your choice, and name it #103GET.txt.

2 Perform the following steps:
   a On your workstation, open a command prompt and go to the drive and folder to which you want to download the Installation System image files.
   b Execute the following command to download the Installation System image files:
      
      `ftp -n -s:"myPath\#103GET.txt"
      
      Update myPath with the path where you saved the #103GET.txt file.

      Message 250 Transfer completed successfully. displays at the end of each file transfer, and message 221 Quit command received. Goodbye. displays at the end of the output.

      Note
      This command is case sensitive.
      If an error occurs, the following items are common causes:
      - The quotation marks are missing.
      - If you copied and pasted the command, the dashes in front of n and s can be misinterpreted. Type the dashes manually.

      The Installation System image files are downloaded to your workstation.

To run #103PUT

1 Copy the #103PUT file to your workstation by using the transfer program of your choice, and name it #103PUT.txt.

2 Update the following variables in the #103PUT.txt file:
3 Execute the following command:

```
ftp -n -s:"myPath\#103PUT.txt"
```

Update `myPath` with the path to where the Installation System image files reside.

---

**Note**

This command is case sensitive.

If an error occurs, the following items are common causes:

- The quotation marks are missing.
- If you copied and pasted the command, the dashes in front of `n` and `s` can be misinterpreted. Type the dashes manually.

---

The Installation System image files are uploaded to your mainframe.

**To run the remaining jobs**

1 Display a member list of Installation System SMP/E JCL library.

2 Review the information in the `$INCGEN` and `$100DOC` members.

3 Run each job in numerical order starting with the `$104DCMP` job.

Each job should end with a return code of 4 or less.

When all of the jobs finish successfully, the Installation System is ready to use.

The following libraries are created:

- `HLQ.BMC.INSTALL`
- `HLQ.BMC.INSTALL.LOAD`
- Other libraries, such as the Runtime Component System (RTCS) bootstrap library
Tip
Before beginning an installation, review the information in “Preparing for an installation” on page 27.

The $205RTEC and $206RTEC jobs can be used to rebuild the runtime environment after maintenance is applied or to build a new runtime environment if you want to have different runtime environments based on the maintenance that is applied.

Update the Installation System

Periodically, the Installation System is updated. Therefore, before starting any new installation activity, it is important to check for updates. Updates are done for:

- Corrective maintenance to the Installation System
- Support of new product releases

Use one of the following methods to update the Installation System:

- Obtain and apply the maintenance PTF to the Installation System SMP/E environment.
  Complete the “To update the Installation System by applying a PTF” on page 22 procedure.

- Reinstall the Installation System by using the setup utility and specifying the current maintenance level.
  Complete the “To update the Installation System by running the setup utility” on page 23 procedure.

- (for physical media only) Run the maintenance utility to obtain maintenance files from a DVD.
  Complete the “To update the Installation System by running the maintenance utility” on page 23 procedure.

To update the Installation System by applying a PTF

1 Obtain the PTF by using one of the following methods:

- (recommended method) Use BMC Internet Service Retrieval (BMC ISR)
  For information about using BMC ISR, see the maintenance information in the Installation System Reference Manual.

- Use BMC eFix PTF Distribution Services (eFix)
  You can access eFix directly at http://efix.bmc.com/ or from the support site. For information about eFix, see the eFix online Help.
Note
Obtain the Installation System maintenance PTF number from the "Release, maintenance, and service levels" section of the most current Installation System release notes.

2 Apply the maintenance to the Installation System SMP/E environment.

You can use the Installation System to create the needed JCL.

3 Refresh the Installation System runtime data sets.

The $205RTEC and $206RTEC jobs can be used to rebuild the runtime environment after maintenance is applied or to build a new runtime environment if you want to have different runtime environments based on the maintenance that is applied.

4 Restart the Installation System.

To update the Installation System by running the setup utility

1 Obtain and run the setup utility as explained in “Setting up the Installation System” on page 13.

2 On the Installation System SMP/E JCL Options, in the Maintenance Version field, specify the new maintenance-level number.

Note
Obtain the Installation System maintenance-level number from the "Release, maintenance, and service levels" section of the most current Installation System release notes.

3 Refresh the Installation System runtime data sets.

The $205RTEC and $206RTEC jobs can be used to rebuild the runtime environment after maintenance is applied or to build a new runtime environment if you want to have different runtime environments based on the maintenance that is applied.

4 Restart the Installation System

To update the Installation System by running the maintenance utility

WARNING
Use this procedure when using physical media only. It will not work if using direct FTP, distributed FTP, or a web browser.
1 On the ISPF TSO Commands panel, execute the following command:

```
EX 'HLQ.BMC.SETUP(BMCMAINT)'
```

The variable $HLQ$ is the high-level qualifier that you assigned to the setup utility data set.

The Installation System Maintenance JCL Options panel is displayed:

```
Command ===> ____________________________________________

Provide the information below and press Enter. The information is used to generate the JCL that will install maintenance to the Installation System for updates and new product distribution.

Installation System Data Set HLQs:
Temporary Files . . . . . . ___________________________ (max. resolved length is 17)
SMP/E Data Sets . . . . . . ___________________________
Runtime Enablement (RTE) . . _________________________

Allocation Options (SMS values will be used when specified)
Allocation controlled by SMS ACS routines? . . . N (Y=yes, N=no)

Allocation Type STORCLAS MGMTCLAS DATACLAS UNIT VOLSER
Temporary Files ________ ________ ________ ________ ________
RTE Data Sets ________ ________ ________ ________ ________

Job Card Template:
//<JOBID> JOB (<ACCOUNT>),'<NAME>',
//             CLASS=<CLASS>,MSGCLASS=<MSGCLASS>,
//             NOTIFY=&SYSUID
//*

JES Message Class. . _ (for large output from decompress process)

Job Name Options
Match generated member names . . . . Y (Y=Yes, N=No) (Both options cannot Suffix with member name number . . . N (Y=Yes, N=No) contain 'Y')

Installation System Maintenance Information:
Maintenance Version . __
```

2 On the panel, supply all the requested information and press Enter.

Consider the following information when completing the panel:

- Obtain the maintenance version from the "FMID and version information" section in the release notes for individual products. If you are installing multiple products and they state different numbers, use the highest number referenced.

- The online Help explains the purpose of each field on the panel.

- The Installation System Maintenance JCL Options panel is a multi-page panel as indicated by the More field (on the right side of the panel, near the top). To scroll through the pages, use F8 (down) and F7 (up).
The list of generated SMP/E jobs is displayed.

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<td>RDAPLS2</td>
</tr>
<tr>
<td>.$181APLP</td>
<td></td>
<td>68</td>
<td>2015/11/02</td>
<td>2015/11/02 07:59:46</td>
<td>RDAPLS2</td>
</tr>
<tr>
<td>.$182ACCP</td>
<td></td>
<td>67</td>
<td>2015/11/02</td>
<td>2015/11/02 07:59:46</td>
<td>RDAPLS2</td>
</tr>
<tr>
<td>.$183ACPP</td>
<td></td>
<td>66</td>
<td>2015/11/02</td>
<td>2015/11/02 07:59:47</td>
<td>RDAPLS2</td>
</tr>
<tr>
<td>.$205RTEC</td>
<td></td>
<td>115</td>
<td>2015/11/02</td>
<td>2015/11/02 07:59:47</td>
<td>RDAPLS2</td>
</tr>
<tr>
<td>.$206RTEC</td>
<td></td>
<td>245</td>
<td>2015/11/02</td>
<td>2015/11/02 07:59:47</td>
<td>RDAPLS2</td>
</tr>
</tbody>
</table>

**End**

3 Press **F3** to exit the list and the setup utility.

4 Transfer the maintenance files from your physical media to your mainframe.
   
   a Copy the #103PUT file to your workstation by using the transfer program of your choice, and name it **#103PUT.txt**.

   b Update the following variables in the **#103PUT.txt** file:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your_zOS_SSID</td>
<td>Domain name server (DNS) host name for your mainframe subsystem</td>
</tr>
<tr>
<td>Your_Mainframe_UserID</td>
<td>Your mainframe user ID</td>
</tr>
<tr>
<td>Your_Mainframe_Password</td>
<td>Your mainframe password</td>
</tr>
</tbody>
</table>

   c Open a command prompt.

   For example, in Windows 7, from the Windows **Start** menu, select **All Programs => Accessories => Command Prompt**.

   d Change to the drive that contains the DVD.

   For example, if your DVD reader is assigned designated as drive D, type **d:**

   e Change to the **ga** directory.

   f Execute the following command to transfer the maintenance files to the mainframe:

   ```bash
   ftp -n -s:"myPath\#103PUT.txt"
   ```
Note
This command is case sensitive. Update myPath with the path where you saved the #103PUT.txt file.
If an error occurs, the following items are common causes:

- The quotation marks are missing.
- If you copied and pasted the command, the dashes in front of n and s can be misinterpreted. Type the dashes manually.

5 Run the generated jobs.

a. Display a member list of maintenance jobs.

b. Review the information in the $$INCGEN and $100DOC members.

c. Run each job in numerical order starting with the $104DCMP job.

Each job should end with a return code of 4 or less.

When all of the jobs finish successfully, the Installation System is updated and ready to use.
Preparing for an installation

Preparing for an installation provides a smoother installation.

The following figure depicts the process for preparing for an installation.

Figure 3: Flow for preparing for installation

Preparing the Installation System repository

The Installation System repository stores information about:

- Installation projects
- Site-wide default values

The Runtime Component System (RTCS) hosts the Installation System repository. RTCS must be active (that is, the RTCS started task is running) on the system on which you run the Installation System. All systems configured to use this RTCS share an Installation System repository.

**Note**

If RTCS is not active on your system, see the Installation System repository information in the *Installation System Reference Manual*.

For more information, view the Quick Course "BMC Installation System - Installation System Repository."
CA ACF2 usage

If you are using the CA ACF2 command limiting feature, several BMI* programs need to be defined to your CA ACF2 command table. These programs are contained in the Installation System LOAD library. Defining the programs to CA ACF2 enables access to them when you run the Installation System.

Review installation requirements

Some products have installation requirements and considerations. For this information, review the installation requirements and considerations sections in the *Installation System Reference Manual*. 
Starting an installation

The following figure depicts the flow for starting an installation.

**Figure 4: Flow for starting an installation**

Before you begin an installation

Review the following information before installing any products:

- Check for and apply maintenance to the Installation System. For more information, see “Updating the Installation System” on page 22.

- BMC 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, so library separation will avoid potential conflicts.

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

- If you install a MainView product into a library that contains the MainView AutoOPERATOR or BMC Impact Integration for z/OS product, the installation automatically upgrades the MainView AutoOPERATOR and BMC Impact Integration for z/OS FMID BBOIMxx and ZMAOxxM. Therefore, you must always upgrade MainView AutoOPERATOR and BMC Impact Integration for z/OS to the latest versions when installing MainView products into the existing library.

- 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 libraries. SMP/E can then control the relationships among
Starting the Installation System

Use the following procedure to start the Installation System:

1. On the ISPF TSO Commands panel, execute the following command:

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

   The variable `HLQ` is the high-level qualifier that was assigned during the set up for the Installation System execution environment.

   **Tip**

   Check for and apply maintenance to the Installation System. For more information, see “Updating the Installation System” on page 22.

After starting, the Installation System:

- Connects to the Installation System repository
  
  If the repository is not found, you are prompted to activate it as explained in “Preparing the Installation System repository” on page 27.

- Prompts you to read and accept the BMC Software End User License Agreement. Select (s) **Read the End User License Agreement**, read the agreement, and accept or decline the agreement. You are prompted only the first time you start the Installation System.

- Displays the Installation System Main Menu:

```plaintext
BMIPMENUS  BMC Software Installation System V2.4.00 - Main Menu
Command  ===> _________________________________________________________________

Select one of the following actions:
  1. Resume Active Project
  2. Manage Projects
  3. Apply SMP/E Maintenance
  4. Maintain Product Passwords
  5. Set Site Wide Default Values
  6. Information on new features in this release

Active Project: USER1 - Sandbox
JCL Library: USER1.INSTALL.JCLLIB

CICS, DB2, IBM, IMS and MVS are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both.
```
Defining or modifying site-wide default values

The Installation System provides user-defined defaults (known as site-wide defaults) that are used as a starting point for a project. When you create a new project, the Installation System copies your site-wide default values to the project. However, you can override the defaults within each project.

Use the following procedure the first time you use the Installation System. After setting the site-wide defaults, use this procedure only if you need to modify the site-wide defaults.

For more information, view the Quick Course "BMC Installation System - Site Wide Defaults."

---

**Note**
Changes to the site-wide defaults affect all new projects for all users of the Installation System. Changes to the following fields also affect existing projects for all users if the JCL is regenerated:

- **Directory, BMC User, BMC Password, and SYSOUT Class** in the BMC FTP Site & Download Options section
- **Temporary Files HLQ** in the Data Set HLQs section
- **Create FMIDSETs** in the SMP/E Options section

---

**To define or modify site-wide values**

1. On the Installation System Main Menu, select **Set Site Wide Default Values**.

2. Complete the fields on the Site Wide Default Values panel.

---

BMIPDEFS Site Wide Default Values

Command ===> __________________________ Scroll ===> CSR

These values are used as defaults when creating a new project. Most values can be overridden at the project level and are saved with the project. Note that the current value of fields in sections marked with an asterisk(*) are always used when generating installation and configuration jobs.

More: +

BMC FTP Site & Download Options

- Directory . . . GA (GA or BETA)
- BMC User . . . mainframe (non-display)
- BMC Password . . . (non-display)
- SYSOUT Class . . . Z (for large output from decompress process)

Data Set HLQs *

- Temporary Files HLQ . . . &SYSUID..&PROJNAME (max resolved length is 17)

Allocation Options (SMS values will be used when specified)

Allocation controlled by SMS ACS routines? . . . N (Y=yes, N=no)
The following table describes the sections of the panel:

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC FTP Site &amp; Download Options</td>
<td>These fields specify the location and access information for the product image files on the BMC Electronic Software Distribution (BMC ESD) FTP site.</td>
</tr>
<tr>
<td>Data Set HLQs</td>
<td>This field specifies an HLQ for the temporary work files used by the Installation System.</td>
</tr>
<tr>
<td>Allocation Options</td>
<td>These fields specify data set allocation information for the files and libraries created by the Installation System. For each file and library, provide SMS or volume information. If you provide both, the SMS information is used.</td>
</tr>
<tr>
<td>System Values</td>
<td>These fields specify the names of system libraries. Only some products use the IBM call library and the IBM 'C' Library. To determine which products require these libraries, see the product-specific requirements information in the Installation System Reference Manual.</td>
</tr>
<tr>
<td>SMP/E Options</td>
<td>This field specifies SMP/E information for the products being installed.</td>
</tr>
<tr>
<td>Batch Job Generation Options</td>
<td>These fields specify information for the JCL generated by the Installation System. You run this JCL to perform the installation and configuration of your products.</td>
</tr>
<tr>
<td>Local FTP Site Options</td>
<td>These fields specify FTP and, optionally, firewall information used at your site. The information entered in these fields is case sensitive. Data set names are used exactly as specified. Do not use single or double quotation marks.</td>
</tr>
</tbody>
</table>

Consider the following information when completing the panel:

- The Site Wide Default Values panel is a multi-page panel as indicated by the More field (on the right side of the panel, near the top). To scroll through the pages, use F8 (down) and F7 (up).

- You can leave a field blank if you do not want to set a site-wide value for that item.

3 When finished, press F3 to save your entries.
Creating and selecting a project

Use the following procedures to create and select a project.

The Installation System uses *projects* to organize separate installations of one or more products. Each project:

- Accumulates the information needed to generate the JCL to install and configure a product
- Installs and configures any combination of products, solutions, families, and components at the same time

Projects are automatically saved at the following points:

- When you make a change to the project and exit the project.
- Before generating the installation JCL.
- Before generating the configuration JCL.
- After selecting a configuration option on the Configure Products or Components panel but not making any changes to the project and exiting the project.

For more information, see:

- The *Installation System Reference Manual*.
- The Quick Course "BMC Installation System - Installation Projects."

To create a project

1. On the Installation System Main Menu, select *Manage Projects*.

2. On the *Command* line of the Manage Projects panel, enter *NEW*.

<table>
<thead>
<tr>
<th>Cmd Name</th>
<th>Description / JCL Library</th>
<th>Updated On</th>
<th>Updated By</th>
</tr>
</thead>
<tbody>
<tr>
<td>MYTEST1</td>
<td>* testing</td>
<td>21:12:51</td>
<td>USER1</td>
</tr>
<tr>
<td>MYTEST2</td>
<td>IMS products test</td>
<td>10:22:41</td>
<td>USER1</td>
</tr>
<tr>
<td>TESTSYS2</td>
<td>Test Case 11</td>
<td>19:16:42</td>
<td>USER2</td>
</tr>
<tr>
<td>DB2_ONLY</td>
<td>new DAD install</td>
<td>12:12:24</td>
<td>USER2</td>
</tr>
<tr>
<td>IMS_ONLY</td>
<td>mix 1 of ims products</td>
<td>09:03:31</td>
<td>USER1</td>
</tr>
</tbody>
</table>
3 On the Execute Project panel, specify a project name, a project description, and a JCL data set name (the library in which to store generated JCL) for the new project.

BMIPPRJE                        Execute Project
Command ===> _________________________________________________________________
Project Name . . . *CHG ME*
Description . . . ________________________________________
JCL Data Set . . . ___________________________________________________
Select one of the following installation actions:
   1. Select Products, Solutions, or Infrastructure
   2. Set SMP/E Data Set High Level Qualifiers
   3. Set SMP/E Data Set Allocation Values
   4. Set Installation Job Values and FTP Options
   5. Generate and Execute Installation Batch Jobs
Options
   5. Generate and Execute Installation Batch Jobs
Select one of the following configuration actions:
   1. Set Runtime Data Set High Level Qualifiers
   2. Set Runtime Data Set Allocation Values
   3. Set Selected Product or Component Values
   4. Set Configuration Job Values
   5. Generate and Execute Configuration Batch Jobs
   6. Multiple SSID install for DB2 Products only (optional)

4 Press Enter.

The Installation System creates the project. Available options are highlighted. You can select any available option to continue the project.

To select a project

1 On the Installation System Main Menu, select Manage Projects.

2 In the Cmd field of the Manage Projects panel, enter the S (select) line command next to the project that you want to use.

The selected project becomes the active project and the Execute Project panel is displayed.

BMIPPRJE                        Execute Project
Command ===> _________________________________________________________________
Project Name . . . USER1
Description . . . Sandbox
JCL Data Set . . . USER1.BMCINST.JCLLIB
Select one of the following installation actions:
   1. Select Products, Solutions, or Infrastructure
   2. Set SMP/E Data Set High Level Qualifiers
   3. Set SMP/E Data Set Allocation Values
   4. Set Installation Job Values and FTP Options
   5. Generate and Execute Installation Batch Jobs
Options
   5. Generate and Execute Installation Batch Jobs
Select one of the following configuration actions:
   1. Set Runtime Data Set High Level Qualifiers
   2. Set Runtime Data Set Allocation Values
   3. Set Selected Product or Component Values
   4. Set Configuration Job Values
Available options are highlighted. You can select any available option to continue the project.

**To resume an active project**

The active project is indicated in the following ways:

- In the **Active Project** field on the Installation System Main Menu
- By an asterisk next to the project name on the Manage Projects panel

1. On the Installation System Main Menu, confirm that the **Active Project** field cites the project that you want.

2. Select **Resume Active Project**.

The Execute Project panel is displayed. Available options are highlighted. You can select any available option to continue the project.
Generating installation jobs

During the installation process, you select the products and solutions that you want to install and provide SMP/E information. The Installation System then uses that information to generate installation jobs. The names of the installation jobs start with $1nn.

The following figure depicts the flow for generating the installation jobs.

Figure 5: Flow for generating installation jobs

Selecting products to install

Use the following procedure to select the products, solutions, families, and components that you want to install:

1. On the Execute Project panel, from the list of installation actions, select Select Products, Solutions, or Infrastructure and press Enter.
2 In the **Cmd** field of the Category Selection panel, enter the **S** (select) line command next to the type of products that you want to install, and press **Enter**.

<table>
<thead>
<tr>
<th>BMIPCTD</th>
<th>Category Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command ===&gt; ___________________________</td>
<td></td>
</tr>
</tbody>
</table>

Select the categories for the products and solutions to be installed. Press Enter to continue or F12 to go back.

**Line Cmds:** Select

<table>
<thead>
<tr>
<th>Cmd</th>
<th>Product and Solution Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>_</td>
<td>BMC Data Management for DB2</td>
</tr>
<tr>
<td>_</td>
<td>BMC Data Management for IMS</td>
</tr>
<tr>
<td>_</td>
<td>BMC Mainframe Cost Optimization</td>
</tr>
<tr>
<td>_</td>
<td>BMC MainView Products</td>
</tr>
<tr>
<td>_</td>
<td>ALL Products</td>
</tr>
</tbody>
</table>

--- Tip ---

If you are unsure which category to select, select **ALL Products**.

---

3 In the **Cmd** field of the Product Selection panel, enter the **S** (select) line command next to each product and solution that you want to install, and press **Enter**.

<table>
<thead>
<tr>
<th>BMIP004</th>
<th>USER1 - ALL Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND ===&gt; ___________________________</td>
<td></td>
</tr>
</tbody>
</table>

Select the products and solutions to be installed. A '+' in the Sub column indicates an included subcomponent can be deselected. Press Enter to continue or F12 to backup.

**Line Cmds:** Select, Expand, Info

<table>
<thead>
<tr>
<th>Cmd</th>
<th>Sub</th>
<th>Products and Solutions</th>
<th>Version</th>
<th>PCode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Administrative Assistant for DB2</td>
<td>11.1.00</td>
<td>AAD</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>ALTER for DB2</td>
<td>11.1.00</td>
<td>ALU</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>APPLICATION RESTART CONTROL DB2/IMS/VSAM</td>
<td>4.0.00</td>
<td>ARX</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>Backup and Recovery Solution for IMS</td>
<td>4.6.00</td>
<td>BRI</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Application Accelerator for IMS</td>
<td>1.2.00</td>
<td>IBO</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC APPTUNE for DB2</td>
<td>11.1.00</td>
<td>ASQ</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Change Mgmt Family for IMS</td>
<td>2.6.00</td>
<td>T85</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Communication Mgmt Family for IMS</td>
<td>2.6.00</td>
<td>T86</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Database Admin Family-DB2 z/OS</td>
<td>11.1.00</td>
<td>T71</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Database Advisor Family for DB2 z/OS</td>
<td>11.1.00</td>
<td>T72</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Database Advisor Family for IMS</td>
<td>2.5.00</td>
<td>T79</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Database Integrity Family for IMS</td>
<td>4.9.00</td>
<td>T82</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Database Advisor for DB2 z/OS</td>
<td>11.1.00</td>
<td>T70</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Database Manager Family-DB2 z/OS</td>
<td>4.9.00</td>
<td>T69</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Database Perf Family for IMS</td>
<td>4.9.00</td>
<td>T69</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Database for z/OS</td>
<td>1.7.00</td>
<td>MDZ</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC DB Perf for Fast Path Family for IMS</td>
<td>1.8.00</td>
<td>T80</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC High Speed Utilities for DB2</td>
<td>11.1.00</td>
<td>BHU</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Impact Integration for z/OS</td>
<td>1.6.00</td>
<td>BIZ</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Intelligent Capping for zEnterprise</td>
<td>1.1.00</td>
<td>DYC</td>
</tr>
<tr>
<td>_</td>
<td></td>
<td>BMC Internet Service Retrieval</td>
<td>1.5.00</td>
<td>BMR</td>
</tr>
</tbody>
</table>

--- Tip ---

To scroll through the list, use **F8** or **Enter** to scroll down, and **F7** to scroll up.

---

4 When you have finished making selections on the Product Selection panel, scroll to the bottom of the list and press **Enter**.
5 If you are prompted to install additional products or components that are associated with your product selections, indicate your preferences:

- If an additional panel is displayed (such as the example below), enter Y to install the specified product or N to omit it, and press Enter:

```
IPTP001 ----------------- BMC System Administration for IMS ---------
COMMAND ===> ______________________________________________________
You have chosen to install BMC System Administration for IMS
Would you also like to install DELTA IMS: Y (Y/N)
```

Press Enter to continue or F12 to go back.

- If you are installing a product that requires the Runtime Component System (RTCS), respond as follows when you see the Install System RTCS Deselection pop-up:

  — If you already have RTCS installed and want to continue using it, deselect the component and press Enter.

  — If you do not have RTCS installed or want to reinstall it, enter S or / next to the component and press Enter.

```
BMIPDSEL       Install System RTCS Deselection
COMMAND ===>                                                
Enter an 'S' or '/' to select the RTCS component for installation. If you do not wish to install the RTCS component, do not select it.
Press Enter to continue.

Select Component Version
_ Run Time Components System 01.2.00
```

6 When the Install System Selected Products and Solutions panel lists your selections, review the list and take one of the following actions:

- To change a product or solution, press F12 to return to the selection panel.
If the list is correct, press Enter.

Below are the products and solutions that were selected for installation. If these are incorrect, return to the Product and Solution Selection Screen to reselect. If correct, press Enter to continue or F12 to go back.

<table>
<thead>
<tr>
<th>Products and Solutions</th>
<th>Version</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC Intelligent Capping for zEnterprise</td>
<td>1.1.00</td>
<td>December 2014</td>
</tr>
</tbody>
</table>

Specifying SMP/E settings

Use the following procedure to specify information for your SMP/E environment:

1. On the SMP/E Data Sets and Options panel, specify HLQs for an existing SMP/E environment or for a new environment, and press Enter.

If you specify a new environment, the Installation System will allocate the new data sets.

**WARNING**

BMC does not recommend installing into existing target and distribution zones that were created with version 2.3.90 or earlier of the Installation System because of changes to the SMP target data sets.

Enter the SMP/E data set HLQs and zone names. Press enter after typing a value in the Quick Fill field to set the other HLQs. Enter a '/' in the Quick Clear field to clear the HLQs.

**WARNING**

BMC does not recommend installing into existing target and distribution zones that were created with version 2.3.90 or earlier of the Installation System because of changes to the SMP target data sets.

Specifying SMP/E settings

Use the following procedure to specify information for your SMP/E environment:

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If you specify a new environment, the Installation System will allocate the new data sets.

**WARNING**

BMC does not recommend installing into existing target and distribution zones that were created with version 2.3.90 or earlier of the Installation System because of changes to the SMP target data sets.
Tip
The online Help includes examples of how to use the fields and options to create the following SMP/E environments supported by BMC:

- *(default configuration)* New global, target, and DLIB zones; new global, target, and DLIB CSI data sets
- New global, target, and DLIB zones; new global CSI data set
- Existing global zone; new target and DLIB zones; new target and DLIB CSI data sets
- Existing global zone; new target and DLIB zones; existing global CSI data set; new target and DLIB CSI data sets
- Existing global, target, and DLIB zones; existing global, target, and DLIB CSI data sets
- Existing global, target, and DLIB zones; existing global CSI data set

For information about target libraries, see the library names section in the *Installation System Reference Manual*.

2 On the SMP/E Data Set Allocation Values panel, specify allocation information for the SMP/E data sets and press **Enter**.

You can specify SMS information or VOLSER information for the data sets. If you specify both, the SMS information is used.

**Note**
If either of the following statements is true, you do not have to specify allocation information:

- You are using existing data sets.
- You are using SMS ACS routines (as indicated in the site-wide defaults).

---

**Specifying JCL values for generated installation jobs**

Use the following procedure to specify JCL information and FTP options for the Installation System to use when generating the installation jobs.
On the Installation Job Values & FTP Options panel, in the **Job Card Template** fields, specify a valid job card statement.

The Installation System uses this information to create the job card in the generated JCL.

```
 BMIPIN40   USER1 - Installation Job Values & FTP Options

 Command ==> ________________________________________________ Scroll ==> CSR

 Enter the Generated Job options for the installation jobs.

 Job Card Template
  //<JOBID> JOB (9999), INSTALL-&SYSUID,
  //               CLASS=A, MSGCLASS=X,
  //               NOTIFY-&SYSUID
  //*

 Job Name Options
  Match generated member names . . . Y (Y=Yes, N=No) (Both options cannot
  Suffixed with member name number . . . N (Y=Yes, N=No) contain 'Y')

 FTP Options
  Directory . . . GA (GA or BETA)
```

In the **Job Name Options** fields, specify how you want the generated job cards to be named.

The **Match generated member names** and **Suffixed with member name number** fields are mutually exclusive. Specify:

- **Y** for **Match generated member names** to have the job card name match the generated member name.
  
  For example, if the member is $103DWNL, the job card name becomes //103DWNL.

- **Y** for **Suffixed with member name number** to have the job card name suffixed with the numeric ID of the member.
  
  For example, if the member is $103DWNL and the job card is //BMCIVPJB, the ID is 103 and the job card name becomes //BMCIV103.

- Specifying **N** for both fields to use what you have in **Job Card Template**.

If the firewall credential fields are displayed, specify a user ID and password for your firewall.

The firewall credential fields are displayed if the symbolics &FRWLUSER and &FRWLPSWD are specified in the site-wide default values for the firewall login credentials. The fields ask for a user ID and password. For security purposes, the credentials are not stored with the project.

Press **Enter**.
Generating the installation JCL

Use the following procedure to generate the JCL that you will run to install the products.

1. **On the Installation JCL Generation Options panel, select Generate JCL and press Enter.**

   BMIP080 Installation JCL Generation Options
   Command ===> ____________________________________________________________________________
   Select an option. Press Enter to continue or F12 to go back.
   $ Generate JCL into USER1.INSTALL.JCLLIB
   _ Skip generation process and display next panel
   
<table>
<thead>
<tr>
<th>Member</th>
<th>Status</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100DOC</td>
<td>Unload Doc</td>
<td></td>
</tr>
<tr>
<td>$103DWNL</td>
<td>Download of Product Files</td>
<td></td>
</tr>
<tr>
<td>$104DCMP</td>
<td>Decompress of Product Files</td>
<td></td>
</tr>
<tr>
<td>$105SMPE</td>
<td>Define/Create/Update SMP/E Env</td>
<td></td>
</tr>
<tr>
<td>$106SMPE</td>
<td>Build/Update SMP/E Env</td>
<td></td>
</tr>
<tr>
<td>$130RECP</td>
<td>Receive Products</td>
<td></td>
</tr>
<tr>
<td>$145RECS</td>
<td>Receive Maintenance</td>
<td></td>
</tr>
<tr>
<td>$150HOLD</td>
<td>Receive BMC HOLD Data</td>
<td></td>
</tr>
<tr>
<td>$155LIST</td>
<td>List Hold Data</td>
<td></td>
</tr>
<tr>
<td>$160DCLI</td>
<td>Print PTF Doc from Maint Files</td>
<td></td>
</tr>
</tbody>
</table>

2. **When the Installation JCL Execution Review panel is displayed, review the information and press Enter.**

   BMIP090 Installation JCL Execution Review
   Command ===> ____________________________________________________________________________
   Several jobs were generated into the following library: USER1.INSTALL.JCLLIB
   Review and submit those jobs whose names start with $1 in the sequence implied by the 3rd and 4th characters of the jobname. Execute the jobs one at a time. Do not skip any of the jobs because they are generally dependent on the jobs earlier in the sequence. The jobs should complete without abends or return codes greater than 4 unless documented otherwise in the job's documentation.
   The exceptions are the #D9 jobs. If generated, these jobs should only be submitted when you want to remove the installed product(s) libraries from your environment.
   If any installation steps remain, a $100DOC member is created containing documentation which describes these remaining steps.
   
   Press Enter to display an Edit member list of the $1 generated jobs.

3. **Review the generated list of jobs.**

   BMIPJEDT ST USER1.INSTALL.JCLLIB
   Command ===> _________________________________ Scroll ===>
<table>
<thead>
<tr>
<th>Name</th>
<th>Prompt</th>
<th>Size</th>
<th>Created</th>
<th>Changed</th>
<th>ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>. $$READ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>. $1JCKLST</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>. $100DOC</td>
<td>236</td>
<td>2014/12/08</td>
<td>2014/12/08 14:32:09</td>
<td>USER1</td>
<td></td>
</tr>
<tr>
<td>. $103DWNL</td>
<td>442</td>
<td>2014/12/08</td>
<td>2014/12/08 15:05:05</td>
<td>USER1</td>
<td></td>
</tr>
</tbody>
</table>
This list shows a subset of the generated jobs. The full list of generated jobs is in your JCL library, and includes additional jobs that you might want to use to perform optional tasks. Not all projects generate the same set of jobs. The jobs generated depend on the products and solutions you are installing and configuring.

You can run the jobs now or later (see “Running the generated jobs” on page 55).

4 Press **F3** to exit the list and return to the Execute Project panel.
Generating configuration jobs

During the configuration process, the Installation System creates a runtime environment from which you run your products. Runtime data sets contain information copied from one or more of the SMP/E target libraries.

The Installation System uses your specifications to generate configuration jobs for the products that you are installing. The names of the configuration jobs begin with $2nn through $9nn.

The following figure depicts the configuration process.

Figure 6: Flow for generating configuration jobs

| Generate configuration jobs | Specify information for runtime data sets | Specify configuration information | Specify JCL for configuration jobs | Generate configuration jobs |

BMC products for IMS that do not require configuration

The Installation System displays panels that are applicable to the product being installed. The following BMC products for IMS do not have configuration tasks associated with them:

- APPLICATION RESTART CONTROL for DB2, APPLICATION RESTART CONTROL for IMS, and APPLICATION RESTART CONTROL for VSAM
  (Instead, use the AR/CTL Install System (AESIS) as described in the APPLICATION RESTART CONTROL Customization Guide.)
- BMC Log Analyzer for IMS
- BMC Partitioned Database Facility for IMS
  (Instead, see the installation information in the BMC Partitioned Database Facility for IMS release notes.)
- DELTA IMS for DBCTL
BMC products for DB2 that do not require configuration

The Installation System displays panels that are applicable to the product being installed. The BMC Next Gen Technology - DB2 Utilities product does not have configuration tasks associated with it.

Instead, use the configuration information in the BMC NGT Installation Guide and BMC NGT Utility Manager for DB2 for z/OS Reference Manual publications.

Specifying runtime data set information

Use the following procedure to specify information for the runtime data sets.

For more information, view the Quick Course "BMC Installation System - Runtime Library Options."

To specify runtime data set information

1. On the Execute Project panel, from the list of configuration actions, select **Set Runtime Data Set High Level Qualifiers** and press **Enter**.

<table>
<thead>
<tr>
<th>BMIPPRJE</th>
<th>Command</th>
<th>Execute Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name</td>
<td>USER1</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Sandbox</td>
<td></td>
</tr>
<tr>
<td>JCL Data Set</td>
<td>USER1.BMCINST.JCLLIB</td>
<td></td>
</tr>
</tbody>
</table>
Select one of the following installation actions:

1. Select Products, Solutions, or Infrastructure
2. Set SMP/E Data Set High Level Qualifiers
3. Set SMP/E Data Set Allocation Values
4. Set Installation Job Values and FTP Options
5. Generate and Execute Installation Batch Jobs

Select one of the following configuration actions:

1. Set Runtime Data Set High Level Qualifiers
2. Set Runtime Data Set Allocation Values
3. Set Selected Product or Component Values
4. Set Configuration Job Values
5. Generate and Execute Configuration Batch Jobs
6. Multiple SSID install for DB2 Products only (optional)

2 On the Runtime & Other Data Sets panel, specify the requested information, and press Enter.

Enter the Data Set HLQs for runtime data sets. Press enter after typing a value in the Quick Fill to set the other HLQs. Enter a '/' in the Quick Clear field to clear the HLQs.

Quick Clear
Quick Fill

Runtime Data Set HLQ (SMP/E content)

Product HLQ

Other Data Set HLQs (non-SMP/E content)

Product non-VSAM
Product VSAM

Low Level Qualifiers

Change Values

1. Use BMC* LLQs (recommended)
2. Use BB/DB/IM/XX LLQs
3. Customize the LLQs

Optional APF Load Library

Existing Load Library

a In the Runtime Data Set HLQ and Other Data Set HLQs sections, specify HLQs.

b In the Change Values field in the Low Level Qualifiers section, select one of the following options for the low-level qualifiers (LLQs) for the product data sets:

- Enter 1 to use BMC*.
  
  (recommended) All LLQs begin with BMC, followed by the type of library (such as LINK, SAMP, or PLIB). Examples are BMCLINK, BMCSAMP, and BMCPLIB. All products use the same set of libraries.

- Enter 2 to use LLQs that start with product-line designators.

  LLQs begin with one of the following designators, followed by the library type:

  - **BB** for MainView and some performance products
  - **DB** for BMC products for IBM DB2
  - **IM** for BMC products for IBM IMS
For example, if you are installing a BMC product for IMS, the names would be IMLIB, IMSAMP, and IMPLIB. All products in the same product line use the same set of libraries.

If you already have MainView products installed, use this option to continue using the naming conventions of your existing libraries.

■ Enter 3 to specify your own LLQs

**Best practice**

Use this option under the following conditions:

■ You need total control over the naming of the runtime data sets.

■ You are installing a BMC Next Gen Technology - *DB2 Utilities* product.

---

**Note**

For the APPLICATION RESTART CONTROL products, regardless of which option you select, the LLQs are predetermined and cannot be changed.

For information about target libraries, see the library names section in the *Installation System Reference Manual*.

---

(**optional**): In the Existing Load Library field, in the Optional APF Load Library section, specify an existing APF load library to use to consolidate all of the load libraries into one.

This library becomes the runtime data set for the load modules only.

**Note**

All SMP/E target and user load modules will be copied here. Existing members in this library can be overwritten.

---

3 On the Runtime Data Set Allocation Values panel, specify the allocation information for the runtime data sets and press Enter.

<table>
<thead>
<tr>
<th>Data Set Type</th>
<th>STORCLAS</th>
<th>MGMTCLAS</th>
<th>DATACLAS</th>
<th>UNIT</th>
<th>VOLSER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Runtime Data Sets</td>
<td>________</td>
<td>________</td>
<td>________</td>
<td>SYSALLDA</td>
<td>______</td>
</tr>
<tr>
<td>Product non-VSAM Data Sets</td>
<td>________</td>
<td>________</td>
<td>________</td>
<td>SYSALLDA</td>
<td>______</td>
</tr>
<tr>
<td>Product VSAM Data Sets</td>
<td>________</td>
<td>________</td>
<td>________</td>
<td>SYSALLDA</td>
<td>______</td>
</tr>
<tr>
<td>Product PDSE Data Sets</td>
<td>________</td>
<td>________</td>
<td>________</td>
<td>SYSALLDA</td>
<td>______</td>
</tr>
</tbody>
</table>

**Note**

Specifying runtime data set information
You can specify SMS information or VOLSER information for the data sets. If you specify both, the Installation System uses the SMS information.

Specifying product configuration information

Complete the following steps to specify configuration information for the products you are installing:

1. On the Configure Products or Components panel, specify product configuration information for the options labeled *(incomplete)* on the right side of the panel:

   BMIPCF30          USER1 - Configure Products or Components
   Command ===>  

   Action availability is based on previously selected (or included) Products or Components.

   Select one of the following actions:

   1. Configure BMC Infrastructure  *(incomplete)*
   2. Configure DB2 products  *(not required)*
   3. Configure IMS products  *(not required)*
   4. Configure MainView products  *(incomplete)*
   5. Configure Mainframe Cost Optimization products  *(not required)*
   6. Configure products common to multiple product lines  *(not required)*
   7. Apply Product Passwords  *(optional)*
   8. Proceed to JCL Generation  

   **Note**

   Only the options needed for the products you are configuring are available for selection.

   Not all products require configuration. If the products you are installing do not require configuration, a message is displayed.

   The APPLICATION RESTART CONTROL products do not use the Installation System for configuration. Instead, use the AR/CTL Install System (AESIS) as described in the *APPLICATION RESTART CONTROL Customization Guide*.

a. Select an option that is labeled *(incomplete)* and press Enter.

b. Complete the corresponding panels that are displayed, until you return to the Configure Products or Components panel.

c. Continue selecting incomplete options until all required options are labeled *(complete)*.

For additional information, see:

- Configuration chapters in the *Installation System Reference Manual*
- The *BMC Infrastructure Components Administration Guide*
The following Quick Courses:

- "BMC Installation System - Infrastructure Configuration"
- "BMC Installation System - DB2 Configuration"
- "BMC Installation System - IMS Configuration"
- "BMC Installation System - MainView Configuration"

2 (optional) Select Apply Product Passwords, press Enter, and provide the requested password information.

If you are reinstalling a product for which you have already provided a password, you do not need to provide the password again.

**Best practice**

BMC recommends providing passwords during configuration if you are installing a product for the first time. You can, however, provide passwords at any time by selecting Maintain Product Passwords on the Installation System Main Menu.

For more information about product authorization, see the *Installation System Reference Manual*.

---

**Specifying JCL values for generated configuration jobs**

Complete the following steps to specify JCL information that the Installation System will use when generating the configuration jobs.

1 On the Configure Products or Components panel, select Proceed to JCL Generation and press Enter.

| BMIPCF30          USER1 - Configure Products or Components |
| Command ===>

Action availability is based on previously selected (or included) Products or Components.

Select one of the following actions:

- 1. Configure BMC Infrastructure (complete)
- 2. Configure DB2 products (not required)
- 3. Configure IMS products (not required)
- 4. Configure MainView products (complete)
- 5. Configure Mainframe Cost Optimization products (not required)
- 6. Configure products common to multiple product lines (not required)
- 7. Apply Product Passwords (optional)
- 8. Proceed to JCL Generation
2 On the Generated Job Values panel, in the **Job Card Template** fields, specify a valid job card statement.

The Installation System uses this information to create the job card in the generated JCL.

```
BMIPCF40 USER1 - Generated Job Values
Command ===> _____________________________________________________________________ Scroll ===> CSR
Enter the Generated Job Values for the configuration jobs.

Job Card Template
//<JOBID> JOB (9999),INSTALL-&SYSUID,  
// CLASS=A,MSGCLASS=X,                      
// NOTIFY=&SYSUID                           
//*
```

```
Job Name Options
Match generated member names . . . . Y (Y=Yes, N=No) (Both options cannot
Suffixed with member name number . . . N (Y=Yes, N=No) contain 'Y')
```

3 In the **Job Name Options** fields, specify how you want the generated job cards named.

The **Match generated member names** and **Suffixed with member name number** fields are mutually exclusive. Specify:

- **Y** for **Match generated member names** to have the job card name match the generated member name.
  
  For example, if the member is $205ALOC, the job card name becomes //205ALOC.

- **Y** for **Suffixed with member name number** to have the job card name suffixed with the numeric ID of the member.
  
  For example, if the member is $205ALOC and the job card is //BMCIVPJB, the ID is 205 and the job card name becomes //BMCIV205.

- Specifying **N** for both fields to use whatever you have in **Job Card Template**.

4 Press **Enter**.

**Generating the configuration JCL**

Use the following procedure to generate the JCL that you will run to configure the products. The installation jobs do not have to be run before generating the configuration JCL.
On the Configuration JCL Generation Options panel, select Generate JCL and press Enter.

When the Configuration JCL Execution Review panel is displayed, review the information and press Enter.

Review the generated list of jobs.
This list shows a subset of the generated jobs. The full list of generated jobs is in your JCL library, and includes additional jobs that you might want to use to perform optional tasks. Not all projects generate the same set of jobs. The jobs generated depend on the products and solutions you are installing and configuring.

You can run the jobs now or later (see “Running the generated jobs” on page 55).

**Best practice**

IBM does not recommend secondary extents for load libraries in LINKLIST. After running the generated configuration jobs, the runtime load libraries might have secondary allocations. If you plan to add the load library to your LINKLIST, BMC recommends manually reallocating the load libraries so that all space is provided in the primary allocation and the secondary allocation is set to 0. This will avoid errors of modules not being found when the library is updated.

4 Press F3 to exit the list and return to the Execute Project panel.
Running the generated jobs

After the Installation System generates the installation and configuration jobs into your installation project’s JCL library, you must run them to complete the installation. In addition to running the generated jobs, some manual tasks might be required.

The following figure depicts the flow for running the jobs.

Figure 7: Flow for running the generated jobs

Reviewing generated documentation members

Use the following procedure to review the documentation members generated by the Installation System:

1. Display a member list of your installation JCL library.

2. Read the $$READ member in your JCL library.

   This file briefly explains the members that are generated.

3. Read the following documentation members in your JCL library.

   These files contain additional information about the products and solutions you are installing.

   - $100DOC
   - $200ALOC
To run the generated jobs

After the installation and configuration jobs are created, you must run them. The jobs perform the following actions:

- $103DWNL, #103GET, and #103PUT download the product image files. Which files you run depends on the method you used to obtain the Installation System:
  - If you used direct FTP, run the $103DWNL job.
    Complete the “To run the $103DWNL job” on page 20 procedure.
  - If you used distributed FTP, run #103GET and #103PUT.
    Complete the “To run #103GET” on page 20 and “To run #103PUT” on page 20 procedures.
  - If you used physical media, run #103PUT.
    Complete the “To run #103PUT” on page 20 procedure.

- The remaining jobs create the SMP/E and runtime environments for the products you are installing.
  Complete the “To run the remaining jobs” on page 58 procedure.

To run the $103DWNL job

1. Run the $103DWNL job.

   The product image files are downloaded.

To run #103GET

1. Copy the #103GET file to your workstation by using the transfer program of your choice, and name it #103GET.txt.
2 Perform the following steps:

a On your workstation, open a command prompt and go to the drive and folder to which you want to download the product image files.

b Execute the following command to download the product image files:

```
ftp -n -s:"myPath\#103GET.txt"
```

Update `myPath` with the path where you saved the `#103GET.txt` file.

Message 250 Transfer completed successfully. displays at the end of each file transfer, and message 221 Quit command received. Goodbye. displays at the end of the output.

**Note**
This command is case sensitive.
If an error occurs, the following items are common causes:
- The quotation marks are missing.
- If you copied and pasted the command, the dashes in front of `n` and `s` can be misinterpreted. Type the dashes manually.

The product image files are downloaded to your workstation.

**To run #103PUT**

1 Copy the #103PUT file to your workstation by using the transfer program of your choice, and name it `#103PUT.txt`.

2 Update the following variables in the `#103PUT.txt` file:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>Your_zOS_SSID</code></td>
<td>Domain name server (DNS) host name for your mainframe subsystem</td>
</tr>
<tr>
<td><code>Your_Mainframe_UserID</code></td>
<td>Your mainframe user ID</td>
</tr>
<tr>
<td><code>Your_Mainframe_Password</code></td>
<td>Your mainframe password</td>
</tr>
</tbody>
</table>

3 Execute the following command:

```
ftp -n -s:"myPath\#103PUT.txt"
```

Update `myPath` with the path to where the product image files reside.
Note
This command is case sensitive.
If an error occurs, the following items are common causes:

- The quotation marks are missing.
- If you copied and pasted the command, the dashes in front of \textit{n} and \textit{s} can be misinterpreted. Type the dashes manually.

The product image files are uploaded to your mainframe.

To run the remaining jobs

1. Read the checklist members in your JCL library.

   The following checklists are created:
   
   - $IJCKLST$ contains instructions for the installation jobs.
   - $CJCKLST$ contains instructions for the configuration jobs.

2. Run the installation jobs by performing each step in the $IJCKLST$ checklist.

   Each job contains comments that explain the function of the job, provide detailed instructions for running the job, and list the acceptable return codes for the job.

   \textbf{Best practice}
   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.

3. Run the configuration jobs by performing each step in the $CJCKLST$ checklist.

   Each job contains comments that explain the function of the job, provide detailed instructions for running the job, and list the acceptable return codes for the job.

Result of running the jobs

Your products are now installed and configured.

Many products require customization before starting them, such as creating CLISTs. Additionally, many products can be customized to meet your site's needs. For more information, see each product's customization or configuration guide:
For BMC products for DB2:
- APPLICATION RESTART CONTROL Customization Guide
- BMC Products and Solutions for DB2 Customization Guide
- BMC Runtime Component System Configuration and Administration Guide

For BMC products for IMS:
- APPLICATION RESTART CONTROL Customization Guide
- Database Products for IMS Customization Guide
- System Administration Products for IMS Customization Guide
- BMC Runtime Component System Configuration and Administration Guide

For MainView products:
- MainView Customization Reference
- CMF MONITOR Customization Guide
- MainView AutoOPERATOR Customization Guide
- MainView for CICS Customization Guide
- MainView for DB2 Customization Guide
- MainView for IMS and MainView for DBCTL Customization Guide
- MainView for IP Customization Guide
- MainView for Linux - Servers Customization Guide
- MainView for z/OS Customization Guide
- MainView SRM Customization Guide
- BMC Runtime Component System Configuration and Administration Guide

For cost optimization products:
- Database Products for IMS Customization Guide
- MainView Customization Reference
- BMC Runtime Component System Configuration and Administration Guide

--- **Best practice** ---
BMC highly recommends applying product maintenance before running your products. For maintenance information, see the *Installation System Reference Manual*. 

---
Result of running the jobs
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