GC23-0351-3

MVS Software
Manufacturing Offerings

System Modification Program Extended
MVS Custom-Built Installation Process Offering
MVS Custom-Built Product Delivery Offering

Process Aids — Drivers

General Information

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General Information

Fourth Edition (January 1990)

This book replaces the previous edition, GC23-0351-2, which is now obsolete. It also takes the place of *System Modification Program Extended General Information*, GC28-1106, and *MVS Custom-Built Offerings General Information and Planning*, GC23-0127, which are also obsolete. Changes or additions to the text and illustrations are indicated by a vertical line to the left of the change.

This edition applies to the following licensed program and program offerings:

- System Modification Program Extended (SMP/E) Release 5, licensed program number 5668-949, which is applicable to Release 3.8 of OS/VS2 (MVS) and all subsequent releases, unless otherwise indicated
- MVS Custom-Built Installation Process Offering (CBIPO), program number 5751-CS1
- MVS Custom-Built Product Delivery Offering (CBPDO), program number 5751-CS3
- MVS Custom-Built Installation Process Offering Process Aids, program number 5751-CS2
- MVS Custom-Built Installation Process Offering Drivers, program number 5665-343.

Changes are made periodically to the information herein; before using this publication in connection with the operation of IBM systems, consult the latest *IBM System/370, 30xx, 4300, and 9370 Processors Bibliography*, GC20-0001, for the editions that are applicable and current.

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Preface

IBM provides several offerings to help you order, install, and service software:

- System Modification Program Extended (SMP/E) – a tool for installing and tracking changes for products and service.
- The MVS Custom-Built Installation Process Offering (CBIPO) – a software package for creating or replacing an MVS system or subsystem.
- The MVS Custom-Built Product Delivery Offering (CBPDO) – a software package for adding products or service to an existing MVS system or subsystem.
- The CBIPO Process Aids – documentation for a model MVS system, without any product code, which can be used to plan the installation of a CBIPO.
- The MVS CBIPO Drivers – a load-and-go MVS/XA* or MVS/370 system to help you install a CBIPO system if you do not already have an MVS system to use.

This book will help you select the offering that is right for you. You should already have a working knowledge of how to install products and service on an MVS system. For a list of books in the SMP/E, CBIPO, and CBPDO libraries, see Appendix A.

This book does not contain any programming interfaces for customers. For information on the programming interfaces provided by SMP/E, see the chapter on user exit routines in the *SMP/E Reference* manual.

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Summary of Changes

Revision GC23-0351-3 (January 1990)

This revision documents the following change:

- An MVS/XA CBIPO driver is now available. The new driver supports both 3380 and 3390 DASD devices.

There are also technical corrections and clarifications. Vertical bars to the left of the text mark these changes.

Changes for SMP/E Release 5 (March 1989)

- **Exception SYSMOD Reporting**

  The REPORT command can now be used to determine whether any SYSMODs that have already been installed are now exception SYSMODs. Specifically, the REPORT ERRSYSMODS command lists installed SYSMODs for which ++HOLD statements were subsequently received and whose error reason IDs have not yet been resolved. SMP/E also checks whether any SYSMODs that resolve the error reason IDs have been received.

- **Support for Additional Types of Elements**

  In addition to macros, modules, and source, SMP/E now recognizes other types of data as program elements. For example, CLISTs no longer have to be packaged as macros — they can be packaged as CLISTs. These new elements, generally called "data elements," may contain either variable-length or fixed-length records, and fixed-length records may have a logical record length equal to or other than 80. The following changes have been made to support these new data elements:

  - New modification control statements (MCS) to add or replace data elements
  - New data element entries in the SMPCSI to track changes to data elements
  - New LIST, UCLIN, and UNLOAD operands for data element entries.

  Data elements must remain in their original format if they are packaged in relative files or in text libraries (TXLIB data sets). They must be in fixed-block 80 format if they are packaged inline. To help package elements that are not in fixed-block 80 format, SMP/E provides a new service routine. This routine (GIMDTS) transforms elements from their original format into fixed-block 80 format. These transformed elements can then be packaged inline. When SMP/E installs these transformed elements, it transforms them back to their original format.

- **New Format for SMPCSI and SMPSCDS Data Sets**

  The format of the records in SMPCSI and SMPSCDS data sets has changed for SMP/E Release 5. Any existing SMPCSI or SMPSCDS data sets that will be used with SMP/E Release 5 must therefore be converted to SMP/E Release 5 format. The SMP/E CONVERT command has been updated to do this.

- **ISPF**

  The SMP/E dialogs now require ISPF Version 2 Release 3.

- **System Generation Support**

  SMP/E Release 5 can no longer be installed as part of the MVS system generation (SYSGEN) process. The SMP/E SYSGEN macro (SGGIMSMP) should no longer be included in SYSGEN decks or used to generate SMP/E outside of the SYSGEN process. If you are doing a SYSGEN to build a system, you can use output from the SMP/E GENERATE command to reinstall SMP/E in the new target libraries.

- **Rewritten Messages**

  The SMP/E messages have been rewritten to make them easier to use. In addition, the message IDs have been expanded from six characters to eight characters, and message severity is now indicated by a letter instead of a number. Most messages still start with the same ID they used to have. In a few cases, a single message is now used for duplicate messages (two or more messages with different message IDs but essentially similar text and purpose).

  Some messages are longer than they had been in previous releases of SMP/E. Therefore, you may need to increase the size of any data sets used for SMP/E messages (such as SMPOUT, SMPLOG, and SMPLOGA). How much more space you need depends on the current size of these data sets and which messages are issued. However, to start, you may want to allocate new data sets that are twice the size of the old ones.

- **Japanese Messages and Dialogs**

  In certain areas, SMP/E is now available in Japanese as well as English. This support is provided by separate Japanese and English features for SMP/E.

  - The Japanese feature provides SMP/E messages and dialogs in Japanese.
  - The English feature provides SMP/E messages and dialogs in English.

  Contact your local branch office for details on the availability of the Japanese feature.

- **Dumping the VSAM RPL Control Block**

  The DEBUG command can now be used to request a dump of the VSAM RPL control block when an error occurs during an attempt to access a CSI data set. This RPL dump can be used to analyze the cause of the error.

  In the past, SMP/E used to automatically dump the VSAM RPL only when the return code was 8 or above. Now the user can request the dump to be taken when certain specific types of internal SMP/E processing are being done and the return code is 8 or above. This allows the cause of the error to be more closely determined. To further aid problem determination, the RPL dump has been expanded to include additional RPL information.

- **ADDIN Control Statements for UNLOAD**

  The UNLOAD command no longer processes ADDIN control statements. The ADDINPUT operand has been deleted from the UNLOAD command, and the SMPADDIN data set is no longer supported.

- **SMPWRK5 Data Set**

  The SMPWRK5 data set is no longer used by SMP/E. SMPWRK5 had been used during APPLY processing when the modules that were to be link-edited into a given load module were not all in the same SMPTLIB data set. SMP/E now allocates its own data sets for this processing and no longer requires an SMPWRK5 data set.

- **SMPWRK6 Data Set**

  The SMPWRK6 data set is a new data set that is required to apply or accept data elements that are packaged inline.

- **Subentries for Regressed Elements**

  The SYSMOD entry will no longer contain subentries to indicate which elements supplied by this SYSMOD have been regressed by other SYSMODs.

- **UPGRADE Operand on APPLY and ACCEPT**

  The UPGRADE operand of the ACCEPT and APPLY commands is no longer supported. UPGRADE had been used along with the SELECT operand to reinstall function SYSMODs. Functions can still be reinstalled with SELECT and the REDO operand, which supports any type of SYSMOD.

- **Obsolete MCS Types and Operands**

  The following obsolete MCS types and operands are no longer supported:

  - ++UPDTE – Use ++MACUPD instead.
  - ASMLIB – Was specified on ++MAC and ++MACUPD. Use DISTSRC instead.
  - BASE(FIXED | UPDATE) – Was specified on ++MAC, ++MACUPD, ++SRC, and ++SRCUPD. This is not needed under SMP/E.
  - DISTOBJ – Was specified on ++MAC, ++MACUPD, ++SRC, and ++SRCUPD. Use DISTMOD instead.

- **VS1 Support**

  SMP/E Release 5 does not run under VS1. However, to help VS1 customers migrate to MVS, SMP/E Release 2 and its documentation continue to support VS1. Contact your local branch office for ordering information.

Chapter 1. MVS Software Manufacturing Offerings

This chapter introduces the MVS software manufacturing offerings. It briefly describes the offerings and suggests when to use each one:

- System Modification Program Extended (SMP/E) — a tool for installing and tracking changes for software products and service.
- The MVS Custom-Built Installation Process Offering (CBIPO) — a software package for creating or replacing an MVS system or subsystem.
- The MVS Custom-Built Product Delivery Offering (CBPDO) — a software package for adding products or service to an existing MVS system or subsystem.

Introduction

In recent years, the IBM* licensed programs available to MVS users have increased dramatically in number, function, and flexibility. The availability of such a wide variety of offerings and options has increased the complexity of ordering, distributing, installing, customizing, and servicing MVS systems and subsystems.

To make the task of installing and servicing MVS-based systems easier, SMP/E, CBIPO, and CBPDO provide the following:

- Wide-ranging product support
- Packages and tools to support a variety of installation processes such as system replacement, incremental product and service installation, and service-only installation
- Software packages, installation tools, and installation processes that are designed to be used together
- A level of service that is appropriate for the installation package
- Record-keeping and process control mechanisms to provide precise content data and to ensure that correct levels of products and service are installed.

SMP/E

SMP/E is a tool that helps you install and maintain products and service by selecting the correct level of change, calling the utility programs to install the changes, and recording the changes that were made. It is an integral part of the installation processes for CBIPO and CBPDO. In addition, SMP/E can be used to install and service any software that is packaged in SMP/E system modification (SYSMOD) format.

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CBIPO

CBIPO is a package that helps you create or replace an MVS system. For example, you might use CBIPO to install products that have significant service and function prerequisites. Or you might use it if the service level of your system has fallen behind.

CBIPO is available for MVS, NCP, Data Base Systems, and CICS. It consists of distribution libraries that are customized to the licensed programs you select, as well as related installation materials (RIMs), which are task-oriented documentation, jobs, sample exit routines, procedures, parameters, and examples developed by IBM. The RIMs are designed to help you install, generate, and use your MVS system.

In a CBIPO, all of the products and service you order are in a single integrated set of distribution libraries at a predetermined service level. This service level has been IPL-tested on a number of CBIPO systems with a variety of products before it is made available.

IBM also provides the following installation tools for CBIPO:

- The CBIPO Process Aids – RIMs for a model MVS system, without any product code. You can use the documentation in the Process Aids to plan the installation of a CBIPO, and wait until you are ready to install before ordering the system itself. This way, the system you install is the latest level of CBIPO.

  Note: When you order a CBIPO, you automatically get the associated RIMs. Therefore, you don't have to order the Process Aids to get the RIMs for the features you order. You would only order the Process Aids if you want RIMs without the associated product code.

- The MVS CBIPO Drivers – a load-and-go MVS system designed to help you install a CBIPO system if you do not already have an MVS system to use as a driver.

CBPDO

CBPDO is a package that helps you add or update products and service on an existing MVS system. (This system may have been created by installing products individually or by installing a CBIPO.) For example, you might use CBPDO to install a few additional products, or to add new versions or releases of currently installed products. Or you might use it to periodically update the service level of your system.

CBPDO is available for MVS, NCP, Data Base Systems, and CICS. It may consist of both products and service, or just service. For example, CBPDO may contain new products that you are ordering, service for those new products, and service for products you ordered previously and for which you are licensed under a single customer number. It also includes the basic machine-readable documentation that is needed to install the products on your MVS system. Because the level of service on CBPDO is appropriate for a specific installation package, using CBPDO is the preferred method for maintaining an MVS system over using program update tapes (PUTs).

In a CBPDO, the individual products and service you order are not integrated but are packaged on a single logical tape (there may be more than one physical reel of tape). The service includes program temporary fixes (PTFs) that are currently available as well as PTFs that have been approved for distribution but are not yet available on a program update tape (PUT). Because the service is not integrated, it can be removed if a problem occurs after the service is installed. In addition, you can install the CBPDO on a copy of your system, such as a backup or test system, which also protects your running system in case a problem occurs.

Which Should You Choose – CBIPO or CBPDO?

There may be times when you are not sure whether to use CBIPO or CBPDO to update your system. The following chart briefly compares these two offerings.

CBIPO	CBPDO
Adds a new system or replaces an existing system	Updates an existing system
A predetermined service level is integrated in the product distribution libraries	Service is not integrated
Generally provides only service that is available on a PUT tape	In addition to current PUT service, provides approved service that is not yet available on a PUT tape
Provides installation assistance (RIMs) through system generation, IPL, system installation verification procedures (IVPs), and customization	Provides assistance (RIMs) through the SMP/E RECEIVE step only

Figure 1. Comparison of CBIPO and CBPDO

In deciding whether to replace your system with CBIPO or upgrade it with CBPDO, you should also consider the following:

- Service level of your current system

  The older the service level of your current system, the more you should consider replacing the system using a CBIPO to minimize time and DASD requirements. However, if you need to maintain your system at a more current service level, then CBPDO may be the better choice because it contains a higher service level than CBIPO.

- Number of products to be added or updated

  If the number of products being added or updated is small (for example, one or two products) and the change is not complex, you should consider CBPDO. If, however, the number of products is large or the change is complex (for example, migration from MVS/370 to MVS/XA or MVS/ESA*, or from one release of IMS to another), then you should use CBIPO. The time required to install a large number of products using CBIPO is usually considerably less than the time required to install the products using CBPDO or traditional methods.

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Because of your unique requirements, you may have to use CBPDO to install a major system change (rather than use CBIPO to replace your system). If, in addition to this, your system service level is not reasonably current, you should do the following to minimize requirements for time, DASD resources, and virtual storage:

  - First, order and install a service-only CBPDO to bring the service on your system up to the required level.
  - Then order and install a CBPDO for the new products to be installed on the system.

- System programming resources

  If you are new to MVS (or NCP, IMS, or CICS) or have a small staff, then CBIPO might be your preference because of the RIMs and the "cookbook" approach to installation. If, on the other hand, you have a large system programming staff or are very experienced with MVS, the subsystems, and SMP/E, then the choice of offerings should be based on other factors.

  CBPDO requires the same skills and experience traditionally required to install individual products and service. With respect to installation, CBIPO requires less expertise compared to CBPDO.

- Change control at your installation

  If you are implementing a new change control system at your site or change control in the past has been weak, then CBIPO is again the better choice because it offers a known starting point. On the other hand, if you already have effective change control procedures in place, make your choice based on other factors.

- Availability of products

  Products are generally supported sooner through CBPDO than through CBIPO. Therefore, if you want to add a particular product to your system as soon as possible, you may choose to order it on a CBPDO rather than wait to order it on a CBIPO.

- Products or changes not available in a CBIPO

  If your system has a large number of user modifications or contains a large number of products that are not available in a CBIPO, then CBPDO is probably the better choice. Remember, since CBPDO updates your existing system instead of replacing it, your user modifications and other products may be preserved.

Each offering has different strengths and, for a given situation, one of the offerings will be the better choice. Each time you order products, review the considerations above along with any that are unique to your site, then order the offering best suited to your needs at that time.

Chapter 2. SMP/E Overview

This chapter provides an overview of SMP/E. It briefly describes:

- What SMP/E is
- What system modifications are
- The data sets used by SMP/E
- The basic ways of using SMP/E processes
- Installation requirements and considerations for SMP/E.

What Is SMP/E?

SMP/E is the basic tool for installing software changes in MVS systems. It controls these changes at the element level by:

- Selecting the proper levels of elements to be installed from a large number of potential changes
- Invoking system utility programs to install the changes
- Keeping records of the installed changes.

By handling these jobs, SMP/E reduces the amount of work the system programmer must do to install and maintain system changes. For this reason, IBM products and service are packaged so that they can be installed using SMP/E. These are some of the types of software that may be installed by SMP/E:

- Products and service provided in CBIPO and CBPDO
- Products and service from IBM but not provided in CBIPO or CBPDO
- Service provided on program update tapes (PUTs)
- Other products and service.

SMP/E can install software from any of these sources as long as it is packaged as a system modification, or *SYSMOD*.

System Modifications (SYSMODs)

Software, whether it is a product or service, consists of *elements* such as macros, modules, source, and other types of data (such as CLISTs or sample procedures). For software to be installed by SMP/E, it must include control information for the elements. This information describes the elements and any relationships the software has with other products or service that may also be installed on the same MVS system. The combination of elements and control information is called a system modification, or *SYSMOD*. There are four types of SYSMODs, which are defined by how they affect the system on which they are installed. A SYSMOD may:

- Introduce a new product, or a new release of a product – this is called a **function**.
- Correct a problem that may affect many users – this is called a **program temporary fix** (PTF).
- Correct a problem that affects a specific user – this is called an **APAR fix**.

- Make authorized changes to IBM products or to user-written products — this is called a **user modification**.

SMP/E processes SYSMODs using a variety of data sets.

Data Sets Used by SMP/E

SMP/E installs SYSMOD elements into two types of libraries:

- **Target libraries**, which contain the executable code that makes up the running system.
- **Distribution libraries**, which contain the master copy of all elements for a system. The distribution libraries (DLIBs) are used as input to the system generation process that builds target libraries for a new system. They are also used by SMP/E for backup if it is necessary to replace or update elements in the target libraries.

To install SYSMOD elements in these libraries, SMP/E uses several types of data sets:

- Data sets for temporary storage of SYSMODs waiting to be installed
- Various utility and work data sets
- VSAM data sets containing various types of control information:
  - System content and structure
  - Function and service levels of system elements
  - Control information from individual SYSMODs.

SMP/E uses the control information to select proper element levels for installation, determine which libraries should contain which elements, and identify which system utilities are to be invoked for the installation.

In addition to directing SMP/E processing, the control information is also used by system programmers, who must have current information available on system structures, content, and status. SMP/E provides this information in reports, listings, and dialogs that help the programmer do the following:

- Research function and service levels
- Understand intersections and relationships of SYSMODs (either installed or waiting to be installed)
- Build job streams for SMP/E processing.

The SMP/E data set that contains this control information is the SMP/E consolidated software inventory data set (SMPCSI).

The SMPCSI Data Set

The SMPCSI (or CSI) is a keyed VSAM data set that is logically divided into "zones." These zones describe the various subsystems and products in the system. There are three types of zones:

- **Global zone**, which describes the following:
  - The associated target and distribution zones
  - SYSMODs waiting to be installed (stored in the SMP/E PTF temporary storage data set – SMPPTS)
  - The names of and information used by system utilities SMP/E calls to install SYSMODs.
- **Target zone**, which describes the structure and contents of a set of target libraries and names the related distribution zone.
- **Distribution zone**, which describes the structure and contents of a set of distribution libraries and names the related target zone.

The following figure shows the relationships between SMP/E zones and libraries.

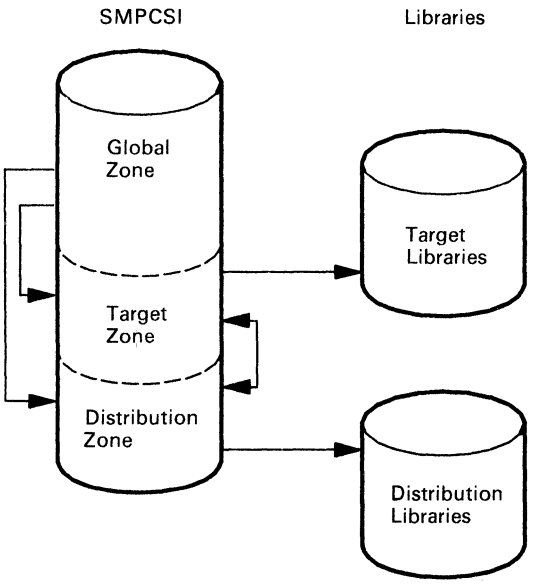

Figure 2. Overview of Zone Relationships

There can be more than one zone in an SMPCSI data set. For example, an SMPCSI could contain a global zone, several target zones, and several distribution zones. The zones could also be in separate SMPCSI data sets. One SMPCSI could contain just the global zone, a second SMPCSI the target zones, and a third SMPCSI the distribution zones. For more information on ways to structure SMPCSI data sets, see the publications *SMP/E Installation* and *MVS Custom-Built Offerings Planning and Installation*.

Using SMP/E to Install Products and Service

SMP/E can be run using either batch jobs or using dialogs under ISPF/PDF. With the SMP/E dialogs, you can:

- Define the contents of the system
- Install products and service from a variety of sources by following a guided step-by-step process
- Run individual SMP/E commands
- Display SMP/E records that contain information about the contents and status of the system
- Learn how to use the SMP/E dialogs.

Whether you use the dialogs or batch jobs, there are basically two methods of using SMP/E to install software:

- The standard method

  With this method, SMP/E commands are used to read SYSMODs into the SMPPTS, or temporary storage data set. The SYSMODs are then installed in the target libraries. Once the changes have been tested, the SYSMODs are installed in the distribution libraries. Generally, there is no special processing required outside of SMP/E to install the SYSMODs.

  The standard method is generally used to add products and service to an existing system or subsystem.

- The special generation method

  With this method, system, subsystem, or product generation procedures are used in addition to SMP/E commands to install functions onto a system or subsystem.

  The special generation method can be used to create or replace a system or subsystem, or it can be used to add to an existing system or subsystem.

There are variations on these methods to accommodate installation processes needed for specific products or offerings. See the *SMP/E User's Guide* or the *SMP/E Program Packaging Guide* for more information.

SMP/E Requirements and Considerations

Before installing SMP/E, you should be aware of the following requirements and considerations:

- Programming requirements
- Hardware requirements
- Education requirements
- Compatibility with SMP Release 4 and other releases of SMP/E
- Performance
- Migration
- SMP/E data integrity
- Security.

Programming Requirements

SMP/E operates with Release 3.8 of OS/VS2 (MVS), and with MVS/SP* Version 1 (MVS/370), Version 2 (MVS/XA), and Version 3 (MVS/ESA).

Use of the SMP/E dialogs is optional. If the dialogs are to be used, the following programs are required:

- Interactive System Productivity Facility (ISPF) Version 2 Release 3 — program number 5665-319
- Interactive System Productivity Facility/Program Development Facility (ISPF/PDF) Version 2 Release 3 — program number 5665-317.

Hardware Requirements

SMP/E runs on all hardware supported by the operating systems listed above.

The input and output devices used must support uppercase English characters, plus any other languages (such as Japanese) that are being processed. If the dialogs for the English feature are being used, then a terminal that processes both uppercase and lowercase English characters must be used.

Education Requirements

The person responsible for using SMP/E to install products and service should be familiar with:

- The MVS area of responsibility (for example, MVS, NCP, IMS, DB2*, CICS, JES)
- Job control language
- SMP/E concepts
- MVS utilities
- ISPF (if used)
- ISPF/PDF (if used).

It is assumed that this person has completed "SMP/E: A Guide for the New SMP/E User" (Self-Study Course 32186), "SMP/E Fundamentals" (Course H3765), and "Integrated System Maintenance Using SMP/E" (Course H3763), or has equivalent experience. See the *Catalog of IBM Education* (G320-1244) for details.

Compatibility

For compatibility, all SYSMOD input acceptable to SMP Release 4 (SMP4) and previous releases of SMP/E is acceptable to SMP/E Release 5.

Performance

The batch processing characteristics of SMP/E can be tuned using VSAM allocation parameters and VSAM index and data buffer specifications. For equivalent operations, SMP/E provides performance characteristics equivalent to or better than SMP4, with virtual storage requirements less than or equal to those of SMP4. Direct access storage requirements for SMP/E are less than or equal to those of SMP4. The performance of SMP/E dialogs is similar to that of other applications running under ISPF.

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Migration

This section discusses migrating to SMP/E Release 5 from:

- Previous releases of SMP/E
- SMP4.

It also offers a suggestion for VS1 users migrating to MVS.

For more information about migrating from SMP/E or SMP4, see the *SMP/E Installation* manual and the SMP/E Program Directory.

Migrating from a Previous Release of SMP/E

For existing SMP/E users, migrating from a previous release of SMP/E to SMP/E Release 5 consists of these steps:

1. Running the SMP/E RECEIVE, APPLY, and ACCEPT commands to install Release 5, which deletes the previous release from the system
2. Converting any SMPCSI or SMPSCDS data sets from previous releases that will be used with SMP/E Release 5. This is done with the SMP/E CONVERT command.

Migrating from SMP4

Migrating from SMP4 consists of these steps:

1. Allocating the appropriate data sets and running SMP4 RECEIVE, APPLY, and ACCEPT commands. This incorporates the SMP/E executable code and dialogs into the target and distribution libraries. Details on installing SMP/E are provided in the SMP/E Program Directory and in the *SMP/E Installation* manual.
2. Converting SMP4 data sets to SMP/E format.
   - Initializing the required SMP/E CSI data sets and using the SMP/E CONVERT command to convert the SMP4 data sets (CDS, ACDS, CRQ, ACRQ, PTS) to the VSAM CSI format.
   - Converting any SMPSCDS data sets from SMP4 that will be used with SMP/E Release 5. This is done with the SMP/E CONVERT command.

If multiple groups of SMP4 data sets exist in a system (for example, one for MVS and one for each subsystem), not all groups need be converted at the same time. SMP/E and SMP4 can coexist in a system; this permits subsystems to be selectively migrated to SMP/E, with SMP4 continuing to support those subsystems not yet migrated. When all subsystems have been migrated to SMP/E (that is, all SMP4 data sets have been converted), SMP4 can be deleted from the system. For more information about migrating from SMP4, see the *SMP/E Installation* manual.

Migrating from VS1 to MVS

The enhanced change management capabilities of SMP/E provide a migration aid for VS1 users planning to move to MVS. VS1 users planning to migrate may wish to consider installing SMP/E Release 2, which supports VS1, to gain experience using SMP/E. Major subsystems can be converted to the SMP/E format prior to the MVS migration, providing an additional option for staging the migration workload. The MVS system includes SMP4, which can be used to install SMP/E Release 5 on MVS, or to convert from SMP/E Release 2 format to SMP/E Release 5.

SMP/E Data Integrity

SMP/E uses VSAM functions to maintain the integrity of SMP/E data sets. SMP/E defines the CSI with VSAM SHAREOPTION(2), which lets many users read the same CSI data set at one time. WRITE operations, however, are serialized, which prevents more than one user from updating a CSI at the same time.

Security

SMP/E runs as an authorized program under MVS. Use of this program can be controlled by the Resource Access Control Facility (RACF, program number 5740-XXH) or password protection of the SMP/E data sets (for example, the CSI). Customers are responsible for the selection, adequacy, and implementation of these controls for the protection of their data.

Chapter 3. CBIPO Overview

This chapter provides an overview of CBIPO. It briefly describes:

- What CBIPO is
- CBIPO features
- Contents of a CBIPO
- How to order a CBIPO
- How a CBIPO is created
- Installation requirements for CBIPO
- How to install a CBIPO.

What Is CBIPO?

CBIPO is a software package for creating or replacing an MVS system. It makes software installation easier by helping you to:

- Order a selection of products that reflects your installation's unique requirements
- Receive your selected products with PTF service already integrated
- Design, install, and maintain your system and subsystems using the documentation and examples in the related installation materials (RIMs).

CBIPO is designed to do the following:

- Offer you flexibility in selecting the product set to support your MVS installation
- Deliver your selected IBM licensed programs with PTF service already integrated, reducing the need for you to research and apply a large volume of PTF service as part of your installation process
- Help your system programmers make decisions regarding system design and configuration that will make subsequent additions to your installation easier
- Provide an installation approach that will make future reinstallations of MVS and its subsystems easier
- Reduce the stand-alone machine time required to install your systems, and to utilize, wherever possible, your existing system and tools
- Allow you to choose the number of DASD volumes required to install your system or subsystem
- Isolate the installation activities associated with MVS and each of its subsystems, while allowing the installation tasks for each feature to proceed in parallel
- Provide a documented, step-by-step approach to building your system
- Reduce the number of noninstallation-dependent option and parameter decisions you have to research, implement, and test
- Provide installation JCL and a process that makes it easily modifiable and usable
- Provide a functional system, generated from your CBIPO distribution libraries, that you can tune and customize to your installation's requirements
- Provide procedures to verify that your basic system or subsystem is operational

- Provide guidance in the additional post-installation steps you will need to perform to customize your system or subsystem following the CBIPO installation process.

CBIPO Features

CBIPO consists of four separately orderable features:

- MVS – This includes MVS/370, MVS/Extended Architecture (MVS/XA), or MVS/Enterprise Systems Architecture (MVS/ESA), and the associated IBM system control program (SCP) and licensed programs.
- NCP – This includes ACF/NCP and associated IBM licensed programs.
- Data Base Systems – This includes IMS, DB2, and associated IBM licensed programs.
- CICS – This includes CICS and associated IBM licensed programs.

For each feature, you select from a large number of SMP/E-installable IBM licensed programs that run in the MVS environment. You receive them integrated with their PTF service in a distribution library (DLIB) customized to the products you select. These are some advantages of grouping products into features:

- Related IBM SCP and licensed programs can be installed and managed as a group.
- Related IBM SCP and licensed programs can be serviced together.
- The features correspond to the management structure of many current installations.
- The activities required to install a complete system are divided into manageable units.

Contents of a CBIPO

When you order a CBIPO feature, you receive a hard-copy *MVS CBIPO Memo to Users*, a *Programming Shipping Request* (packing list), and three or more tapes:

- The DLIB tape or tapes
- The RIM tape
- The SERV tape.

The *Memo to Users* describes how to start the CBIPO installation process. The *Programming Shipping Request* describes the tapes, their standard internal labels or volume serial numbers, and external labels.

Figure 3 on page 15 summarizes the contents of the tapes you receive for a CBIPO feature.

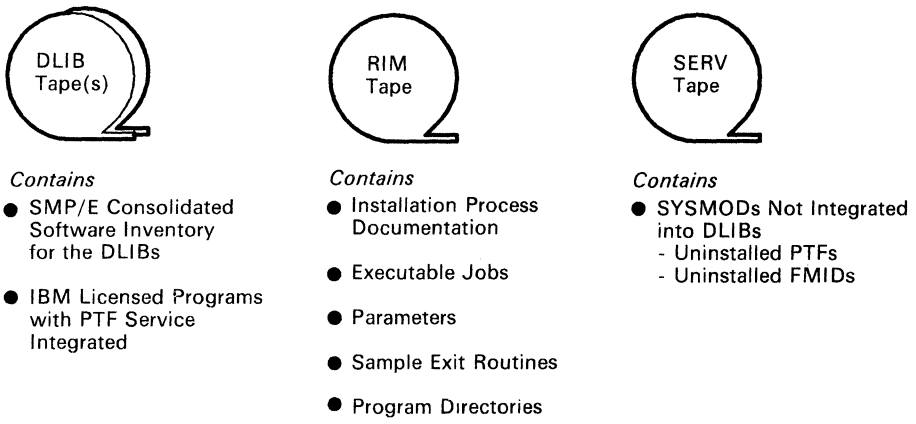


Figure 3. Tapes for a CBIPO Feature

The DLIB Tape

The DLIB tape contains the following data sets, customized to the products you select:

- Distribution libraries (DLIBs) for the specified products, with the PTF service integrated
- The SMPCSI data set for the DLIBs.

The RIM Tape

The RIM tape contains installation process documentation, as well as jobs, parameters, and sample exit routines. More specifically, it provides the following:

- An *MVS CBIPO Memo to Users Extension* containing a customized description of the contents of your CBIPO

  Note: The *Memo to Users Extension* is the only CBIPO document that is customized to the contents of your CBIPO.

- A job to print selected contents of the RIM tape
- Jobs to allocate and load selected files from the RIM tape
- Jobs to allocate space on the target system volume
- The available softcopy program directories associated with the products you selected
- Cover letters for selected PTFs
- The *MVS CBIPO System Design Reference* manual and the installation guide for the feature
- The CBIPO print program
- The jobs and additional documents needed to install and customize the CBIPO feature.

The SERV Tape

The SERV tape contains SYSMODs associated with the licensed programs you selected but not integrated into your DLIBs. Specifically, it provides:

- Uninstalled function SYSMODs. These SYSMODs are parts of a licensed program you selected that your particular product mix does not require. For example, the SERV tape would include parts of licensed programs that require unavailable prerequisite licensed programs or that are mutually exclusive with other parts of your product mix.
- PTF SYSMODs, such as:
  - PTFs with unresolved error holds
  - PTFs with unresolved system holds
  - PTFs in error and system hold chains
  - PTFs from PUT tapes more current than those integrated into your CBIPO DLIBs.

For more information on using the SERV tape, see the *MVS Custom-Built Offerings Planning and Installation* manual.

Ordering a CBIPO

The CBIPO ordering process is designed to accommodate the wide variety of options available to you in the CBIPO features. It also makes it easy for you to select the specific products you want.

Getting Information about CBIPO

One source of information about a CBIPO feature is the order checklist for that feature. The checklist identifies the IBM products and release levels currently available for each feature. There is also a NEWS file that identifies products that were added since the last release of CBIPO and the PTF service level. It should be used for information and planning purposes.

The order checklist is updated as new products, service, RIMs, enhancements to the CBIPO features, and changes to the supported product set become available. Copies of the order checklist and the NEWS file are available from your IBM representative.

Ordering Your CBIPO

When you are ready to place an order, your IBM representative will provide you with a current order checklist that identifies the IBM licensed programs and release levels currently available for whatever feature (MVS, NCP, Data Base Systems, or CICS) you wish to install. Available programs are identified within the order checklist by their program and feature numbers.

When you have completed the checklist for a feature, return it to your IBM representative, who will handle the processing of your order.

Each CBIPO feature must be ordered separately. Orders for each CBIPO feature must include certain specific products:

- MVS feature for MVS/370 – Orders for a CBIPO MVS feature for MVS/370 must include the currently supported level of MVS/SP Version 1, MVS/370 DFP, and SMP/E.
- MVS feature for MVS/XA – Orders for a CBIPO MVS feature for MVS/XA must include the current supported level of MVS/SP Version 2, MVS/XA Data Facilities Product (DFP), and SMP/E.
- MVS feature for MVS/ESA – Orders for a CBIPO MVS feature for MVS/ESA must include the current supported level of MVS/SP Version 3, MVS/ESA Data Facilities Product (DFP), and SMP/E.
- NCP feature – Orders for a CBIPO NCP feature must include a currently supported level of ACF/SSP and the corresponding appropriate level of ACF/NCP.
- Data Base Systems feature – Orders for a CBIPO Data Base Systems feature must include at a minimum a currently supported level of IMS Data Base or a currently supported level of DB2.
- CICS feature – Orders for a CBIPO CICS feature must include a currently supported level of CICS.

Some Points to Remember

- When you place an order for a CBIPO feature, make sure you are using a current order checklist. This ensures that the products you order match the products currently available in a CBIPO.
- If you wish to install the most current PTF service available in a CBIPO, avoid ordering your CBIPO too far in advance of your planned installation date.
- To receive any of the IBM licensed programs supported by CBIPO, you must be licensed for those programs and applicable features on the same customer number for which you are ordering the CBIPO. Licensing can be done at the time you place your CBIPO order, by marking a field on the CBIPO order checklist. The marked and signed checklist informs your IBM representative that you wish to be licensed for a particular licensed program.

How a CBIPO Is Created

Each CBIPO is produced in response to a specific customer order. The DLIBs contain the products that were selected, and the RIMs are tailored to support those products. For example, jobs to allocate and load the DLIBs will correspond to the products that were ordered.

IBM uses a software manufacturing process to build and package your CBIPO according to information you have provided on an order checklist. Figure 4 on page 18 illustrates this process.

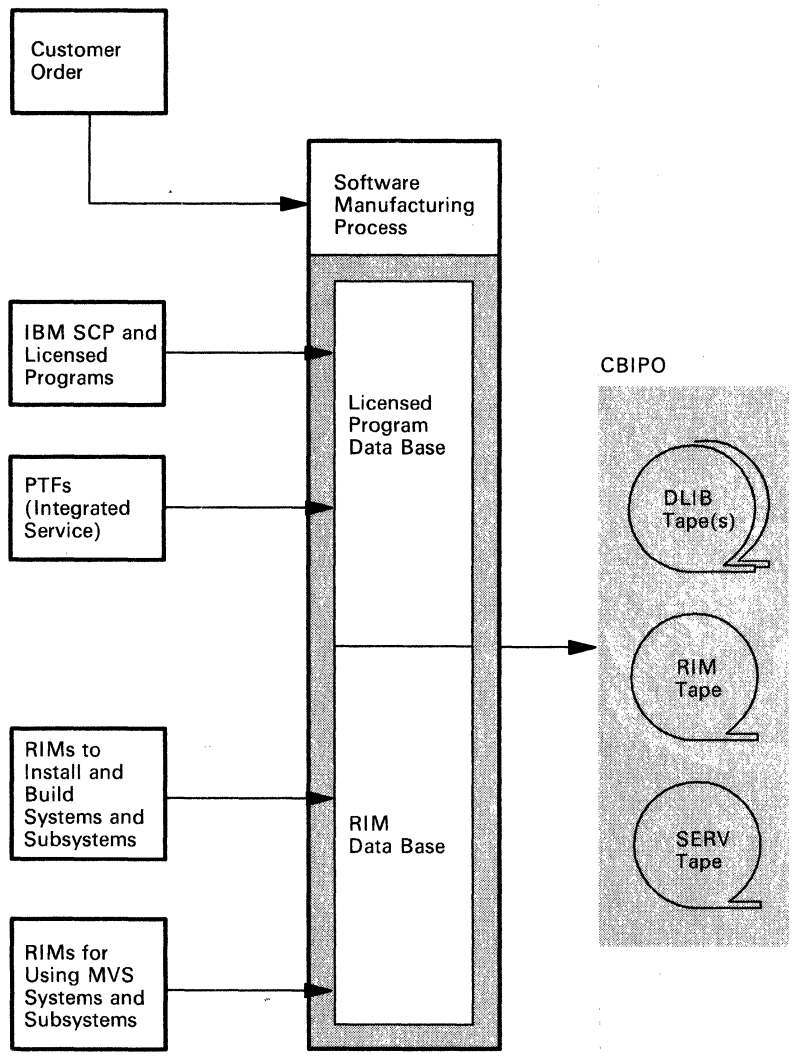


Figure 4. How a CBIPO Is Created

To produce CBIPOs, IBM maintains a data base that contains:

- The IBM SCP and licensed programs supported by CBIPO for the MVS system and subsystems
- PTF service for the products. The service level of your CBIPO is identified by a PUT service level.
- The CBIPO-developed materials that are delivered to assist you in the installation and use of your system or subsystem.

  These materials include installation procedures, sample JCL, and job streams. All these installation materials can be easily modified, using a CBIPO-supplied program called IPOUPDTE, to meet your particular needs.

  The CBIPO-developed materials are created for an integrated system known as the Model Installation. The IBM CBIPO development group's experience in customizing and using this system provides the basis for the system installation and maintenance philosophy of the CBIPO offerings. In addition, the Model Installation is used to create the CBIPO Process Aids, which are described on page 31.

IBM uses SMP/E as it fills each CBIPO order by building DLIBs containing the requested set of products with their PTF service integrated. RIMs for each order are built from the RIM data base. Certain SYSMODs are identified in the data base and may be shipped as part of your order, but are not integrated into your DLIBs. Instead, they are shipped on the SERV tape, which is described on page 16.

CBIPO Requirements

Before installing a CBIPO, you should be aware of the following requirements:

- Programming requirements
- Hardware requirements
- Education requirements.

Programming Requirements

The following products must be installed on the driving system used to install a custom-built offering:

- One of the following: MVS/System Extensions Release 1 or 2, MVS/SP Version 1 (MVS/370 – any release), MVS/SP Version 2 (MVS/XA – any release), or MVS/SP Version 3 (MVS/ESA – any release).
- JES2 or JES3 as the job entry subsystem.
- To install CICS for MVS/XA, the driving system must have MVS/XA (any release).
- To install CICS for MVS/ESA, the driving system must have MVS/ESA (any release).
- The Device Support Facilities program. This is used by the CBIPO RIM-provided jobs to initialize DASD, create VTOCs, and perform other utility functions during system installation.
- SMP/E Release 4 or higher.

  Note: A CBIPO order for an MVS feature must always include SMP/E. The installation process for the MVS feature makes SMP/E available to the driving system as part of the installation process.

  The installation process also makes Assembler H and the MVS/XA linkage editor available to the driving system when installing MVS/XA or MVS/ESA.

  You must also be licensed for SMP/E to order a CBIPO.

- To install Integrated Catalog Facility (ICF) catalogs on your new system, the driving system must include either MVS/370 DFP, MVS/XA DFP, MVS/ESA DFP, or Data Facility Extended Function (DFEF).

  Note: You do not need to convert all the catalogs on your driving system to ICF. However, you ***should*** try to convert your other user catalogs to ICF. Jobs are supplied on the RIM tape to help you do this.

Hardware Requirements

You can run the CBIPO installation process on any hardware configuration capable of running MVS, provided that the configuration has at least the following:

- One 6250-bpi tape drive or one 3480 tape drive.
- Sufficient 3350, 3375, 3380, or 3390 DASD devices to hold the MVS system, RIM data sets, DLIB, and catalog volume data sets used in the installation process. These CBIPO volumes are in addition to those required to run your driving MVS (including DASD storage required for MVS work data sets and other temporary storage) on your configuration.

  Note: The CBIPO DASD requirements for the MVS feature may vary from as few as three to as many as 13 physical volumes depending on your DASD device types, your mix of products, and your performance criteria.

  The *MVS CBIPO System Design Reference* manual discusses this topic in detail, and the *MVS CBIPO Memo to Users Extension* provides estimates of the DASD space requirements for your particular order.
- One or more terminals. The CBIPO jobs are designed to be edited and submitted from TSO or another online interactive system.
- One printer. Since the CBIPO documentation is distributed in mixed case, your printer should be able to print both uppercase and lowercase. The documentation can, however, be printed in uppercase.

Education Requirements

The person responsible for planning and installing a CBIPO feature should be familiar with:

- The MVS area of responsibility (for example, MVS, NCP, IMS, DB2, CICS, JES)
- Job control language
- SMP/E concepts
- MVS utilities
- ISPF (if used)
- ISPF/PDF (if used).

It is assumed that the person installing a CBIPO feature has completed "MVS/XA Installation" (Course H3827) or "MVS/SP Planning and Control" (Course H3774), "SMP/E Fundamentals" (Course H3765), "Integrated System Maintenance Using SMP/E" (Course H3763), and all prerequisites, or has equivalent experience. See the *Catalog of IBM Education* (G320-1244) for details.

Installing a CBIPO

The CBIPO installation process is designed to provide you with a system or subsystem that is capable of running a CBIPO system installation verification procedure (IVP). The *MVS Custom-Built Offerings Planning and Installation* manual and the RIMs provide planning information to help you design your system, as well as documentation and jobs to guide you step-by-step through the installation process.

In some cases you will have to customize specific products to make those products ready to use and to meet your installation's specific requirements. The RIMs for many of those products include customization and use guides to help you tailor your system.

CBIPO features use a process called IPOGEN to install products in the CBIPO, including those that do not have SYSGEN support. Using the SMP/E GENERATE command and product-specific JCLIN that was generated for your order by the software manufacturing process, IPOGEN installs all of the programs in your CBIPO into your target libraries. Using IPOGEN provides a number of advantages:

- You no longer need to run many product-specific post-SYSGEN installation jobs.
- The installation process generally takes less time than running SYSGEN and post-SYSGEN jobs. This is because the GENERATE command tailors the job stream it creates for maximum efficiency by eliminating duplicate or unnecessary steps that sometimes occur in normal SYSGEN processing.
- You no longer need to edit product-supplied Stage 2 job streams to match your installation's data set names or unit and volume serial numbers. GENERATE uses the information supplied to the IPOUPDTE program to create a job stream.
- The GENERATE command produces a summary report that lists the utilities and libraries used in the job stream, which elements go in which libraries, and which modules are included in each load module.

Chapter 4. CBPDO Overview

This chapter provides an overview of CBPDO. It briefly describes:

- What CBPDO is
- CBPDO features
- Contents of a CBPDO
- How to order a CBPDO
- How a CBPDO is created
- Installation requirements for CBPDO
- How to install a CBPDO.

What Is CBPDO?

CBPDO is a software package for adding to or updating an existing MVS system. It makes software installation easier by helping you to:

- Order a selection of products to extend the function of your existing MVS system
- Order service for all the products for which you are licensed under a single customer number
- Obtain the basic machine-readable material needed to install the products and service onto your MVS system.

CBPDO is designed to do the following:

- Provide the available basic machine-readable material necessary to install products and PTF service on your MVS system
- Offer you a choice in selecting and installing the products and PTF service level to support your MVS installation
- Allow you to incrementally upgrade your MVS system with products and PTF service
- Deliver your selected IBM licensed programs with currently available PTF service unintegrated, reducing the need for you to research and separately obtain a large volume of PTF service as part of your installation process
- Deliver service approved for distribution but not yet available on a PUT tape.

CBPDO Features

CBPDO consists of four separately orderable features:

- MVS – This includes MVS/370, MVS/Extended Architecture (MVS/XA), MVS/Enterprise Systems Architecture (MVS/ESA), and associated IBM SCP and licensed programs.
- NCP – This includes ACF/NCP and associated IBM licensed programs.
- Data Base Systems – This includes IMS, DB2, and associated IBM licensed programs.
- CICS – This includes CICS and associated IBM licensed programs.

For each feature, you select from a large number of SMP/E-installable IBM licensed programs that run in the MVS environment. There are advantages to grouping products into these features:

- Related IBM SCP and licensed programs can be shipped together.
- The PTF service for the related IBM SCP and licensed programs can be shipped with the associated programs.
- The features correspond to the management structure of many current installations. This allows the installation tasks for each feature to proceed in parallel.

Contents of a CBPDO

When you order a CBPDO feature, you receive an *MVS CBPDO Memo to Users*, a *Programming Shipping Request* (packing list), and one or more CBPDO tapes.

The *Memo to Users* describes how to start the CBPDO installation process. The *Programming Shipping Request* describes the tapes, their standard internal labels or volume serial numbers, and external labels.

Note: Other product materials, such as basic publications, are automatically shipped to you, just as they are when you order an individual product. However, they are delivered separately from your CBPDO tapes.

The CBPDO Tapes

The CBPDO tapes contain:

- A *Memo to Users Extension*, with a customized description of the contents of your CBPDO
- Sample jobs to receive products and PTF service
- The available softcopy program directories associated with the products you selected
- Preventive service planning (PSP) information. This includes the following:
  - An individual PSP upgrade file for each PUT service level on the CBPDO tape
  - The available PSP upgrade and subset files for each product on the CBPDO tape
  - PSP information for upgrade CORPE
  - A cross-reference of PTFs referred to in the upgrades.
- The SMP/E modification control statements (MCS) for products and PTF service on the CBPDO tapes
- A customer-specified set of IBM SCP and licensed programs for a single feature, with currently available PTF service for all licensed programs within that feature for which you are licensed, in SMP/E relative file format.

  Note: The service is not integrated into the products.

The *Memo to Users Extension* is the only CBPDO document that is customized to the contents of your CBPDO. It contains a complete list of the contents of the package, including:

- A list of products by name, order number, and feature code
- A list of the copyrighted licensed programs in the package
- Volume serial numbers of the tapes contained in the package
- A list of the FMIDs contained in the package
- The PTF service levels contained in the package
- Driving system dependencies for the installation process
- Instructions for installing and servicing SMP/E in an established SMP/E environment.

Ordering a CBPDO

The CBPDO ordering process is designed to accommodate the wide variety of options available to you in the CBPDO features. It also makes it easy for you to select the specific products and service you want.

Getting Information about CBPDO

One source of information about a CBPDO feature is the order checklist for that feature. The checklist identifies the IBM products and release levels currently available for each feature and is updated as new products and service become available. There is also a NEWS file that identifies additional products being supported, products that are deleted, and the PTF service level. It should be used for information and planning purposes.

The order checklist is updated as new products and releases, enhancements to the CBPDO features, and changes to the supported product set become available. Copies of the NEWS file and the order checklist are available from your IBM representative.

Ordering Your CBPDO

When you are ready to place an order, your IBM representative will provide you with a current order checklist that identifies the IBM licensed programs and release levels currently available for whatever feature (MVS, NCP, Data Base Systems, or CICS) you wish to install. Available programs are identified within the order checklist by their program and feature numbers.

You have two options when ordering a CBPDO: you can get products plus service, or service only. With both of these options you automatically receive service for products for which you are already licensed under a single customer number for a single feature – **you do not have to check off these products to get service for them**.

The amount of service you receive in your CBPDO depends on whether you select a service level and whether this is your first CBPDO order.

- If you select a PUT service level on the order checklist, you will get all service from that level to the current level.
- If you do not select a service level and this is your first CBPDO order, you will get all the service shown on the order checklist.
- If you do not select a service level and you have ordered a CBPDO before, you will get service following the PUT service level that was shipped in your previous CBPDO.

Note: You must have received service into the SMPPTS for your system within two years of the currently available PUT tape.

If you order products and service, the level of service provided for the new products you order will be the earliest of the following:

- The level of service integrated into the product (the SUP level of the product) in the software manufacturing data base
- The service level you specified on the order checklist.

Note: A CBPDO order is based on the total set of products for which you are licensed under a single customer number. It does not reflect the contents of any specific system within the establishment defined by that customer number. For example, the same establishment may have MVS/XA on one system and MVS/370 on another system, and be licensed for both under the same customer number. In this case, service for both MVS/XA and MVS/370 will be included in the CBPDO order.

When you have completed the checklist for a feature, return it to your IBM representative, who will handle the processing of your order.

Each CBPDO feature must be ordered separately. You can order products and service or service only for any of these features:

- MVS feature
- NCP feature
- Data Base Systems feature
- CICS feature.

Some Points to Remember

- When you place an order for a CBPDO feature, make sure that you are using a current order checklist. This ensures that your order content matches the current CBPDO-supported product set.
- If you wish to install the most current PTF service level available in a CBPDO, avoid ordering your CBPDO too far in advance of your planned installation date.
- To receive any of the IBM licensed programs supported by CBPDO, you must be licensed for those programs and applicable features on the same customer number for which you are ordering the CBPDO. Licensing can be done at the time you place your CBPDO order by marking a field on the CBPDO order checklist. The marked and signed checklist informs your IBM representative that you wish to be licensed for a particular licensed program.

How a CBPDO Is Created

Each CBPDO is produced in response to a specific customer order. The products, service, program directories, and *Memo to Users Extension* are tailored to the products that were selected, as well as to products for which you are already licensed under a single customer number.

IBM uses a software manufacturing process to build and package your CBPDO according to information you have provided on an order checklist. Figure 5 illustrates this process.

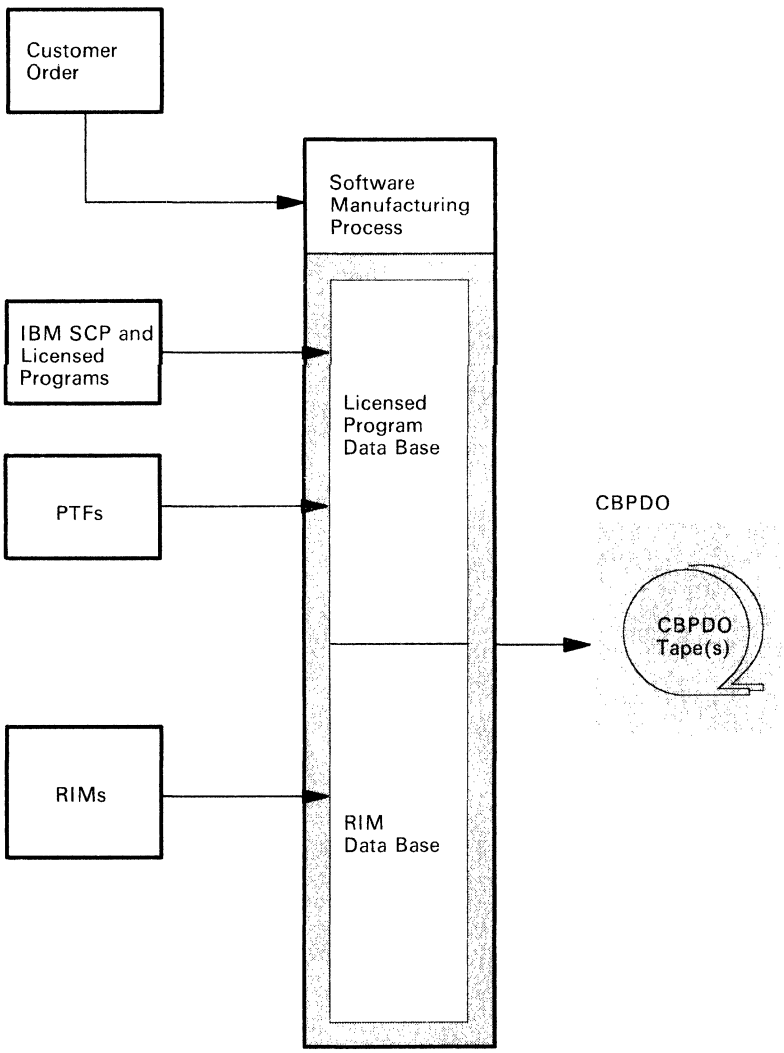


Figure 5. How a CBPDO Is Created

To produce CBPDOs, IBM maintains a data base that contains:

- The IBM SCP and licensed programs supported by CBPDO for the MVS system and subsystems.
- PTF service for the products. This service is not integrated into the products in your CBPDO. The service level of your CBPDO is identified by the PUT service levels included.
- The CBPDO-developed materials that are delivered to assist you in receiving your products and PTF service.

CBPDO Requirements

Before installing a CBPDO, you should be aware of the following requirements:

- Programming requirements
- Hardware requirements
- Education requirements.

Programming Requirements

The following products must be installed on the driving system used to install a CBPDO:

- MVS Release 3.8 or above. This includes MVS/System Extensions Release 1 or 2, MVS/SP Version 1 (MVS/370 – any release), MVS/SP Version 2 (MVS/XA – any release), or MVS/SP Version 3 (MVS/ESA – any release).
- SMP/E Release 4 or higher.

  Note: If your driving system has an earlier release of SMP/E, you can include the required level when you order a CBPDO MVS feature. Sample jobs are provided in the RIMLIB data set to help you install the new release of SMP/E on your driving system.

  You must have an established SMP/E environment to install a CBPDO. There are no CBPDO jobs or documentation to help you migrate from SMP4 to SMP/E. For information about migrating from SMP4, see the *SMP/E Installation* manual.

  You must also be licensed for SMP/E to order a CBPDO.

- If you plan to use the SMP/E dialogs to install a CBPDO, the following programs are required:
  - Interactive System Productivity Facility (ISPF) Version 2 Release 3 – program number 5665-319
  - Interactive System Productivity Facility/Program Development Facility (ISPF/PDF) Version 2 Release 3 – program number 5665-317.

Hardware Requirements

To install a CBPDO, you must have the following:

- One 6250-bpi tape drive or one 3480 tape drive.
- DASD and other devices (such as a terminal or printer) as required by the products in your CBPDO.

Education Requirements

CBPDO requires the same skills and experience required to install individual products and service. The person responsible for planning and installing a CBPDO feature should be familiar with:

- The MVS area of responsibility (for example, MVS, NCP, IMS, DB2, CICS, JES)
- Job control language
- SMP/E concepts related to the installation of individual products and service
- MVS utilities
- ISPF (if used)
- ISPF/PDF (if used).

The person installing a CBPDO feature should have completed "MVS/XA Installation" (Course H3827) or "MVS/SP Planning and Control" (Course H3774), "SMP/E Fundamentals" (Course H3765), "Integrated System Maintenance Using SMP/E" (Course H3763), and all prerequisites, or have equivalent experience. See the *Catalog of IBM Education* (G320-1244) for details.

Installing a CBPDO

The CBPDO installation process is designed to help you receive products and service into your SMPPTS data set. From that point on, you can use standard SMP/E methods to install the products and service. There are SMP/E dialogs to help you install CBPDO tapes. The *MVS Custom-Built Offerings Planning and Installation* manual provides information to help you plan for installing a CBPDO.

Chapter 5. CBIPO Process Aids Overview

The CBIPO Process Aids consist of related installation materials (RIMs) for the IBM Model Installation system. These RIMs reflect the installation process defined by CBIPO and can be used to plan for installing a CBIPO. However, they do not correspond to any specific CBIPO you may order.

Contents of the Process Aids

The Process Aids are RIMs only, without associated product code. These RIMs correspond to the CBIPO for the IBM Model Installation system described on page 18. There are four separately orderable features:

- MVS – This includes RIMs for MVS/Extended Architecture (MVS/XA) and associated IBM licensed programs.
- NCP – This includes RIMs for ACF/NCP and associated IBM licensed programs.
- Data Base Systems – This includes RIMs for IMS, DB2, and associated IBM licensed programs.
- CICS – This includes RIMs for CICS and associated IBM licensed programs.

One of the RIMs for the MVS feature, the *MVS Customization and Use Guide*, also provides information to help you convert OS control volumes (CVOLs) and VSAM catalogs to Integrated Catalog Facility (ICF) structure, convert from SMP4 to SMP/E, support coexistence of an MVS/370 system and an MVS/XA system, and migrate from an MVS/370 system to an MVS/XA system.

Ordering the Process Aids

Your IBM representative can provide you with information about ordering the CBIPO Process Aids. Because the Process Aids do not include any product code, there are no licensing requirements for placing an order.

Chapter 6. MVS CBIPO Drivers Overview

The MVS CBIPO drivers are for customers who do not have an MVS system they can use to install a CBIPO MVS/370, MVS/XA, or MVS/ESA feature. A driver is a pre-generated MVS/XA or MVS/370 system in dump/restore format. It can only be used as an initial MVS system to install a CBIPO MVS feature. It is not intended for any other purpose and cannot be used as a conventional MVS/XA or MVS/370 system.

Contents of a Driver

An MVS CBIPO driver contains the products needed to support the installation of a CBIPO feature for MVS/370, MVS/XA, or MVS/ESA. Along with the driver, you also get stand-alone copies of utility programs to initialize DASD and restore the driver.

A *Memo to Users and Installation Guide* is provided with each driver.

Ordering a Driver

Your IBM representative can provide you with an order checklist for an MVS CBIPO driver.

Driver Requirements

The MVS/370 CBIPO drivers support 3350, 3375, and 3380 DASD devices. MVS/XA CBIPO drivers support 3380 and 3390 DASD devices. To install an MVS CBIPO driver, you need:

- Two DASDs of the same type (such as two 3380s or two 3390s) for the MVS/XA driver, **or**
- Two DASDs of the same type (such as two 3350s, two 3375s, or two 3380s) for the MVS/370 driver
- One 6250-bpi tape drive or one 3480 tape drive
- One local terminal for TSO and ISPF
- One printer
- A processor and system console capable of supporting an MVS system.

The *MVS Custom-Built Offerings Planning and Installation* manual lists the I/O device addresses that are generated for the drivers.

Appendix A. Related Documentation

This appendix notes where you can find additional information about SMP/E, CBIPO, and CBPDO.

For information about courses on software installation and system management, call IBM DIRECT at 800-631-5584 or see the *IBM Catalog of Education*, G320-1244.

SMP/E Documentation

Figure 6 shows additional books in the SMP/E library.

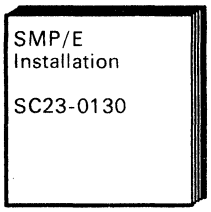
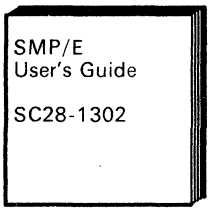
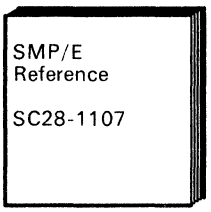
Title	Brief Description
	Explains how to plan for SMP/E and install it on your present SMP4 or SMP/E system.
	Describes how to accomplish various tasks using SMP/E.
	Explains SMP/E commands and processing in detail.

Figure 6 (Part 1 of 2). SMP/E Documents

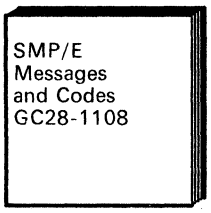
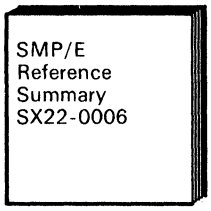
Title	Brief Description
 SMP/E Messages and Codes GC28-1108	Explains what SMP/E messages and return codes mean and what actions to take for each message and code.
 SMP/E Program Packaging Guide SC23-0221	Explains how to package programs so they can be installed by SMP/E.
 SMP/E Diagnosis Guide LY27-8047	Explains how to handle suspected SMP/E problems.
 SMP/E Reference Summary SX22-0006	Summarizes the SMP/E commands in a convenient form.

Figure 6 (Part 2 of 2). SMP/E Documents

CBIPO Documentation

Figure 8 on page 38 summarizes the types of documents in the CBIPO library and their relationship to each other. In this chart, the documents are grouped into three major categories for each of the four features: planning, installation, and customization. The specific documents are described below in Figure 7, Figure 9, Figure 10, Figure 11, and Figure 12. All of the CBIPO documentation is on a tape of related installation materials (RIMs) except for this book, the *MVS Custom-Built Offerings Planning and Installation* manual, and the *Memo to Users*. Documents on the RIM tape can be printed using jobs that are included on that tape.

Note: The only document that is customized to the products in a CBIPO is the Memo to Users Extension. The other documents are based on the CBIPO Model Installation and are not customized to the specific products you order.

Common Documents

Title	Brief Description
MVS Custom-Built Offerings Planning and Installation SC23-0352	Provides an overview of how to plan for installing products and service from a CBIPO or CBPDO.
CBIPO Memo to Users Extension	Describes the order as a whole as well as individual licensed programs in the order. There is a separate *Memo to Users Extension* for each feature, which is customized to the specific order. This document is part of the CBIPO package and does not have an order number.
CBIPO System Design Reference	Helps in designing a system. It shows the system that results when you follow the installation procedures described in the installation guides and other RIM data sets. This document is part of the CBIPO package and does not have an order number.

Figure 7. CBIPO Documents — Common Documents

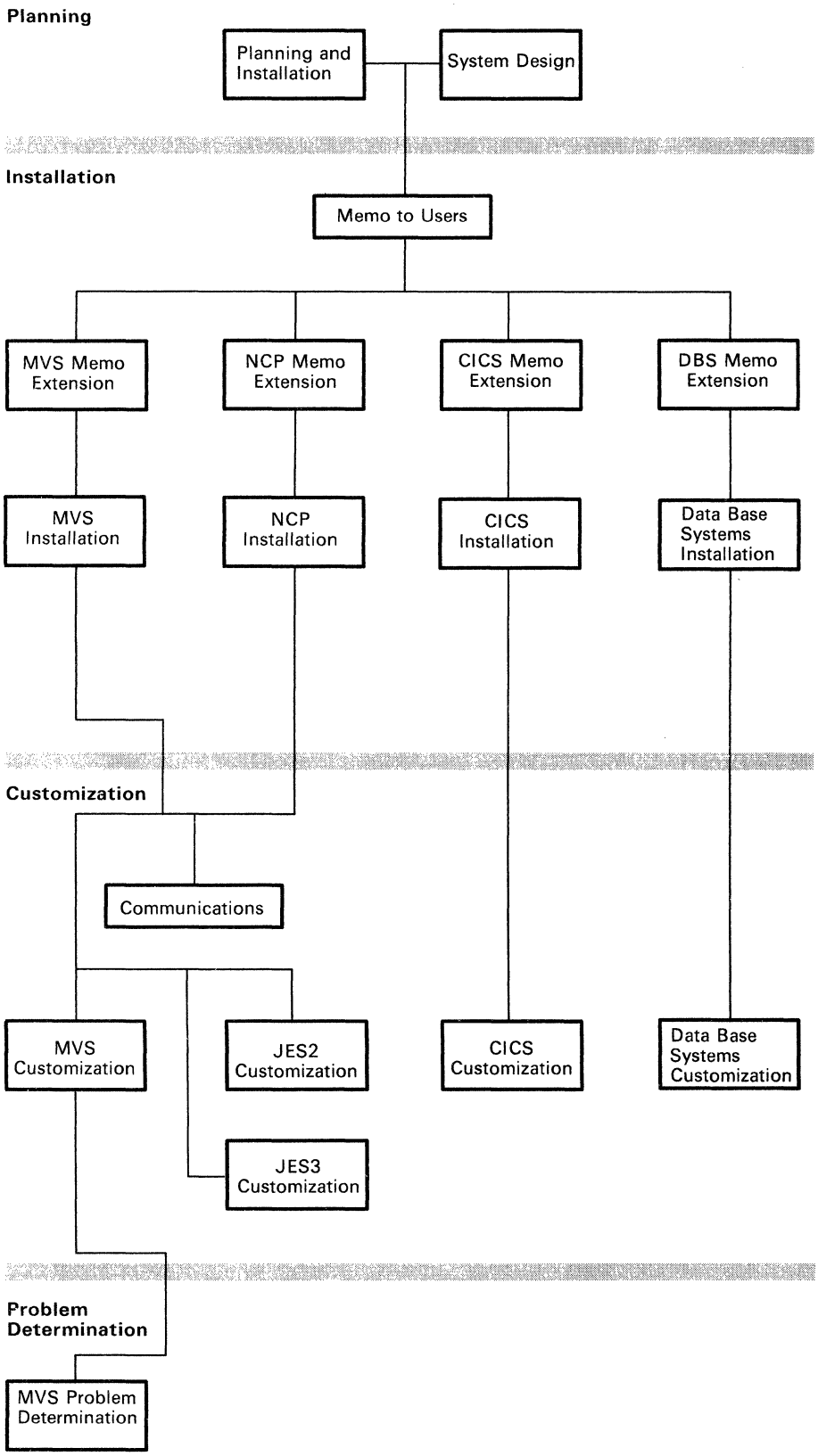


Figure 8. Types of Information Provided for CBIPO

MVS Feature Documents

Title	Brief Description
CBIPO MVS/XA and MVS/ESA Installation Guide	Describes how to install a new MVS/XA or MVS/ESA system from a CBIPO-customized DLIB.
CBIPO MVS/370 Installation Guide	Describes how to install a new MVS/370 system from a CBIPO-customized DLIB
CBIPO MVS Customization and Use Guide	Describes how to customize and use the MVS system control program and selected other products.
CBIPO MVS Communication Customization and Use Guide	Contains information needed for customizing and managing a communication network.
CBIPO JES2 Customization and Use Guide	Provides step-by-step procedures for migrating to a new level of JES2 and describes how to define and use JES2 Network Job Entry (NJE).
CBIPO JES3 Customization and Use Guide	Provides step-by-step procedures for migrating to a new level of JES3 in an MVS/SP environment
CBIPO MVS System Problem Determination Guide	Contains information to help users with system-level problem determination.

Figure 9. CBIPO Documents — MVS Feature

NCP Feature Documents

Title	Brief Description
CBIPO NCP Installation Guide	Provides step-by-step procedures for installing the CBIPO NCP feature. It also describes other aspects of ACF/NCP that you may want to review, such as NCPGEN.
CBIPO MVS Communication Customization and Use Guide	Contains information needed for customizing and managing a communication network.

Figure 10. CBIPO Documents — NCP Feature

Data Base Systems Feature Documents

Title	Brief Description
CBIPO Data Base Systems Installation Guide	Describes how to install an IMS/VS and its related products from CBIPO-customized DLIBs. It also describes how to install a Relational Data Base system from CBIPO-customized DLIBs.
CBIPO Data Base Systems Customization and Use Guide	Describes how to customize and use IMS/VS and its related products.

Figure 11. CBIPO Documents — Data Base Systems Feature

CICS Feature Documents

Title	Brief Description
CBIPO CICS Installation Guide	Describes how to install a CICS/OS/VS system from a CBIPO-customized DLIB.
CBIPO CICS Customization and Use Guide	Describes how to customize and use CICS. It also provides guidance on using CICS along with its related products.

Figure 12. CBIPO Documents — CICS Feature

CBPDO Documentation

Figure 14 on page 42 summarizes the types of documents in the CBPDO library and their relationship to each other. In this chart, the documents are grouped into two categories: planning and installation. The specific documents are described below in Figure 13. The *Memo to Users Extension* can be printed using directions in the *Memo to Users*.

Title	Brief Description
MVS Custom Built Offerings Planning and Installation SC23-0352	Provides an overview of how to plan for installing products and service from a CBIPO or CBPDO.
CBPDO Memo to Users Extension	Describes the order as a whole as well as individual licensed programs in the order. There is a separate *Memo to Users Extension* for each feature, which is customized to the specific order. This document is part of the CBPDO package and does not have an order number.

Figure 13. CBPDO Documents

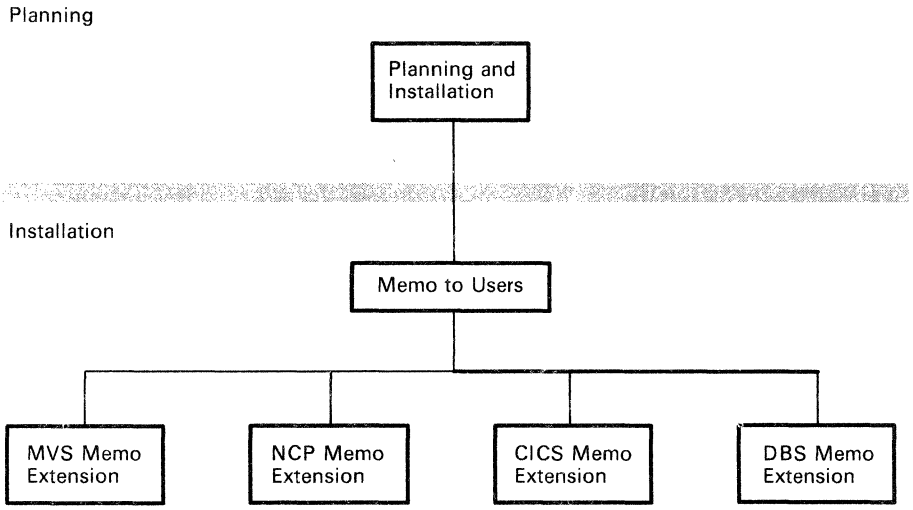


Figure 14. Types of Information Provided for CBPDO

Appendix B. Acronyms and Abbreviations

ACDS	Alternate control data set.
ACRQ	Alternate conditional requisite queue.
APAR	Authorized program analysis report.
CBIPO	Custom-Built Installation Process Offering.
CBPDO	Custom-Built Product Delivery Offering.
CDS	Control data set.
CICS	Customer Information Control System.
CRQ	Conditional requisite queue.
CSI	Consolidated software inventory.
CVOL	Control volume.
DASD	Direct access storage device.
DB2	Database 2
DFEF	Data Facility Extended Function.
DFP	Data Facilities Product.
DLIB	Distribution library.
ICF	Integrated Catalog Facility.
IMS	Information Management System.
I/O	Input or output.
IPL	Initial program load.
ISPF	Interactive System Productivity Facility.
IVP	Installation verification procedure.
JES	Job Entry Subsystem.
MCS	Modification control statement.
MVS	Multiple Virtual Storage.
MVS/ESA	Multiple Virtual Storage/Enterprise Systems Architecture (MVS/SP Version 3).
MVS/SP	Multiple Virtual Storage/System Product.
MVS/XA	Multiple Virtual Storage/Extended Architecture. (MVS/SP Version 2).
MVS/370	Multiple Virtual Storage for System/370*. (MVS/SP Version 1).
NCP	Network Control Program.
PDF	Program Development Facility.
PE-PTF	Program error PTF.
PSP	Preventive service planning.
PTF	Program temporary fix.
PTS	PTF temporary store.
PUT	Program update tape.
RACF	Resource Access Control Facility.
RIM	Related installation material.
SCP	System control program.
SERV	CBIPO service tape.
SMP	System Modification Program.
SMPCSI	System Modification Program consolidated software inventory.
SMP/E	System Modification Program Extended
SMPPTS	System Modification Program PTF temporary store.
SSP	System Support Program.
SYSMOD	System modification.
USERMOD	User modification.
VSAM	Virtual Sequential Access Method.
VS1	Operating System/Virtual Storage 1.
VS2	Operating System/Virtual Storage 2.
VTOC	Volume table of contents.

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System Modification Program
Extended
MVS Custom-Built Installation
Process Offering
MVS Custom-Built Product
Delivery Offering

Process Aids – Drivers

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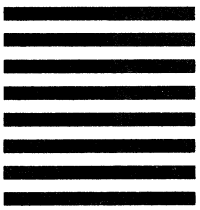

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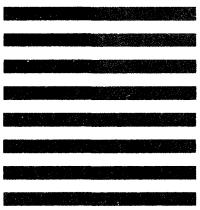

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5751-CS2
5751-CS3
5665-343

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