SF99740
C3313740 Cumulative PTF Package Instructions
This PSP consists of:
Short Version of Installation Instructions,
and Detailed Installation Instructions.

IBM i PTF Shipping Information Letter

IBM i CUMULATIVE PTF PACKAGE
INSTALLATION INSTRUCTIONS (SHORT VERSION)
SF99740 Level 23313
PACKAGE ID: C3313740
VERSION 7 RELEASE 4.0

Cumulative PTF Package Instructions Last Updated: 02/28/2024

Note: Online copy of this document is the latest version. Any
printed copy should be assumed to be obsolete and not used unless
the date of last update is verified to match that shown on the
online version.

The information contained in this document was current at the
time this cumulative PTF package was made available. We recommend
you get the most current information (including a more detailed
installation instructions version if desired) which can be found
via the following URL:

https://www.ibm.com/support/pages/node/667567

PSP SF98740 lists HIPER PTFs not included in this cumulative PTF
package and any defective PTFs identified since this package was
released.

You will receive the cumulative PTF package in one of three
different formats:

* Electronically downloaded as individual PTF save files

* Electronically downloaded as optical image files

* Physical optical media (when it cannot be downloaded
   electronically)

The installation instructions contained in this document will

guide you through the install steps needed for each format.

REVIEW PTF COVER LETTERS

As with any PTF order, before you install the PTFs you should
review the cover letter of each delivered PTF for any special
instructions that may need to be followed. When you ordered your
cumulative PTF package, you were automatically sent the latest
HIPER and Database PTF groups along with the cumulative PTF
package. You should review the cover letters for the PTFs in
these groups that are applicable to your system. The commands
needed for copying and printing (or displaying) the PTF cover
letter(s) are included below.

1. COPYING PTF COVER LETTERS:

   * Mount the PTF media and sign on using a security officer
      user profile such as QSECOFR.

   * To copy all cover letters from media onto the system for
      PTFs that are not already applied to your system, enter the
      following command:

      CPYPTFCVR DEV(device_name) LICPGM(*ALL) SELECT(*NOTAPY)

   * To copy a specific cover letter from media onto the system,
      enter the following command:

      CPYPTFCVR DEV(device_name) LICPGM(product_id) SELECT(ptf_id)

2. DISPLAYING OR PRINTING PTF COVER LETTERS:

   * The PTF cover letters must be copied from the media first
      before they can be displayed or printed.

   * To display or print cover letters for all PTFs that are
      currently not applied on your system, enter one of the
      following commands:

      DSPPTFCVR LICPGM(*ALL) SELECT(*NOTAPY)
      DSPPTFCVR LICPGM(*ALL) SELECT(*NOTAPY) OUTPUT(*PRINT)

      Note: You can also specify CVRATR(*SPCINST) on the
      DSPPTFCVR command to view all cover letters that have
      special instructions.

   * To display or print a specific cover letter, enter one of
      the following commands:

      DSPPTFCVR LICPGM(product_id) SELECT(ptf_id)
      DSPPTFCVR LICPGM(product_id) SELECT(ptf_id) OUTPUT(*PRINT)

```
    *  PTF TC23313 is the Cumulative PTF package cover letter and
       contains a list of all PTFs contained in this cumulative
       PTF package. To display the Cumulative PTF package cover
       letter, enter one of the following commands:

          DSPPTFCVR LICPGM(5770SS1) SELECT(TC23313)
          DSPPTFCVR LICPGM(5770SS1) SELECT(TC23313) OUTPUT(*PRINT)
```

3. You can also review the special instructions for PTFs in the
   cumulative package or groups in a convenient format online:

   * Cumulative package:
      https://www.ibm.com/support/pages/uid/nas4C3313740

   * HIPER PTF group:
      https://www.ibm.com/support/pages/uid/nas4SF99739_SI

   * Database PTF group:
      https://www.ibm.com/support/pages/uid/nas4SF99704_SI

READ THIS FIRST

1. Failure to follow these instructions may result in failure of
   your system to operate. Follow the directions carefully every
   time you install a cumulative PTF package.

2. Cumulative PTF packages must be installed delayed for proper
   PTF installation. Do NOT use any immediate apply install
   options to install this package; otherwise, unpredictable
   results may occur.

3. Vital PTF information: Application of PTFs within this
   cumulative PTF package may disable or render ineffective
   programs that use system memory addresses not generated by the
   IBM® translator, including programs that circumvent control
   technology designed to limit interactive capacity to purchased
   levels. These PTFs may be prerequisites for future PTFs. By
   applying these PTFs you authorize and agree to the foregoing.

4. Each of these PTFs is subject to the terms of the license
   agreement which accompanied, or was contained in, the Program
   for which you are obtaining such PTF. You are not authorized
   to install or use any such PTF except as part of the Program
   for which you have a valid Proof of Entitlement.

   SUBJECT TO ANY WARRANTIES WHICH CAN NOT BE EXCLUDED OR EXCEPT
   AS EXPLICITLY AGREED TO IN THE APPLICABLE LICENSE AGREEMENT OR
   AN APPLICABLE SUPPORT AGREEMENT, IBM MAKES NO WARRANTIES OR
   CONDITIONS EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT
   LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF
   MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON
   INFRINGEMENT, REGARDING EACH PTF.

The applicable license agreement may have been provided to you
in printed form and/or may be viewed using the Work with
Software Agreements (WRKSFWAGR) CL command.

5. Attention Content Manager OnDemand - 5770RD1 - Users. If you
   have Content Manager OnDemand - 5770RD1 - installed, please
   see https://www.ibm.com/support/pages/node/404923 for any
   important special instructions.

6. If you received this cumulative PTF package as physical
   optical media, it is strongly recommended that you create an
   image catalog from the media and perform the PTF install from
   a virtual optical device. This may avoid multiple IPLs during
   the PTF installation.

7. The approximate install time for this cumulative PTF package
   is one hour.

8. You should have a current backup of your system before
   applying this package. If you have backed up your system since
   the last time you applied PTFs, that backup is acceptable.

9. If you are running on the A storage area, perform a normal IPL
   from the B IPL source. To determine the storage area you are
   running from, type DSPPTF 5770999 and press Enter. On the
   Display PTF Status display, the storage area is identified in
   the IPL source field. ##MACH#A is the A storage area and
   ##MACH#B is the B storage area.

10. IMPORTANT: Permanently apply any temporarily applied Licensed
    Internal Code PTFs on your partition before installing this
    cumulative PTF package:

    APYPTF LICPGM(5770999) SELECT(*ALL) APY(*PERM)

11. Be sure the IPL mode is set to Normal and sign on using a
    security officer user profile such as QSECOFR.

12. DO NOT cancel any of the steps once they are started. Allow
    each step to complete normally.

13. Select the appropriate INSTALL steps below based on the
    format in which you received the cumulative PTF package.

14. The PTF install processing will automatically pre-apply the
    following PTFs when applicable: 5770999-MF71387,
    5770999-MF67819, 5770999-MF66517, 5770999-MF71394,
    5770SS1-SI76780, 5770SS1-SI82606, 5770SS1-SI84579 and
    5770SS1-SI84230. NOTE: PTFs that need to be manually
    pre-applied are listed elsewhere in this READ THIS FIRST
    section.

15. If you have changed defaults to any IBM commands using the
    CHGCMDDFT command, application of this PTF package will
    change the command defaults back to the shipped values for
    any commands included in this PTF package. This can cause
    commands to behave differently after applying PTFs. IBM
    recommends that any time you change a command default for a
    command in an IBM library, you keep the CHGCMDDFT commands in
    a CL program, and run that program after you apply PTFs to
    reapply your customized command defaults.

16. If you already have PTF 5770999-MF99301 installed, or if you
    are running a stand-alone system or you run with multiple
    partitions which are HMC managed, the following document can
    be ignored. Otherwise, to prevent a potential C6003962 IPL
    hang while applying PTF MF99301, please review the following
    document before installing this Cumulative package:
    https://www.ibm.com/support/pages/node/1137502

17. If the WRKPTFGRP command shows any PTF groups with a status
    of "Apply at next IPL", it is recommended that you IPL to
    complete the PTF install prior to installing this cumulative
    PTF package.

18. If your system uses a LAN Console, it is recommended that you
    order and install PTF 5770999-MF68103 or a later supersede
    prior to installing this package.

19. If your partition has IBM Advanced Job Scheduler for i
    (5770-JS1) installed, run the following command before
    installing this package:

    CHGDTAARA DTAARA(QUSRIJS/QIJSPM (246 1)) VALUE('1')

    This will prevent unnecessary inquiry messages in the SCPF
    job log that could hang the install when certain System Reply
    List entries have been customized with an 'R' reply.

20. (NEW 2024-02-28) This package contains a PTF for product 5770BR1. If you have
    5770BR1 installed on your system, all PTFs for product 5770BR1 should be
    applied immediately. Links to the BRMS PTF coverletters are available at
    https://helpsystemswiki.atlassian.net/wiki/spaces/IWT/pages/165642445/List+of+BRMS+Service+Packs
    to review immediate apply considerations. Use the following command to install
    PTFs for 5770BR1 immediately:

    INSPTF LICPGM((5770BR1)) DEV(<Install-Device>) INSTYP(*IMMONLY)

    NOTE: It is recommended that BRMS PTFS should be applied immediate. The BRMS
    PTF exit program performs SQL operations which can cause unexpected results
    if the BRMS PTF is applied delayed at the same time as DB related PTFS.

INSTALL FROM *SERVICE

If you received the cumulative PTF package electronically as

individual PTF save files, refer to the INSTALL FROM *SERVICE
section in the detailed installation instructions.

INSTALL FROM OPTICAL IMAGE FILES

Use these steps when you ordered and received the cumulative PTF
package electronically as optical image files:

1. Create your image catalog and add the image files to the
   catalog. For information on how to create an image catalog
   refer to the IBM Knowledge Center:
   http://www.ibm.com/support/knowledgecenter/ssw_ibm_i_74/rzam8/rzam8fixinstallimage.htm
   (IBM i 7.4>IBM i and related software>Maintaining and managing
   IBM i and related software>Using software fixes>Installing
   fixes>Step 3: Choosing your fix installation
   scenario>Installing IBM i fixes from an image catalog).

2. Load the image catalog into the virtual optical device using
   the following command:

   LODIMGCLG IMGCLG(ptfcatalog) DEV(OPTVRTxx) OPTION(*LOAD)

3. Type GO PTF and press the Enter key.

4. Take menu option 8 and press the Enter key.

5. If the Continue PTF Install display is shown, press the Enter
   key.

6. Review the appropriate options and notes which follow, below,
   then complete the Install Options for Program Temporary Fixes
   screen and press the Enter key.

   Device . . . . . .   OPTVRTxx (for example, OPTVRT01)
   Automatic IPL . .   Y = Yes or N = No
   Prompt for media .   1 or 3
   Restart type . . .   *SYS
   Other options . .   Y = Yes

   Note: If you have received individual and/or PTF groups as
   save files that you want to install at the same time as the
   cumulative PTF package, type 3 in the Prompt for media field.

7. Review the appropriate options and notes which follow, below,
   then complete the Other Install Options screen and press the
   Enter key.

   Omit PTFs . .   N = No or Y = Yes
   Apply type . .   1 = Set all PTFs delayed
   PTF type . . .   1 = All PTFs
   Copy PTFs . .   N = No or Y = Yes

Note: If you want to copy PTF save files and cover letters
   into *SERVICE for PTFs that are not already applied, enter a Y
   (Yes) in the Copy PTFs field. Otherwise, enter a N (No) and
   PTF save files and cover letters will not be copied.

   Note: Depending on the previous options specified, some fields
   above may not be shown.

   Note: If you have PTFs to omit, type Y in the Other Options
   field and follow the directions on the displays which follow.
   Refer to Appendix A in the detailed installation instructions
   section on omitting PTFs.

8. The display shows the licensed programs for which PTFs are
   being loaded. All volumes that are loaded in the image catalog
   are automatically processed.

9. Continue with the COMPLETE THE INSTALL PROCESS section.

INSTALL FROM OPTICAL MEDIA

Use these steps when you ordered and received the cumulative PTF
package as physical optical media:

1. Enter the following command and press the Enter key.

   CHGMSGQ QSYSOPR *BREAK SEV(70)

   This step ensures a break message will appear if the system
   determines you should mount the next volume. IMPORTANTâ€"If
   there are no PTFs on the other volumes that are applicable to
   your system, the system will not prompt you for the other
   volumes.

2. Ensure volume one of the cumulative PTF package media, labeled
   C3313740_01, is loaded in the appropriate drive for the media
   you are using.

3. Type GO PTF and press the Enter key.

4. Take menu option 8 and press the Enter key.

5. If the Continue PTF Install display is shown, press the Enter
   key.

6. Review the appropriate options and notes which follow, below,

then complete the Install Options for Program Temporary Fixes
screen and press the Enter key.

```
Device . . . . . .  OPTxx (for example, OPT01)
Automatic IPL  . .  Y = Yes or N = No
Prompt for media .  2 or 3
Restart type . . .  *SYS
Other options  . .  Y = Yes
```

Note: Enter a 2 in the Prompt for media field in order to
install the HIPER and Database PTF groups along with your
cumulative PTF package.

If you have received individual and/or PTF groups as save
files that you want to install at the same time as the
cumulative PTF package, type 3 in the Prompt for media field.

7. Review the appropriate options and notes which follow, below,
   then complete the Other Install Options screen and press the
   Enter key.

```
Omit PTFs  . .  N = No or Y = Yes
Apply type . .  1 = Set all PTFs delayed
PTF type . . .  1 = All PTFs
Copy PTFs  . .  N = No or Y = Yes
```

Note: If you want to copy PTF save files and cover letters
into *SERVICE for PTFs that are not already applied, enter a Y
(Yes) in the Copy PTFs field. Otherwise, enter a N (No) and
PTF save files and cover letters will not be copied.

Note: Depending on the previous options specified, some fields
above may not be shown.

Note: If you have PTFs to omit, type Y in the Other Options
field and follow the directions on the displays which follow.
Refer to Appendix A in the detailed installation instructions
section on omitting PTFs.

8. The display shows the licensed programs for which PTFs are
   being loaded.

   8.a. After each volume is processed, you will receive a
        message to mount the next volume. Load the volume
        indicated and use the G option to continue.

   8.b. After all the applicable volumes for the cumulative PTF

package have been processed, you will automatically be
prompted to mount the first volume of the next media set
in order to install the HIPER and Database PTF groups.
Mount the first volume in the set and use the G option to
continue.

  8.c. Continue mounting any additional volumes. When all your
       volume sets have been processed, use the X option to
       complete the PTF installation.

  Note: If there are volumes that contain PTFs that are not
  applicable to your system, the system will not prompt you to
  mount those volumes.

9. Continue with the COMPLETE THE INSTALL PROCESS section.

COMPLETE THE INSTALL PROCESS

Use these steps to complete the install process.

1. If the Confirm IPL to Complete PTF Install display is shown:

  1.a. End all jobs on the system and perform a normal mode IPL
       to the B IPL source. If you are installing from optical
       image files, do not delete the image catalog until after
       the next normal IPL completes.
  1.b. When the Sign On display is shown, continue with step 4.

2. If the Confirm IPL for Technology Refresh PTFs display is
   shown:

  2.a. Press F10 to end all jobs on the system and IPL the
       system. Note: If an IPL cannot be performed right away,
       press F12 to Cancel the process. Schedule to IPL the
       system at the earliest convenience.
  2.b. When the Sign On display is shown, if you are installing
       from optical media, go back and start the installation of
       this cumulative PTF package again. (The next time through
       these instructions, you will not get this display.) Start
       again with STEP 1 of INSTALL FROM OPTICAL MEDIA section.
       If you installed from *SERVICE or optical image files,
       continue with step 4.

3. If you entered a Y (Yes) for the Automatic IPL option, the
   system will be IPLed automatically. If you entered N (No) for
   the Automatic IPL field, you must use the following command
   when you are ready to activate the fixes:

   PWRDWNSYS OPTION(*IMMED) RESTART(*YES) IPLSRC(B)

4. After the IPL completes, use the following procedure to verify

the cumulative PTF package was properly installed:

  4.a. Sign on using a security officer user profile such as
       QSECOFR.
  4.b. Type WRKPTFGRP SF99740 on any command line.
  4.c. If the Status field is "Installed" and the Level field is
       "23313", continue with step 5, otherwise, continue with
       step 4.d.
  4.d. Type GO LICPGM on any command line.
  4.e. Press the Enter key. The Work with Licensed Programs
       display is shown.
  4.f. Select option 50.
  4.g. Press the Enter key. The Install History display is
       shown.
  4.h. Press the Enter key. The Display History Log Contents
       display appears.

       * If the cumulative PTF package was installed
          successfully, you will see messages indicating the
          applying of PTFs completed. Continue with step 5.
       * If the cumulative PTF package was not installed
          successfully, you will see messages indicating the
          applying of PTFs failed. Contact your provider of
          software service for assistance.
       * If the previous IPL was abnormal, only PTFs for the
          Licensed Internal Code will be applied (5770999). You
          can check if the previous IPL was abnormal by typing
          the following command:

          DSPSYSVAL SYSVAL(QABNORMSW)

          If the IPL was abnormal and you are installing this
          package immediately after a system install, perform
          the IPL again to apply the remaining PTFs.

5. You can resume normal system operation at this time. You
   should back up your system again at your earliest convenience.

If you have comments or concerns with cumulative PTF packages,
contact your provider of software service.

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IBM i PTF Shipping Information Letter

IBM i CUMULATIVE PTF PACKAGE

INSTALLATION INSTRUCTIONS (DETAILED VERSION)
SF99740 Level 23313
PACKAGE ID: C3313740
VERSION 7 RELEASE 4.0

Cumulative PTF Package Instructions Last Updated: 02/28/2024

Note: Online copy of this document is the latest version. Any
printed copy should be assumed to be obsolete and not used unless
the date of last update is verified to match that shown on the
online version.

This PTF package replaces the following PTF packages for Version
7 RELEASE 4.0. If you have any of the packages listed below, do
not spend time installing them. All PTFs from the earlier
packages are contained in this package.

C9151740 C9304740 C0121740 C0303740 C1091740 C1238740 C2125740 C2328740 C3117740

You will receive the cumulative PTF package in one of three
different formats:

* Electronically downloaded as individual PTF save files

* Electronically downloaded as optical image files

* Physical optical media (when it cannot be downloaded
   electronically)

The installation instructions contained in this document will
guide you through the install steps needed for each format.

REVIEW PTF COVER LETTERS

As with any PTF order, before you install the PTFs you should
review the cover letter of each delivered PTF for any special
instructions that may need to be followed. When you ordered your
cumulative PTF package, you were automatically sent the latest
HIPER and Database PTF groups along with the cumulative PTF
package. You should review the cover letters for the PTFs in
these groups that are applicable to your system. The commands
needed for copying and printing (or displaying) the PTF cover
letter(s) are included below.

1. COPYING PTF COVER LETTERS:

   * Mount the PTF media and sign on using a security officer
      user profile such as QSECOFR.

   * To copy all cover letters from media onto the system for
      PTFs that are not already applied to your system, enter the
      following command:

```
      CPYPTFCVR DEV(device_name) LICPGM(*ALL) SELECT(*NOTAPY)
```

   * To copy a specific cover letter from media onto the system,
      enter the following command:

```
      CPYPTFCVR DEV(device_name) LICPGM(product_id) SELECT(ptf_id)
```

2. DISPLAYING OR PRINTING PTF COVER LETTERS:

   * The PTF cover letters must be copied from the media first
      before they can be displayed or printed.

   * To display or print cover letters for all PTFs that are
      currently not applied on your system, enter one of the
      following commands:

```
      DSPPTFCVR LICPGM(*ALL) SELECT(*NOTAPY)
      DSPPTFCVR LICPGM(*ALL) SELECT(*NOTAPY) OUTPUT(*PRINT)
```

      Note: You can also specify CVRATR(*SPCINST) on the
      DSPPTFCVR command to view all cover letters that have
      special instructions.

   * To display or print a specific cover letter, enter one of
      the following commands:

```
      DSPPTFCVR LICPGM(product_id) SELECT(ptf_id)
      DSPPTFCVR LICPGM(product_id) SELECT(ptf_id) OUTPUT(*PRINT)
```

   * PTF TC23313 is the Cumulative PTF package cover letter and
      contains a list of all PTFs contained in this cumulative
      PTF package. To display the Cumulative PTF package cover
      letter, enter one of the following commands:

```
         DSPPTFCVR LICPGM(5770SS1) SELECT(TC23313)
         DSPPTFCVR LICPGM(5770SS1) SELECT(TC23313) OUTPUT(*PRINT)
```

3. You can also review the special instructions for PTFs in the
   cumulative package or groups in a convenient format online:

   * Cumulative package:
      https://www.ibm.com/support/pages/uid/nas4C3313740

   * HIPER PTF group:
      https://www.ibm.com/support/pages/uid/nas4SF99739_SI

   * Database PTF
      group:https://www.ibm.com/support/pages/uid/nas4SF99704_SI

READ THIS FIRST

1. Failure to follow these instructions may result in failure of
   your system to operate. Follow the directions carefully every
   time you install a cumulative PTF package.

2. Cumulative PTF packages must be installed delayed for proper
   PTF installation. Do NOT use any immediate apply install
   options to install this package; otherwise, unpredictable
   results may occur.

3. Vital PTF information: Application of PTFs within this
   cumulative PTF package may disable or render ineffective
   programs that use system memory addresses not generated by the
   IBMÂ® translator, including programs that circumvent control
   technology designed to limit interactive capacity to purchased
   levels. These PTFs may be prerequisites for future PTFs. By
   applying these PTFs you authorize and agree to the foregoing.

4. Each of these PTFs is subject to the terms of the license
   agreement which accompanied, or was contained in, the Program
   for which you are obtaining such PTF. You are not authorized
   to install or use any such PTF except as part of the Program
   for which you have a valid Proof of Entitlement.

   SUBJECT TO ANY WARRANTIES WHICH CAN NOT BE EXCLUDED OR EXCEPT
   AS EXPLICITLY AGREED TO IN THE APPLICABLE LICENSE AGREEMENT OR
   AN APPLICABLE SUPPORT AGREEMENT, IBM MAKES NO WARRANTIES OR
   CONDITIONS EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT
   LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF
   MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON
   INFRINGEMENT, REGARDING EACH PTF.

   The applicable license agreement may have been provided to you
   in printed form and/or may be viewed using the Work with
   Software Agreements (WRKSFWAGR) CL command.

5. Attention Content Manager OnDemand - 5770RD1 - Users. If you
   have Content Manager OnDemand - 5770RD1 - installed, please
   see https://www.ibm.com/support/pages/node/404923 for any
   important special instructions.

6. If you received this cumulative PTF package as physical
   optical media, it is strongly recommended that you create an
   image catalog from the media and perform the PTF install from
   a virtual optical device. This may avoid multiple IPLs during
   the PTF installation.

7. The PTF install processing will automatically pre-apply the
   following PTFs when applicable: 5770999-MF71387,
   5770999-MF67819, 5770999-MF66517, 5770999-MF71394,
   5770SS1-SI76780, 5770SS1-SI82606, 5770SS1-SI84579 and
   5770SS1-SI84230. NOTE: PTFs that need to be manually
   pre-applied are listed elsewhere in this READ THIS FIRST

section.

8. If you have changed defaults to any IBM commands using the
   CHGCMDDFT command, application of this PTF package will change
   the command defaults back to the shipped values for any
   commands included in this PTF package. This can cause commands
   to behave differently after applying PTFs. IBM recommends that
   any time you change a command default for a command in an IBM
   library, you keep the CHGCMDDFT commands in a CL program, and
   run that program after you apply PTFs to reapply your
   customized command defaults.

9. If you already have PTF 5770999-MF99301 installed, or if you
   are running a stand-alone system or you run with multiple
   partitions which are HMC managed, the following document can
   be ignored. Otherwise, to prevent a potential C6003962 IPL
   hang while applying PTF MF99301, please review the following
   document before installing this Cumulative package:
   https://www.ibm.com/support/pages/node/1137502

10. If the WRKPTFGRP command shows any PTF groups with a status
    of "Apply at next IPL", it is recommended that you IPL to
    complete the PTF install prior to installing this cumulative
    PTF package.

11. If your system uses a LAN Console, it is recommended that you
    order and install PTF 5770999-MF68103 or a later supersede
    prior to installing this package.

12. If your partition has IBM Advanced Job Scheduler for i
    (5770-JS1) installed, run the following command before
    installing this package:

    CHGDTAARA DTAARA(QUSRIJS/QIJSPM (246 1)) VALUE('1')

    This will prevent unnecessary inquiry messages in the SCPF
    job log that could hang the install when certain System Reply
    List entries have been customized with an 'R' reply.

13. (NEW 2024-02-28) This package contains a PTF for product 5770BR1. If you have
    5770BR1 installed on your system, all PTFs for product 5770BR1 should be
    applied immediately. Links to the BRMS PTF coverletters are available at
    https://helpsystemswiki.atlassian.net/wiki/spaces/IWT/pages/165642445/List+of+BRMS+Service+Packs
    to review immediate apply considerations. Use the following command to install
    PTFs for 5770BR1 immediately:

    INSPTF LICPGM((5770BR1)) DEV(<Install-Device>) INSTYP(*IMMONLY)

    NOTE: It is recommended that BRMS PTFS should be applied immediate. The BRMS
    PTF exit program performs SQL operations which can cause unexpected results
    if the BRMS PTF is applied delayed at the same time as DB related PTFS.

BEFORE YOU BEGIN

1. After reading this section, you should continue with the IBM i
   PTF INSTALLATION INSTRUCTIONS section.

2. If any problems have been discovered with the PTFs in this
   package since it was released, they will be documented in the
   Preventive Service Planning (PSP) information. The PSP
   information can be viewed via the Internet at the following
   URL:

     https://www.ibm.com/support/pages/node/667567

   The PSP information can also be ordered from Electronic
   Customer Support (ECS) using the following command:

   SNDPTFORD SF98740

   The PSP information can also be obtained by calling your
   provider of software service and asking for the IBM i Version
   7 RELEASE 4.0 PSP information for installing this cumulative
   PTF package (C3313740).

   The PSP information contains information about any high impact
   or pervasive problems that have been identified since this
   package was released. It is recommended that you order and
   install the PTFs for these problems if the USERS AFFECTED area
   pertains to you.

   If any PTFs in this package were found to be in error since
   this package was released, this information is also included
   in the PSP information. Users who will be affected by the
   error in a PTF should follow the RECOMMENDATION provided in
   the PSP.

3. You should have a current backup of your system before
   applying this package. If you have backed up your system since
   the last time you applied PTFs, that backup is acceptable.

   Note: If you are installing this PTF package as a part of the
   Version 7 RELEASE 4.0 installation process, you do not need to
   back up your system before you install this package.

4. If you specify automatic IPL option "N" to install this
   package, you must use the following command when you are ready
   to activate the fixes:

```
PWRDWNSYS OPTION(*IMMED) RESTART(*YES) IPLSRC(B)
```

5. The approximate install time for this cumulative PTF package
   is one hour.

   The actual time required for your system may vary based on the
   following:

   * Length of time typically required to IPL your system
   * Frequency of cumulative PTF package updates to your system
   * Performance associated with your specific model
   * Number of licensed programs installed on your system

6. If you have any problems applying these PTFs, contact your
   provider of software service.

7. It is recommended that you permanently apply the PTFs in this
   package after you are comfortable that your system has been
   operating successfully with these PTFs.

   This will free up disk space otherwise used by temporary
   copies of modules in the PTF. The amount of disk space taken
   up by a cumulative package installation depends on the number
   of Licensed Programs installed and the frequency with which
   you install and permanently apply the cumulative PTFs.

8. The QALWOBJRST system value determines whether
   security-sensitive objects may be restored to your system. If
   it is currently set to a value other than *ALL, this package
   may fail to install with message identifiers CPD373F or
   CPD3740. Use the command DSPSYSVAL QALWOBJRST to determine its
   value. If the value is *ALL, you may proceed with the package
   installation. If the value is not *ALL, write down the value
   displayed, and issue the command CHGSYSVAL QALWOBJRST *ALL
   prior to the package installation. This system value can be
   changed without an IPL. After the package installation is
   complete, similarly change the system value back to the
   initial value you wrote down.

9. Appendix B contains some basic troubleshooting information
   that may help if you experience a failure installing this
   cumulative PTF package.

IBM i PTF INSTALLATION INSTRUCTIONS

Notify all users to sign off the system prior to any system IPL
in these instructions. If you plan to select the option to
automatically IPL the system, you should notify all users to sign
off now.

DO NOT cancel any of the following steps once they are started.
Allow each step to complete normally.

If you are running on the A storage area, perform a normal IPL
from the B IPL source. To determine the storage area you are
running from, type DSPPTF 5770999 and press ENTER. On the Display
PTF Status display, the storage area is identified in the IPL
source field. ##MACH#A is the A storage area and ##MACH#B is the
B storage area.

IMPORTANT: Permanently apply any temporarily applied Licensed
Internal Code PTFs on your partition before installing this
cumulative PTF package:

APYPTF LICPGM(5770999) SELECT(*ALL) APY(*PERM)

Be sure the IPL mode is set to Normal and sign on using a
security officer user profile such as QSECOFR.

Select the appropriate INSTALL steps below based on the format in
which you received the cumulative PTF package.

INSTALL FROM *SERVICE

Use these steps when you ordered and received the cumulative PTF
package electronically as PTF save files:

1. Type GO PTF and press the Enter key.

2. Take menu option 8 and press the Enter key.

3. If the Continue PTF Install display is shown, press the Enter
   key.

4. Review the appropriate options and notes which follow, below,
   then complete the Install Options for Program Temporary Fixes
   screen and press the Enter key.

   Device . . . . *SERVICE
   Automatic IPL . . Y = Yes or N = No
   Prompt for media . 1
   Restart type . . . *SYS
   Other options . . Y = Yes

   Note: If you want the system to automatically IPL, enter a Y
   (Yes) in the automatic IPL field. Otherwise enter a N (No) and
   the PTFs will not be temporarily applied until after the next
   unattended IPL.

5. Review the appropriate options and notes which follow, below,
   then complete the Other Install Options screen and press the
   Enter key.

   Omit PTFs . . N = No or Y = Yes
   Apply type . . 1 = Set all PTFs delayed

```
    PTF type . . . 1 = All PTFs
```


    Note: Depending on the previous options specified, some fields
    above may not be shown.

    Note: If you have PTFs to omit, type Y in the Other Options
    field and follow the directions on the displays which follow.
    Refer to Appendix A in the detailed installation instructions
    section on omitting PTFs.

6. The display shows the licensed programs for which PTFs are
   being loaded.

7. Continue with the COMPLETE THE INSTALL PROCESS section.

INSTALL FROM OPTICAL IMAGE FILES

Use these steps when you ordered and received the cumulative PTF
package as optical image files:

1. Create your image catalog and add the image files to the
   catalog. For information on how to create an image catalog
   refer to the IBM Knowledge Center:
   http://www.ibm.com/support/knowledgecenter/ssw_ibm_i_74/rzam8/rzam8fixinstallimage.htm

   (IBM i 7.4>IBM i and related software>Maintaining and managing
   IBM i and related software>Using software fixes>Installing
   fixes>Step 3: Choosing your fix installation
   scenario>Installing IBM i fixes from an image catalog).

2. Load the image catalog into the virtual optical device using
   the following command:

   LODIMGCLG IMGCLG(ptfcatalog) DEV(OPTVRTxx) OPTION(*LOAD)

3. Read this entire step carefully, as you may be asked to select
   an option to omit certain PTFs. To install the cumulative
   package:

   3.a. Type GO PTF on any command line and press the Enter key.

   3.b. On the Program Temporary Fix (PTF) display, select option
        8 (Install program temporary fix package) and press the
        Enter key. Using this option allows you to install all of
        the PTFs that are applicable to your system.

   3.c. If the Continue PTF Install display is shown, press the
        Enter key.

3.d. Type the name of the virtual optical device in the Device
     field on the Install Options for Program Temporary Fixes
     display.

3.e. If you do NOT want the system to automatically IPL:

     * Enter an N (No) in the Automatic IPL field. The PTFs
        will not be temporarily applied until after the next
        unattended IPL.

3.f. If you DO want the system to automatically IPL:

     * Enter a Y (Yes) in the Automatic IPL field.

3.g. Enter a 1 in the Prompt for media.

     If you have received individual and/or PTF groups as save
     files that you want to install at the same time as the
     cumulative PTF package, type 3 in the Prompt for media
     field.

3.h. Enter a Y (Yes) in the Other Options field and press the
     Enter key.

3.i. Enter a 1 in the Apply type field. If you specified Y
     (Yes) for the Automatic IPL field, the Apply type field
     is not displayed.

3.j. Enter a 1 in the PTF type field.

3.k. If the PSP information lists any PTFs that need to be
     manually omitted, omit those PTFs. Enter a Y (Yes) in the
     Omit PTFs field and follow APPENDIX A ("OMITTING A PTF
     FROM THE PACKAGE") to omit any indicated PTFs. Otherwise,
     enter an N (No) in the Omit PTFs field.

3.l. Press the Enter key.

     Note: If (after pressing the Enter key) the Confirm
     Install of Licensed Internal Code Fixes display is shown,
     press F10 to automatically IPL. Wait for the system to
     power down and start an IPL. When the Sign On display is
     shown, go back to STEP 1 and start the installation of
     this cumulative PTF package again. (The next time through
     these instructions, you will not get this display.)

4. The display shows the licensed programs for which PTFs are
   being loaded. All volumes that are loaded in the image catalog
   are automatically processed.

5. Continue with the COMPLETE THE INSTALL PROCESS section.

INSTALL FROM OPTICAL MEDIA

Use these steps when you ordered and received the cumulative PTF
package as physical optical media:

1. Enter the following command and press the Enter key.

   CHGMSGQ QSYSOPR *BREAK SEV(70)

   This step ensures a break message will appear if the system
   determines you should mount the next volume. IMPORTANT -- If
   there are no PTFs on the other volumes that are applicable to
   your system, the system will not prompt you for the other
   volumes.

2. Read this entire step carefully, as you may be asked to select
   an option to omit certain PTFs. To install the cumulative
   package:

   2.a. Type GO PTF on any command line and press the Enter key.

   2.b. On the Program Temporary Fix (PTF) display, select option
        8 (Install program temporary fix package) and press the
        Enter key. Using this option allows you to install all of
        the PTFs that are applicable to your system.

   2.c. If the Continue PTF Install display is shown, press the
        Enter key.

   2.d. Ensure volume one of the cumulative PTF package media,
        labeled C3313740_01, is loaded in the appropriate drive
        for the media you are using, and type the name of the
        drive in the Device field on the Install Options for
        Program Temporary Fixes display.

   2.e. If you do NOT want the system to automatically IPL:

        *   Enter an N (No) in the Automatic IPL field. The PTFs
            will not be temporarily applied until after the next
            unattended IPL.

   2.f. If you DO want the system to automatically IPL:

        *   Enter a Y (Yes) in the Automatic IPL field.

   2.g. Enter a 2 in the Prompt for media field in order to
        install the HIPER and Database PTF groups along with your
        cumulative PTF Package.

        If you have received individual and/or PTF groups as save
        files that you want to install at the same time as the
        cumulative PTF package, type 3 in the Prompt for media

field.

2.h. Enter a Y (Yes) in the Other Options field and press the
     Enter key.

2.i. Enter a 1 in the Apply type field. If you specified Y
     (Yes) for the Automatic IPL field, the Apply type field
     is not displayed.

2.j. Enter a 1 in the PTF type field.

2.k. If the PSP information lists any PTFs that need to be
     manually omitted, omit those PTFs. Enter a Y (Yes) in the
     Omit PTFs field and follow APPENDIX A ("OMITTING A PTF
     FROM THE PACKAGE") to omit any indicated PTFs. Otherwise,
     enter an N (No) in the Omit PTFs field.

2.l. Press the Enter key.

Note: If (after pressing the Enter key) the Confirm Install of
Licensed Internal Code Fixes display is shown, press F10 to
automatically IPL. Wait for the system to power down and start
an IPL. When the Sign On display is shown, go back to STEP 1
and start the installation of this cumulative PTF package
again. (The next time through these instructions, you will not
get this display.)

3. The display shows the licensed programs for which PTFs are
   being loaded.

   3.a. After each volume is processed, you will receive a
        message to mount the next volume. Load the volume
        indicated and use the G option to continue.

   3.b. After all the applicable volumes for the cumulative PTF
        package have been processed, you will automatically be
        prompted to mount the first volume of the next media set
        in order to install the HIPER and Database PTF groups.
        Mount the first volume in the set and use the G option to
        continue.

   3.c. Continue mounting any additional volumes. When all your
        volume sets have been processed, use the X option to
        complete the PTF installation.

Note: If there are volumes that contain PTFs that are not
applicable to your system, the system will not prompt you to
mount those volumes.

4. Continue with the COMPLETE THE INSTALL PROCESS section.

COMPLETE THE INSTALL PROCESS

Use these steps to complete the install process.

1. If the Confirm IPL to Complete PTF Install display is shown:

   1.a. End all jobs on the system and perform a normal mode IPL
        to the B IPL source. If you are installing from optical
        image files, do not delete the image catalog until after
        the next normal IPL completes.
   1.b. When the Sign On display is shown, continue with step 5.

2. If the Confirm IPL for Technology Refresh PTFs display is
   shown:

   2.a. Press F10 to end all jobs on the system and IPL the
        system. Note: If an IPL cannot be performed right away,
        press F12 to Cancel the process. Schedule to IPL the
        system at the earliest convenience.
   2.b. When the Sign On display is shown, if you are installing
        from optical media, go back and start the installation of
        this cumulative PTF package again. (The next time through
        these instructions, you will not get this display.) Start
        again with STEP 1 of INSTALL FROM OPTICAL MEDIA section.
        If you installed from *SERVICE or optical image files,
        continue with step 5.

3. If you entered a Y (Yes) for the Automatic IPL option, the
   system will be IPLed automatically.

   After the IPL completes, the Sign On display is shown and the
   new PTFs are active. Read the following NOTEs, then go to STEP
   5.

   Note: During the power down of your service partition, system
   reference code D6xx430B or D6xx430A could be displayed for an
   extended amount of time. The "xx" should increment
   periodically and is a normal part of processing where server
   firmware code is being updated.

   Note: During the IPL, system reference code C9002967 could be
   displayed for an extended amount of time. This is normal
   (assuming the processor light flashes periodically). You may
   also notice multiple power down sequences, with a change in
   the IPL side that is displayed.

   Note: While applying Licensed Internal Code fixes, it may be

necessary for the system to reorganize a portion of the
Licensed Internal Code storage. While this reorganization is
taking place, system reference codes (SRCs) C600 4400 and C600
4401 are displayed.

4. If you entered an N (No) for the Automatic IPL option, the
display shows the licensed programs for which PTFs are being
loaded and marked to be temporarily applied upon the next
unattended IPL. When this procedure completes, the Program
Temporary Fix display is shown. When you are ready to complete
the installation of the package, do the following:

4.a. Notify all users to sign off the system, then enter the
following command to put the system in a restricted
state:

ENDSBS *ALL *IMMED

Press the Enter key. The message "ENDSBS SBS(*ALL) in
progress" is shown.

4.b. Enter the following command:

DSPMSG QSYSOPR

If the message "System ended to restricted condition" is
shown, continue. Otherwise, repeat the above command
until the message appears.

4.c. Make sure the IPL mode is set to Normal.

4.d. Enter the following command to perform the IPL:

PWRDWNSYS OPTION(*IMMED) RESTART(*YES) IPLSRC(B)

Press the Enter key.

After the IPL completes, the Sign On display is shown and
the new PTFs are active. Continue with STEP 5.

5. Use the following procedure to verify the cumulative package
was properly installed:

5.a. Sign on using a security officer user profile such as
QSECOFR.

5.b. Type WRKPTFGRP SF99740 on any command line.
5.c. If the Status field is "Installed" and the Level field is
     "23313" continue with step 6, otherwise continue with
     step.5.d.
5.d. Type GO LICPGM on any command line.
5.e. Press the Enter key. The Work with licensed programs
     display is shown.
5.f. Select option 50.
5.g. Press the Enter key. The Install History display is
     shown.
5.h. Press the Enter key. The Display History Log Contents
     display appears.

     * If the cumulative package was installed successfully,
        you will see messages indicating the applying of PTFs
        completed. Continue with STEP 6.

     * If the cumulative PTF package was not installed
        successfully, you will see messages indicating the
        applying of PTFs failed. Contact your provider of
        software service for assistance.

     * If the previous IPL was abnormal, only PTFs for the
        Licensed Internal Code will be applied (5770999). You
        can check if the previous IPL was abnormal by typing
        the following command:

        DSPSYSVAL SYSVAL(QABNORMSW)

        If the IPL was abnormal and you are installing this
        package immediately after a system install, perform
        the IPL again to apply the remaining PTFs.

6. You can resume normal system operation at this time. You
   should back up your system again at your earliest convenience.

This concludes the installation of the IBM i cumulative PTF
package.

If you have comments or concerns with cumulative PTF packages,
contact your provider of software service.

APPENDIX A - OMITTING A PTF FROM THE PACKAGE (IBM i INSTALLED)

Use these steps when the Preventive Service Planning information
directs you to omit a PTF from the package. When complete, return
to the step following the one which sent you here.

1. Enter a Y (Yes) in the Other Options field. Press the Enter
   key.

2. If the Confirm Automatic IPL display is shown, follow the
   instructions on the display.

3. On the Other Install Options display, enter a Y (Yes) in the
   Omit PTFs field. If the Apply Type field is also shown, enter
   a 1 (1 = Set all PTFs delayed). Press the Enter key.

4. On the Omit Program Temporary Fixes display, select the
   products for which you want to omit PTFs and press the Enter
   key.

5. On the PTFs to Omit display, enter a 1 in the option field and
   the PTF ID of the PTF you want to omit in the PTF ID field and
   press the Enter key. The list will be updated.

   Repeat this step for each PTF you want to omit for this
   product. Pressing the Enter key without any input on the
   display will take you to the PTFs to Omit display for the next
   product, or you will be returned to the Omit Program Temporary
   Fixes display once all selected products have been processed.

6. Press the Enter key at the Omit Program Temporary Fixes
   display to go to the Confirm to Omit PTFs display. Confirm
   that the list is correct and press the Enter key to continue
   with the package installation.

APPENDIX B - BASIC TROUBLESHOOTING INFORMATION

Q. Why is my IPL taking longer than usual?

A. If an extra IPL is required for a Technology Refresh PTF or
Special Handling pre-apply PTF, the extra IPL will be performed
automatically. During the next normal IPL, the Install PTF
command will be run during the â€œPTF Processingâ€ IPL step in the
SCPF job. Any additional LIC PTFs will be loaded from the PTF
install device (virtual optical or *SERVICE), and all PTFs will
be set for delayed apply. The partition will then be
automatically restarted to apply all PTFs.

Q. My cumulative PTF package did not install. How do I figure out
what is wrong?

A. First you need to determine whether the failure occurred
during the load or apply phase of the cumulative package
installation. If the system did not IPL, then chances are the
failure occurred during the load phase. Do a help on the failure
message, then press F10 to view the messages in the joblog. Look
for escape messages that will indicate what the problem is. Fix
these errors and then try the request again.

1. Verify that the IPL was a normal unattended IPL, OS and LPP
   PTFs will not be applied during an abnormal IPL or during an
   attended IPL.

2. Do a GO LICPGM and take option 50 to display the install
   history log for messages. Look for any messages that indicate
   that there was a failure during the install. The following
   messages are what you would expect to see during a successful
   cumulative PTF package installation:

PTF installation process started.
Loading of PTFs started.
Loading of PTFs completed successfully.
Marking of PTFs for delayed application started.
Marking of PTFs for delayed application completed successfully.
PTFs installed successfully.
Apply PTF started.
Applying of PTFs for product 5770999 completed successfully.
Applying of PTFs for product 5770SS1 completed successfully.
Applying of PTFs completed.
PTFs applied or removed during IPL.

If you find any failure messages, then you will need to go to the
SCPF joblog to see the detailed messages that indicate what the
problem is. To find the SCPF joblog, do the following:

1. Enter the command: WRKJOB SCPF
2. You may get a list of jobs. If you just did the IPL, enter a 1
   next to the job in Active status.
3. Enter a 10 and press enter to look at the spooled files for
   that job. The detailed error messages should be found in this
   joblog.
4. Find the error messages and try to determine what caused the
   error. If you can fix the problem, do so and then re-IPL the
   system to apply the remaining PTFs.
5. If you cannot fix the problem, have the information in the
   joblog available when you call your provider of software
   service.