CIMS Lab, Inc.

CIMS Chargeback for OS/390

Installation and Upgrade Guide

Version 11.6

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Preface

As companies continue to integrate computer technology into their business operations, it becomes increasingly important to properly administer the IT function, particularly with respect to performance and cost. And the best way to control costs is to plan for them.

CIMS Chargeback is a comprehensive, flexible software solution that consolidates a wide variety of accounting data from multiple operating systems into a single file that may be accessed from either the mainframe or a workstation. Simply put, CIMS Chargeback is an essential component of an effective financial management system.

Philosophy

Originally developed in 1974, CIMS has focused on meeting the financial and resource reporting requirements of Information Services Departments. CIMS has evolved with corporate IT management requirements. Focused commitment to client service and support sets CIMS apart from competing products. Our goal is to provide the best chargeback and resource reporting software in the world at the lowest possible cost to our customers.

The CIMS Lab strongly believes in and executes the concept of continuous product improvement. Customers have access to CIMS product development personnel to ensure that customer feedback and other critical issues are incorporated into the next release of the product.

Contacting the CIMS Lab

You can contact us with any questions or problems you have. Please use one of the methods below to contact us.

For product assistance or information, contact:

USA & Canada, toll free	(800) 283-4267
International	(916) 783-8525
FAX	(916) 783-2090
World Wide Web	**www.cimslab.com**

Our Mailing Address is:

CIMS Lab, Inc.
3013 Douglas Blvd., Suite 120
Roseville, CA 95661-3842

About This Guide

This guide explains how to installing CIMS Chargeback for a new installation, as well as instructions for performing an upgrade to an already installed version of the product.

Ch. No.	Chapter Name	Content Description
1	*Introduction*	Provides general information regarding installing and upgrading *CIMS for OS/390*. Review this chapter before continuing to the other chapters in this guide.
2	*New Installation Instructions*	Provides procedures for installing and implementing CIMS for a new installation.
3	*Upgrade Instructions*	Provides procedures for upgrading an already existing installation of CIMS.
4	*Installation Flow Charts*	Presents additional installation information and installation flow charts.
5	*README File*	Provides a copy of the readme file included with product download. Contains instructions for installation.
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Conventions

Some or all of the following conventions appear in this guide:

Symbol or Type Style	Represents	Example
Bold	a new term	...called a **source object**.
Alternate color	(online only) hotlinked cross-references to other sections in this guide; if you are viewing this guide online in PDF format, you can click the cross-reference to jump directly to its location	...see *Chapter 3, Data Migration*.
Italic	words that are emphasized	...the entry *after* the current entry...
	the titles of other documents	*CIMS for MVS Release Notes*
	syntax variables	COPY *filename*
Monospace	directories, file names, command names, computer code	&HIGHLVL.SRCLIB
	computer screen text, system responses, command line commands	Copy file? Y/N
Monospace bold	what a user types	...enter RUN APP.EXE in the Application field
< >	the name of a key on the keyboard	Press <Enter>.
▶	choosing a command from a cascading menu	File ▶ Import ▶ Object
Highlighted Screen Text	used to callout screen text on character-based screen captures. (When viewed online, the screen text will be blue.)	Dataset.... Product.... Parmlib...

Related Publications

As you use this guide, you might find it helpful to have these additional books available for reference:

■ *CIMS Chargeback for OS/390 User Guide*

■ *CIMS Chargeback Report Writer User Guide*

■ *CIMS Chargeback Report Writer Sample Reports for OS/390*

■ *CIMS Chargeback CICS User Guide*

■ *CIMS Chargeback VM/CMS User Guide*

■ *CIMS Server Administrator's Guide*

■ *CIMS Server Web Reporting User's Guide*

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Introduction

Overview

The purpose of this guide is to describe the install process for *CIMS for OS/390* release 11.6 for both new users and existing users of CIMS. This document contains important information and should be reviewed before proceeding with the install or upgrade.

About Installing the Most Current Release

If you do not install *CIMS for OS/390* in a timely manner after receiving the product on the product tape or downloading the product for the CIMS Lab Web site, a new product release may be available from CIMS Lab. Each release is assigned a genlevel that specifies the release date.

If you want to determine whether you have the latest genlevel before installing the product, go to the CIMS Lab Web site, http://www.cimslab.com, and do the following:

1 Click the Customer Area link on the `CIMS` Web site. To gain access to the product information, select your product from the Product/Category pull down (`CIMS for OS/390`). Enter your *CIMS for OS/390* password as the key and select the **Save my key** check box so that you won't have to re-enter the key each time you access this area. You can determine your current password from the `CIMSNUMS` member of your current `CIMS.DATAFILE` production library.

2 Click the Product Downloads link after gaining access to the Customer Area.

3 Scroll through the product list and find the most recent product download under CIMS OS/390 Product Downloads.

CIMS Lab periodically rebuilds the install to include all updates that have been made to the product since the initial genlevel was released. If any updates have been added to the genlevel, the `CIMS.DATAFILE` member will include an `$UPDATES` member that lists all of the updates to the current genlevel.

If you want to determine the *CIMS for OS/390* genlevel of that you have installed, customize the `CIMS.DATAFILE JCL` member `CIMSLEVL` and submit it. The output in the `CIMSPRNT DD` will show the genlevel. It will be something like:

```
V11.6.0                    CIMS, The Enterprise ChargeBack System
                           _____
                                    Program CIMSLEVL

CIMS Base Install Level = 2003/01/13
```

Go to the Product Updates page of the CIMS Lab Web site and look for updates listed that have a date after the genlevel. These are updates that were added after the genlevel was created. Refer to the `$UPDATES` member in the `CIMS.DATAFILE` library to see if any of these updates were included in the genlevel build that you installed. You can either download and apply any updates that are not included in your installation or wait to install the next genlevel build that includes these updates.

What to Install

You can install or upgrade *CIMS for OS/390* from the following sources:

■ CIMS Product Tape (you cannot use the CIMS Product Tape to upgrade from one genlevel to another of the same *CIMS for OS/390* release—see *If you are upgrading from one genlevel to another of the same CIMS for OS/390 release (for example, one genlevel of 11.6 to another 11.6 genlevel):*)

■ CIMS Product CD

■ CIMS Lab Web site

If you install or upgrade from the product tape, the files required are provided on the tape. If you install or upgrade from the CIMS Product CD or from the CIMS Lab Web site, you need to use the following self-extracting executable files depending on your situation.

> **Note** • **To ensure that you always have access to the current** *CIMS for OS/390* **genlevel, CIMS Lab recommends that you install or upgrade from the CIMS Lab Web site.**

If you are installing CIMS for OS/390 for the first time or are upgrading to a new release (for example, from 11.5 to 11.6):

Download the self-extracting file `cimss390_<genleveldate>.exe` and follow the instructions in the `readme` file. If you are installing from the CIMS Product CD, the `cimss390_ <genleveldate>.exe` file is in the `CIMSS390` folder. If you are installing from the CIMS Lab Web site, this file is on the Product Downloads page.

If you are upgrading from one genlevel to another of the same CIMS for OS/390 release (for example, one genlevel of 11.6 to another 11.6 genlevel):

Download the self-extracting file `s390updt_<genleveldate>.exe` and follow the instructions in the `readme` file. The `s390updt_<genleveldate>.exe` file is referred to as a maintenance update and upgrades your current genlevel to the latest genlevel of the same release. If you are installing from the CIMS Product CD, this file is in the `CIMSS390` folder. If you are installing from the CIMS Lab Web site, this file is on the Product Updates page.

The Product Updates page of the CIMS Lab Web site also contains product updates that CIMS Lab has made between genlevels. Look for updates listed that have a date after the genlevel and are not included in the `$UPDATES` member of the `CIMS.DATAFILE` library. These updates have been added since the genlevel build was created. Download and apply all the updates that are appropriate.

> **Note** • **Each genlevel includes the updates that preceded it. When you upgrade to a new genlevel, you do not need to apply updates with an earlier date.**

For complete installation and upgrade instructions, see *Chapter 2, New Installation Instructions* and *Chapter 3, Upgrade Instructions*.

New Installations

If you are installing *CIMS for OS/390* for the first time, refer to the following chapters:

■ *Chapter 5, README File*. This chapter provides a copy of the readme file contained in the self-extracting cimss390_<genleveldate>.exe executable located on the CIMS Product CD and CIMS Lab Web site. When installing from this executable, all the steps in the readme file must be completed before going on to *Step Two: Run CIMSINIT* on page 2-9.

If you are installing from the CIMS Product Tape, you do not need to review Chapter 5. Review *Step One: Install the Partitioned Datasets from the CIMS Product Tape, the Product CD, or Web Site* on page 2-8, included in *Chapter 2, New Installation Instructions.*

■ *Chapter 2, New Installation Instructions*. This chapter contains steps to install the base *CIMS for OS/390* product. You will run several sample jobs to test out the client and rate files and sample jobs to process SMF data and produce an invoice. After the system is installed, you will then customize it to your shop's standards.

■ *Chapter 4, Installation Flow Charts*. This chapter provides a guide to customizing CIMS for your shop.

Upgrades

If you are upgrading to a *new* release of *CIMS for OS/390*, refer to the following chapters:

■ *Chapter 5, README File*. This chapter provides a copy of the readme file contained in the self-extracting cimss390_<genleveldate>.exe executable located on the CIMS Product CD and CIMS Lab Web site. When upgrading from this executable, all the steps in the readme file must be completed before going on to *Chapter 3, Upgrade Instructions.*

If you are upgrading from the CIMS Product Tape, you do not need to review Chapter 5. Review *Step One: Install the Partitioned Datasets from the CIMS Product Tape, the Product CD, or Web Site* on page 2-8, included in *Chapter 2, New Installation Instructions.*

■ *Chapter 3, Upgrade Instructions*. This chapter contains all the information necessary to upgrade to the new release of CIMS. It lists the specific JCL changes, program changes (new control statements, updated control statements, different processing options), and report changes for the upgrade.

If you are upgrading from one genlevel to another of the *same CIMS for OS/390* release, perform the steps in the readme file contained in the self-extracting s390updt_<genleveldate>.exe executable located on the CIMS Product CD and CIMS Lab Web site. When upgrading from this executable, all the steps in the readme file must be completed before reviewing the DATAFILE and REPTLIB changes described in the *Ehancements/Updates to CIMS Chargeback OS/390* document (see page 1-5 for a description of this document).

For additional information regarding updates and enhancements to *CIMS for OS/390*, refer to the following documents. You can find these documents on the CIMS Product CD in the `DOCUMENTATION\OS390` folder and the CIMS Lab Web site.

■ *CIMS Chargeback for OS/390 Release Notes* (filename `os390rn.pdf`) contains all major changes included in the first genlevel of a new release. Any important program modifications, deletions and additions are discussed. `JCL` and report changes are also listed.

■ *Ehancements/Updates to CIMS Chargeback OS/390* (filename `updates_ <genleveldate>.pdf`) contains all the modifications to the release since the first genlevel. This document is arranged in genlevel order by component (Program updates, `CIMS.REPTLIB` updates, and `CIMS.DATAFILE` updates). This document is very useful for determining what changes have been made in a recent genlevel.

■ 2

New Installation Instructions

Introduction

CIMS generates invoices, job cost, and resource usage reports immediately following installation.

Installation and implementation of CIMS is straightforward. The basic requirements to install CIMS are as follows:

■ Ability to edit and submit a series of batch jobs.

■ Access to ONE DAY'S `SMF` Records. (Types 6 and 30).

■ CIMS does not require modifications to user `JCL`.

■ CIMS does not require any special exits or `SVC` calls.

Simply follow the steps in this chapter.

The basic portion of CIMS is installed after processing all items on the CIMS Setup Menu or by processing `CIMSJOB1` through `CIMSJOB4`.

Installation steps start on . *Chapter 4, Installation Flow Charts* contains a series of flow charts that are a useful reference during the installation process. Each CIMS program is documented in this manual.

CIMS TSO Screens

CIMS includes a series of `TSO` screens. These screens make it easier to implement `CIMS` and to generate reports. The following main menus are provided:

■ **Setup Menu.** Builds CIMS Client and Rate Tables and executes various set-up jobs.

■ **Interface Menu**. Account Code Tables and various usage log interfaces.

■ **Chargeback Menu**. Sets up and executes the `CIMSBILL` program

■ **Reporting and Graphics**. Selects and executes CIMS Sample Reports. Generates graphics files for downloading.

■ **Data Management**. Builds history files of CIMS input and output records.

To use the screens, access the main menu and then select the appropriate options from Setup, Interface, Chargeback, Reporting and Graphics, and Data Management.

Using the CIMS Screens

To use the CIMS screens, edit member `CIMS` in dataset `CIMS.CLIST` and change the dataset names to match the dataset names installed from the tape.

To start the Screen System

1 Add `CIMS` to your Startup `TSO` Menu. (Ask your `TSO` Systems Programmer.)

2 Edit member `CIMS` from dataset `CIMS.CLIST`. Enter the appropriate high level nodes before the four `CIMS` dataset names.

3 Execute member `CIMS` from dataset `CIMS.CLIST`.

4 Assign the `CIMS` screens to a `PF` Key.

To assign the CIMS Screens to a Key

1 Select `TSO ISPF PARMS` Option from the `ISPF` Main Menu.

2 Select `PF` KEYS

3 Modify a `PF` key to contain the following:

`PF13` ▶ `TSO EX '????????.CIMS.CLIST(CIMS)'`

`????????` is the High Level qualifier associated with dataset `CIMS.CLIST`.

4 Exit the `PF KEY` and `ISPF PARMS` screens and press `PF13`. The `CIMS` screen SYSTEM appears.

```
    CIMS MAIN MENU

1. Setup
2. Interface
3. Chargeback
4. Reporting & Graphics
5. Data Management

T. Tutorial
```

Select the appropriate option and begin the CIMS Chargeback process.

Installation Sources

As discussed in *What to Install* on page 1-3, you can install *CIMS for OS/390* from the following sources:

■ CIMS Product Tape

■ CIMS Product CD

■ CIMS Lab Web site (http://www.cimslab.com)

This section describes the contents of the CIMS Product Tape and the `cimss390_<genleveldate>.exe` executable that is located in both the `CIMSS390` folder of the CIMS Product CD and the Product Downloads page of the CIMS Lab Web site.

Tape

The distribution tape contains ten standard label datasets as follows:

DATASET	CONTENTS
1	`CIMS` Job Control, Tables, and Data Files
2	`CIMS` Load Modules
3	`CIMS CICS` Online Screens, Maps, and Load Modules
4	`CIMS` Report Writer Report Library
5	`CIMS TSO` Message Library
6	`CIMS TSO` Screen Library
7	`CIMS TSO CLIST` Library
8	`CIMS` Job Control, Tables, and Data Files BACKUP
9	`CIMS` Object Code
10	`CIMS LINK JCL` to create the Load Modules

CD and Web Site

The `cimss390_<genleveldate>.exe` executable on the CIMS Product CD and CIMSLab Web site contains the following files.

DATASET	CONTENTS
`CLIST_<genleveldate>.SEQ`	A `TSO` Transmitted sequential dataset containing the `CLIST` library for *CIMS for OS/390*.
`LOADLIB_<genleveldate>.SEQ`	A `TSO` Transmitted sequential dataset containing some Load modules for *CIMS for OS/390*.
`REPTLIB_<genleveldate>.SEQ`	A `TSO` Transmitted sequential dataset containing the `REPORT` library for *CIMS for OS/390*.
`DATAFILE_<genleveldate>.SEQ`	A `TSO` Transmitted sequential dataset containing the `CONTROL` library for *CIMS for OS/390*.
`MESSAGES_<genleveldate>.SEQ`	A `TSO` Transmitted sequential dataset containing the `ISPF` message library for *CIMS for OS/390*.
`PANELS_<genleveldate>.SEQ`	A `TSO` Transmitted sequential dataset containing the `ISPF` panel library for *CIMS for OS/390*.
`OBJECT_<genleveldate>.SEQ`	A `TSO` Transmitted sequential dataset containing the *CIMS for OS/390* object code.
`LINKJCL_<genleveldate>.SEQ`	A `TSO` Transmitted sequential dataset containing the link `JCL` to build the *CIMS for OS/390* load modules from the object code.
`README_<genleveldate>.RTF`	This file contains the installation instructions.
`ALLOC_<genleveldate>.JCL`	A sample `JCL` member that allocates all the temporary install and permanent product libraries.
`INSTJOB1_<genleveldate>.JCL`	A sample `JCL` member that restores the datasets from the sequential files.

CIMS INSTALLATION

> **Note** • **To determine whether you have the latest release of** *CIMS for OS/390*, **see** *About Installing the Most Current Release* **on page 1-2.**

Installation Overview

The following is an overview of the steps required to install *CIMS for OS/390*. These steps are discussed in detail in the following sections.

1 Install the partitioned datasets from the CIMS Product Tape, CIMS Product CD, or CIMS Lab Web site.

2 Execute the `REXX` program `CIMSINIT`.

> **Run CIMSINIT**   1) Replace sample jobcard with user jobcard
>
> 2) Insert or replace dataset name high level qualifiers
>
> 3) Insert `VOLSER` numbers
>
> 4) Insert `DSCB` Model names

3 Check the level of `COBOL LE`.

CIMS for OS/390 has been compiled using `COBOL` for `OS/390` and linked with `COBOL LE`. The `CIMS` programs need access to the `COBOL LE` runtime.

4 Process `CIMSJOB1`.

This job creates the `CIMS CLIENT` and `CIMS RATE VSAM` files.

It is *not* necessary to set rates *or* identify clients at this time, just create the `VSAM` files using the `CIMS` defaults.

5 Process `CIMSJOB2`. (`CIMSDATA` and `CIMSACCT`)

This job processes programs `CIMSDATA` and `CIMSACCT`. These programs interface with the `MVS-SMF` dataset and create the `CIMS.CIMSACCT.DAILY` batch chargeback file.

6 Process `CIMSJOB3`. (`CIMSBILL`)

This job processes program `CIMSBILL`, which creates:

- Invoices

- Zero cost invoices (Rate Determination)

- Batch detail and summary reports

- Job Cost Report

`CIMSBILL` creates the `CIMS` Resource File and Summary File. Both files are used for additional reporting.

7 Process `CIMSJOB4`. (`CIMS` Report Writer)

This job generates Chargeback and Resource Usage Reports.

8 (Optional) Process `CIMS` Sub-systems.

`CIMSDISK`, `CIMSTAPE`, `CIMSCICS`, `CIMSDB2`, `CIMSUNIV`, and so forth.

9 (Optional) Install `CIMS` `CICS`-Based online screens.

Screens provide Rate and Client Maintenance, External Transaction Entry, Account Code Validation, and `CA/DISPATCH` Maildrop Conversion.

10 (Optional) Install the CIMS Web-based reporting feature. This feature allows users to create a wide variety of reports (including drill down detail reports), graphics and spreadsheets in a browser-based, point-and-click environment.

Getting Started

The basic portion of `CIMS` is installed after processing the items on the Setup Menu or `CIMSJOB1`, `CIMSJOB2`, `CIMSJOB3`, and `CIMSJOB4`.

To support `CICS`, `DB2`, `IDMS`, `IMS`, `VM/CMS`, `VSE`, `DASD` Space Chargeback, Tape Storage Accounting and so forth, edit and process the appropriate job control or access the appropriate menu.

Members names are `CIMSCICS`, `CIMSDB2`, `CIMSDISK`, and so forth.

For assistance in installing *CIMS for OS/390*, contact CIMS Lab (see page viii).

Step One: Install the Partitioned Datasets from the CIMS Product Tape, Product CD, or Web Site

To Install from the CIMS Product Tape

The following job control unloads the first dataset from the distribution tape into a partitioned dataset identified as `CIMS.DATAFILE`. Dataset `CIMS.DATAFILE` contains the library of `CIMS` job control, input parameters, copy books and other data elements.

To unload dataset one:

▸ Execute the following `JCL`:

```
//CIMS0010 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//INPUT    DD DSN=CIMS.DATA,
//            DISP=(OLD,PASS),
//            UNIT=TAPE,
//            VOL=SER=??????,
//            LABEL=(1,SL,,EXPDT=98000)
//*
//OUTPUT   DD DSN=CIMS.DATAFILE,
//            DISP=(,CATLG),
//            UNIT=SYSDA,
//            SPACE=(CYL,(4,2,70)),
//            VOL=SER=??????
//*
//SYSUT3   DD DSN=&&TEMP3,UNIT=SYSDA,SPACE=(CYL,(10))
//SYSUT4   DD DSN=&&TEMP4,UNIT=SYSDA,SPACE=(CYL,(10))
//SYSIN    DD *
  COPY OUTDD=OUTPUT,INDD=((INPUT,R))
/*
```

After unloading dataset one, edit member `CIMSLOAD`. This member contains nine `IEBCOPY` executions that unload datasets two through ten. Submit the job control to load the remainder of the `CIMS` partition datasets.

Note • `CIMS` **is password controlled. The installation material contained your passwords. Be sure to have the password document.**

To Install from the CIMS Product CD or the CIMS Lab Web Site

Download the self-extracting file `cimss390_<genleveldate>.exe` and follow the instructions in the `readme` file and then proceed to *Step Two: Run CIMSINIT* on page 2-9. The `readme` file explains the steps involved in installing the partitioned datasets from the zip file. A copy of the `readme` file is in *Chapter 5, README File*.

If you are installing from the CIMS Product CD, the `cimss390_ <genleveldate>.exe` file is in the `CIMSS390` folder. If you are installing from the CIMS Lab Web site, this file is on the Product Downloads page.

CIMS Partitioned Datasets

When the partitioned datasets are successfully installed, the following datasets are created:

- `CIMS.DATAFILE` Sample `JCL` and Data Files.

- `CIMS.LOAD.MODULES` Executable Programs

- `CIMS.CICS.LOADMODS` `CIMS` Online Screens

- `CIMS.REPTLIB` Report Writer Library

- `CIMS.MESSAGES` Under Construction

- `CIMS.PANELS` `TSO` Screen Members

- `CIMS.DATAFILE.BACKUP` A copy of `CIMS.DATAFILE`

- `CIMS.CLIST` `TSO` `CLIST`s Members

- `CIMS.LINKJCL` `LINK JCL` to create the Executable Programs

- `CIMS.OBJECT` `CIMS` Object Code

Step Two: Run CIMSINIT

Execute the `REXX` program `CIMSINIT`. This program is a utility that transforms all the `CIMS JCL` to your specifications. `CIMSINIT` inserts job cards, adds high level nodes to all `CIMS` datasets, changes `VOLSER` numbers, and specifies `DSCB` Model names.

Note • **If you do not process** `CIMSINIT`**, you have to change each** `JCL` **member manually as you use it.**

In `TSO`, enter the command:

`TSO EX 'CIMS.DATAFILE(CIMSINIT)'`

Be sure to include your high level node, if necessary.

`CIMSINIT` tries to determine the high level node of your installation from the command you entered to start the program. If it is not successful, usually due to operating system settings, it asks you to enter the high level node manually.

This implementation of `TSO/E MVS/REXX` does not support the `PARSE SOURCE` command. High Level Qualifier must be entered manually.

Enter the HIGH LEVEL QUALIFIER that `CIMS` was installed under:

If this occurs, simply type the high level node(s) used during tape unload and press <Enter>. `CIMSINIT` then displays a `TSO` screen with four sections:

Section 1: Job Card Replacement

```
Job Card Source (Member DSN) ══>
Number of lines to copy       ══> 2
Job Name Mask                 ══>
SKIP JOB CARD REPLACEMENT     ══>
```

To bypass the Job Card Replacement, enter a '/' into the `SKIP JOB CARD REPLACEMENT` field.

To replace job cards

1 Enter the `DSN` of the member to use as the job card template and the number of lines you want copied from that member.

2 Enter the Job Name mask you want to use. Anywhere after the first character, you must enter a sequence of '*' characters to indicate where to insert your job sequence number. The sequence mask is from 2 to 6 characters in length:

Job Card Mask	Job Names placed in JCL
CIMS****	CIMS0001, CIMS0002, CIMS0003...
P******Q	P000001Q, P000002Q, P000003Q...
CIM**CIM	CIM01CIM, CIM02CIM, CIM03CIM...

These job sequence numbers are assigned sequentially to avoid duplicate job names as the Job Card is being inserted into each `CIMS JCL` member. You can change the Job Name later at your discretion.

Section 2: High Level Qualifier Insertion/Replacement

```
Action (<I>nsert or <R>eplace)       ══> I
Target String (to Replace or Precede) ══> CIMS.
High Level Qualifier                 ══> TEST1234.
Replacement String (Replace only)    ══>
SKIP HLQ REPLACEMENT                 ══>
```

To bypass the `HLQ` Replacement, enter a '/' into the "SKIP HLQ REPLACEMENT" field.

All `CIMS JCL` files contain dataset references that look like the following:

```
CIMS.REPTLIB(SWOPTION)
```

`HLQ` Replacement lets you insert or replace high level nodes in these references throughout the `CIMS` installation.

■ The default selections are <I>nsert, `CIMS.`, and the high level qualifier being used. Using these settings inserts that `HLQ` before every occurrence of "CIMS." in every uncommented `JCL` line.

■ If you choose <R>eplace, `CIMSINIT` ignores the `HLQ`, and *replaces* the target string with whatever is entered in the "Replacement String" field.

■ This section (as well as the Job Card and Volume replacements) can be run multiple times as the need arises.

Section 3: Volume Replacement

```
IDCAMS:  VOL(??????) Target  ==> ??????   Replace With  ==>
JCL: VOL=SER=??????  Target  ==> ??????   Replace With  ==>
SKIP VOLUME REPLACEMENT       ==>
```

■ To bypass Volume Replacement, enter a '/' into the "SKIP VOLUME REPLACEMENT" field.

■ At various places within the `CIMS JCL`, Volume Serial numbers are needed. This utility allows you to replace them all globally. `CIMS` ships with these Volume Serial numbers as "??????" throughout the `JCL`. The default targets are therefore "??????".

■ The `IDCAMS` field replaces all Volume Serial references in the `IDCAMS` processes throughout `CIMS` (i.e. VOL(??????))

■ The `JCL` field replaces all other VolSer references (i.e. VOL=SER=??????).

Section 4: Model DSCB Replacement

```
Installation Model DSCB      ==>
SKIP MODEL DSCB REPLACEMENT  ==>
```

To bypass Model DSCB Replacement, enter a '/' into the "SKIP MODEL DSCB REPLACEMENT" field.

■ Most installations require a Model DSCB parameter for the proper functioning of Generation Data Groups (GDGs). Enter the DSN of your installation's model in the field.

■ The CIMS distribution tape is sent with all Model DSCB references set to "MODELDCB". If your installation does not require the use of this parameter, you can delete it manually from the JCL.

CIMSINIT Statistics

```
Processing...

291 Files
0 Exceptions

JobCard  : 145 Replacements
HLQ      : 1519 Inserts
Volume   : 51 Replacements
ModelDSCB: 12 Replacements

NORMAL CIMSHLQ COMPLETION
***
```

Once CIMSINIT has run, you are shown the statistics for that run. If any exceptions are noted, you can find them listed in the HLQEXCEP member of CIMS.DATAFILE. These exceptions might or might not be severe enough to cause a JCL error, so you should check HLQEXCEP immediately if any exceptions are reported.

Step Three: Check the Level of COBOL LE

The next step is to check the level of COBOL LE:

• The CIMS programs must have access to COBOL LE (the language environment for COBOL). To check if it is accessible to the CIMS programs, edit the CIMS.LINKJCL member INSTJOB4 and submit it. If it abends with an OC4, then COBOL LE is not link listed. If it ends with a return code of 0, the output will show the level of COBOL LE installed.

• If you have installed from the product tape, the CIMS load modules were linked with COBOL LE release 1.8. You must have at least this level to run these programs. If you are at a lower release, you can re-link the CIMS programs with your release of LE by editing and submitting the CIMS.LINKJCL member INSTJOB2. You must edit CIMS.LINKJCL member LINKPROC prior to submitting INSTJOB2.

Step Four: Process CIMSJOB1

The next step is to process `CIMSJOB1`.

`CIMSJOB1` is a member in `CIMS.DATAFILE`.

This job creates two permanent files and one `GDG`:

■ `CIMS.CLIENT.VSAM`	Client File
■ `CIMS.CIMSRATE.VSAM`	Rate Table
■ `CIMS.CIMSACCT.SUSPENSE`	`GDG` for `CIMSACCT` Processing

The client and rate files are created using the sample clients and rates provided.

Note • **These files are required.**

Member `CLIENT` contains sample client records. Client Records are documented in the *Client Identification and Budget Reporting—CIMSCLNT and CIMSBDGT* chapter of the *CIMS Chargeback for OS/390 User Guide*.

Members `CIMSRATE, CIMSRT01, CIMSRT02` contain sample Rate Records. Rate Records are documented in the *Computer Center Chargeback Program—CIMSBILL* chapter of the *CIMS Chargeback for OS/390 User Guide*.

CIMSJOB1 Job Control

```
//CIMSJOB1 JOB (XXXX,YYYY),'LOAD-CLIENTS-RATES',//
CLASS=A,MSGCLASS=X,NOTIFY=??????
//*
//*
//*
//*
//JSTEP010 EXEC PGM=IDCAMS,REGION=0K
//*
//* DEFINE CLUSTER CIMS.CLIENT.VSAM
//*
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//*
//VSAMC1   DD UNIT=SYSDA,
//           DISP=SHR,
//           VOL=SER=??????
//*
//SYSIN    DD *,DCB=BLKSIZE=80
 DEFINE CLUSTER
    (NAME(CIMS.CLIENT.VSAM)            -
     RECSZ(800 800)                    -
     KEYS(32 0)                        -
     SPEED                             -
     NOREUSE                           -
     UNIQUE                            -
     FILE(VSAMC1)                      -
     IMBED                             -
     REPLICATE                         -
     SHR(2 3))                         -
 DATA                                  -
    (NAME(CIMS.CLIENT.VSAM.DATA)       -
     CYLINDERS(10 2)                   -
 INDEX                                 -
    (NAME(CIMS.CLIENT.VSAM.INDEX))
 LISTCAT                               -
    ENTRIES (CIMS.CLIENT.VSAM) ALL
/*
//*
//JSTEP020 EXEC PGM=CIMSCLNT,REGION=0K
//*
//*          CREATE DATASET CIMS.CLIENT.VSAM
//*
//* PROGRAMS CIMSCLNT/CIMSBDGT ARE DOCUMENTED IN CHAPTER 5
//*
//* *************************************************************
//*          EDIT MEMBER CLIENT                                *
//* *************************************************************
//*
//STEPLIB  DD DSN=CIMS.LOAD.MODULES,
//           DISP=SHR
//*
//SYSOUT   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//CIMSPRNT DD SYSOUT=*
//*
//CIMSCLVS DD DSN=CIMS.CLIENT.VSAM,
//           DISP=SHR
```

```
//*
//CIMSCNTL DD DSN=CIMS.DATAFILE(CLIENT),
//           DISP=SHR
//*
//JSTEP030 EXEC PGM=CIMSBDGT,REGION=0K
//*
//*           PRINT CLIENT REPORT
//*
//STEPLIB  DD DSN=CIMS.LOAD.MODULES,
//           DISP=SHR
//*
//CIMSCLVS DD DSN=CIMS.CLIENT.VSAM,
//           DISP=SHR
//*
//SYSOUT   DD SYSOUT=*
//CIMSPRNT DD SYSOUT=*
//*
//SYSUDUMP DD SYSOUT=*
//*
//SORTWK01 DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//SORTWK02 DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//SORTWK03 DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//SORTWK04 DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//*
//CIMSHEAD DD DSN=CIMS.DATAFILE(BUDGETIN),
//           DISP=SHR
//*
//CIMSCNTL DD *,DCB=BLKSIZE=80
//*
//JSTEP040 EXEC PGM=IDCAMS,REGION=0K
//*
//*       CREATE CIMS RATE FILE CIMS.CIMSRATE.VSAM
//*
//*****************************************************************
//*                                                              *
//*    IF THE VSAM RATE FILE HAS ALREADY BEEN CREATED AND        *
//*    RECORDS ADDED, PLEASE REMOVE OR COMMENT OUT STEPS ---     *
//*                                                              *
//*        JSTEP040  JSTEP050  JSTEP060  JSTEP070                *
//*                                                              *
//*****************************************************************
//*
//*   NOTE:  FIND '??????' AND REPLACE WITH VOL SERIAL
//*
//*          HIGH LEVEL QUALIFIER IS CIMS.
//*
//*
//*          THE DELETE STATEMENT WILL TERMINATE WITH A CONDITION
//*          CODE OF 8. THIS IS OK !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
//*
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//*
//VSAMC1   DD UNIT=SYSDA,DISP=SHR,VOL=SER=??????
//SYSIN    DD *,DCB=BLKSIZE=80
 DELETE (CIMS.CIMSRATE.*)                    -
     PURGE
 DEFINE CLUSTER                              -
    (NAME(CIMS.CIMSRATE.VSAM)                -
```

```
                  VOL(??????)                         -
                  RECSZ(200 200)                      -
                  KEYS(16 0)                          -
                  SPEED                               -
                  NOREUSE                             -
                  UNIQUE                              -
                  FILE(VSAMC1)                        -
                  IMBED                               -
                  REPLICATE                           -
                  SHR(2 3))                           -
           DATA                                       -
              (NAME(CIMS.CIMSRATE.VSAM.DATA)          -
               RECORDS(1000 200)                      -
               CISZ(8192))                            -
           INDEX                                      -
              (NAME(CIMS.CIMSRATE.VSAM.INDEX))
           LISTCAT                                    -
              ENTRIES (CIMS.CIMSRATE.VSAM) ALL
        /*
        //*
        //JSTEP050 EXEC PGM=CIMSRTLD,REGION=0K
        //*
        //*          DUMMY CIMS RATE LOAD
        //*
        //STEPLIB  DD DSN=CIMS.LOAD.MODULES,
        //            DISP=SHR
        //*
        //SYSUDUMP DD SYSOUT=*
        //SYSABOUT DD SYSOUT=*
        //SYSOUT   DD SYSOUT=*
        //CIMSPRNT DD SYSOUT=*
        //*
        //CIMSRATE DD DUMMY,DCB=BLKSIZE=80
        //*
        //CIMSRTVS DD DSN=CIMS.CIMSRATE.VSAM,
        //            DISP=SHR
        //*


        //JSTEP060 EXEC PGM=IDCAMS,REGION=0K
        //*
        //*          BUILD ALTERNATE INDEX
        //*
        //SYSPRINT  DD SYSOUT=*
        //SYSOUT    DD SYSOUT=*
        //*
        //VSAMC1   DD UNIT=SYSDA,DISP=SHR,VOL=SER=??????
        //IDCUT1   DD UNIT=SYSDA,DISP=SHR,VOL=SER=??????
        //IDCUT2   DD UNIT=SYSDA,DISP=SHR,VOL=SER=??????
        //SYSIN    DD *
        DEFINE AIX                                     -
           (NAME(CIMS.CIMSRATE.AIX.VSAM)               -
            RELATE(CIMS.CIMSRATE.VSAM)                 -
            VOL(??????)                                -
            RECSZ(200 200)                             -
            KEYS(10 100)                               -
            UNIQUEKEY                                  -
            UPGRADE                                    -
            SPEED                                      -
            NOREUSE                                    -
```

```
        UNIQUE                                       -
        FILE(VSAMC1)                                 -
        IMBED                                        -
        REPLICATE                                    -
        SHR(2 3))                                    -
 DATA                                                -
    (NAME(CIMS.CIMSRATE.AIX.DATA)                    -
     RECORDS(1000 200)                               -
     CISZ(8192))                                     -
 INDEX                                               -
    (NAME(CIMS.CIMSRATE.AIX.INDEX))
 LISTCAT                                             -
     ENTRIES (CIMS.CIMSRATE.AIX.VSAM) ALL
 DEFINE PATH                                         -
    (NAME(CIMS.CIMSRATE.AIX.PATH)                    -
     PATHENTRY(CIMS.CIMSRATE.AIX.VSAM)               -
     UPDATE)
 LISTCAT                                             -
     ENTRIES (CIMS.CIMSRATE.AIX.PATH) ALL
 BLDINDEX INDATASET(CIMS.CIMSRATE.VSAM) -
         OUTDATASET(CIMS.CIMSRATE.AIX.VSAM)
/*
//*

//JSTEP070 EXEC PGM=CIMSRTLD,REGION=0K
//*
//*        LOAD CIMS RATE FILE        CIMS.CIMSRATE.VSAM
//*
//STEPLIB  DD DSN=CIMS.LOAD.MODULES,
//            DISP=SHR
//*
//SYSUDUMP DD SYSOUT=*
//SYSABOUT DD SYSOUT=*
//SYSOUT   DD SYSOUT=*
//CIMSPRNT DD SYSOUT=*
//*
//CIMSRATE DD DSN=CIMS.DATAFILE(CIMSRATE),
//            DISP=SHR
//         DD DSN=CIMS.DATAFILE(CIMSRT01),
//            DISP=SHR
//         DD DSN=CIMS.DATAFILE(CIMSRT02),
//            DISP=SHR
//*
//CIMSRTVS DD DSN=CIMS.CIMSRATE.VSAM,
//            DISP=SHR
//*
//CIMSRTV1 DD DSN=CIMS.CIMSRATE.AIX.PATH,
//            DISP=SHR
//*

//JSTEP080 EXEC PGM=CIMSRTRP,REGION=0K
//*
//*        PRINT RATE FILE
//*
//STEPLIB  DD DSN=CIMS.LOAD.MODULES,
//            DISP=SHR
//*
//SYSOUT   DD SYSOUT=*
//SYSABOUT DD SYSOUT=*
```

```
//SYSUDUMP DD SYSOUT=*
//CIMSPRNT DD SYSOUT=*
//*
//SORTWK01 DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//SORTWK02 DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//SORTWK03 DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//SORTWK04 DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//*
//CIMSRTVS DD DSN=CIMS.CIMSRATE.VSAM,
//            DISP=SHR
/*
//JSTEP090 EXEC PGM=IDCAMS,REGION=0K
//*
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//*
//SYSIN    DD *,DCB=BLKSIZE=80
 DEFINE GDG                                 -
    (NAME(CIMS.CIMSACCT.SUSPENSE)           -
    LIMIT(5)                                -
    NOEMPTY)
 LISTCAT                                    -
    ENTRIES (CIMS.CIMSACCT.SUSPENSE) ALL
/*
//*
```

Step Five: Process CIMSJOB2

The next step is to process `CIMSJOB2`.

`CIMSJOB2` is a member in `CIMS.DATAFILE`.

This job interfaces with the `MVS-SMF` dataset and creates the `CIMS` accounting file.

■ JOB STEP 2A executes Program `CIMSDATA` (refer to the *SMF Interface Program—CIMSDATA* chapter of the *CIMS Chargeback for OS/390 User Guide*).

■ JOB STEP 2B executes Program `CIMSACCT` (refer to the *Accounting File Creation Program—CIMSACCT* chapter of the *CIMS Chargeback for OS/390 User Guide*).

Note • **It is not necessary to read chapters 2 and 3 now. However, we strongly recommend that you refer to these chapters before you start changing our default control statements.**

A flow chart for each program is contained in *Chapter 4, Installation Flow Charts*.

Refer to *Chapter 4, Installation Flow Charts* in this manual for page numbers of each flow chart.

Note • `CIMSJOB2` **is the basis for your daily processing.**

`CIMSJOB2` is the only job required on a daily basis for batch chargeback. Logically, it is processed immediately after the `SMF` dataset is unloaded to disk or tape. When `CIMSJOB2` completes, dataset `CIMS.CIMSACCT.DAILY` contains `MVS` batch and `TSO` accounting records, and dataset `CIMS.SMF.HISTORY` contains reformatted `SMF` records.

SMF Merge

We recommend that you insert a merge between steps `CIMS2A` and `CIMS2B` to create a history of dataset `CIMS.SMF.HISTORY`. (See member `SMFMERGE` in `CIMS.DATAFILE`.) The merge field is seven for one character.

Use a cartridge tape and block the output dataset to 32K (BLKSIZE = 32760).

CIMS Merge

A sample `SORT/MERGE` set of Job Control that creates a sorted history dataset of `CIMS` Chargeback Records can be found in dataset `CIMS.DATAFILE` member `CIMSMERG`. This job control should be processed daily after the batch and online `CIMS` jobs have been executed.

■ If `CIMSMERG` is done on a daily basis, at the end of the month, the `CIMS` master file is in Account Code Sort Sequence.

■ You should maintain the history datasets on tape. Leave the daily files on disk for daily reports and set up Generation Datasets to tape for the history file.

CIMSJOB2 Explanation—Program CIMSDATA

CIMS2A

This job step executes program `CIMSDATA`. The dataset created by the `SMF` Dump Facility is read and 4 `CIMS` datasets are created.

INPUT	DDNAME SMFIN	This is the `SMF DUMP` dataset.
INPUT	DDNAME CIMSCNTL	Dataset `CIMS.DATAFILE` (`DATAINPT`) Contains input control statements. See the Control Statement Table in the *SMF Interface Program—CIMSDATA* chapter of the *CIMS Chargeback for OS/390 User Guide* for further information.
OUTPUT	DDNAME CIMSSMF	`CIMS` reformatted `SMF` dataset. Contains each `SMF` record from the input dataset unless limited by a records statement.
		This dataset is designed as a backup dataset of reformatted `SMF` Records. This dataset can be input to the `CIMS` REPORT WRITER.
		Depending on installation requirements, you might choose to `DD DUMMY` this dataset, or to COMMENT the statement.

OUTPUT	DDNAME CIMSACCT	This dataset contains Selected SMF Chargeback records (6, 30, 101, 110).
		This dataset is used as input in step CIMS2B.
OUTPUT	DDNAME CIMSCICS	This dataset contains CICS records (SMF Type 110) This record is used by the CIMS CICS Interface Programs.
OUTPUT	DDNAME CIMSDB2	This dataset contains DB2 records (SMF Type 101) This record is used by the CIMS DB2 Interface Programs.

CIMSJOB2 Explanation–(Program CIMSACCT)

CIMS2B

This step executes program CIMSACCT. CIMSACCT processes the dataset created by program CIMSDATA (DDNAME CIMSACCT) and generates the CIMS Batch Chargeback dataset.

INPUT	DDNAME CIMSDATA	Reformatted SMF records.
		These records are created by DDNAME CIMSACCT in program CIMSDATA.
		CIMS Suspense File.
		The CIMS Suspense file for unmatched job step and print records is appended to DDNAME CIMSDATA.
INPUT	DDNAME CIMSCNTL	Control Statements.
		Member ACCTINPT contains CIMS default control statements for CIMSACCT.
INPUT	DDNAME CIMSPASS	CIMS product passwords.
		Passwords are supplied with CIMS.
		Update member CIMSNUMS with the supplied passwords. If you cannot find the passwords, call (800) 283-4267 OR (916) 783-8525 and we can give them to you over the phone.
INPUT	DDNAME CIMSTABL	Optional user-supplied table to convert Job Names and/or Job Card account codes to a new format. Refer to the *Accounting File Creation Program— CIMSACCT* chapter of the *CIMS Chargeback for OS/ 390 User Guide* for further information.
INPUT	DDNAME CIMSDTVS	CIMS VSAM dictionary file.
		The dictionary file is used by CIMSACCT when PROCESS CIMS SERVER RESOURCE RECORDS is specified.

INPUT	DDNAME CIMSPDS	Control statements.
		This dataset is used by CIMSACCT when PROCESS CIMS SERVER RESOURCE RECORDS is specified. A member, ALIASACC, in this dataset contains the control members for the different records.
OUTPUT	DDNAME CIMSACCT	`CIMS` batch chargeback file.
		This dataset is used by `CIMS` Billing Program `CIMSBILL` and the `CIMS` Report Writer.
OUTPUT	DDNAME CIMSACT1	`CIMS` 791 records.
		This dataset contains the non-`SMF30` and `SMF6` records. These records are used by the `CIMS SERVER EXTRACT` program to create resource records for *CIMS Server*.
OUTPUT	DDNAME CIMSACT2	`CIMS` 792 records.
		This dataset contains the `SMF` 30 data. These records are used by the `CIMS SERVER EXTRACT` program to create resource records for *CIMS Server*.
OUTPUT	DDNAME CIMSACT3	`CIMS` 793 records.
		This dataset contains the `SMF` 6 data. These records are used by the `CIMS SERVER EXTRACT` program to create resource records for *CIMS Server*.
OUTPUT	DDNAME CIMSUSPN	`CIMS` suspense file.
		This dataset contains Step and Print records that have not been matched with a Job Start or Job Stop record.
OUTPUT	DDNAME CIMSEXCP	This datset contains records that have *not* been matched with entries in the `CIMSTABL` dataset.
OUTPUT	DDNAME CIMSPRNT	This dataset contains the runtime parameters and the results of the run.
OUTPUT	DDNAME CIMSMSG	This dataset contains informational messages.
OUTPUT	DDNAME CIMSSEL	CIMS accounting records.
		This dataset contains the records that failed date selection when the PROCESS CIMS MAINTENANCE and NON-SELECTED FILE PROCESSING ON control statements are specified.
OUTPUT	DDNAME CIMSUNSP	Unsupported CIMS Server Resource Records.
		This dataset contains all CIMS Server Resource Records that did not have a definition within CIMSDTVS.

CIMSJOB2 Job Control

Member `CIMSJOB2` in `CIMS.DATAFILE` might be more current than what is printed here!

```
//CIMSJOB2 JOB (XXXX,YYYY),'CONVERT-SMF-DATA',

//        CLASS=A,MSGCLASS=X,NOTIFY=??????
//*
//*
//*        MEMBER CIMSGDG CONTAINS IDCAM GDG DEFINITIONS
//*        REVIEW THIS MEMBER BEFORE PROCESSING THIS JOB
//*
//*
//*
//*        PROGRAM CIMSDATA CONVERTS SMF DATA TO CIMS FORMAT
//*        CONVERTED DATA IS WRITTEN TO DD'S CIMSSMF, CIMSACCT,
//*        CIMSCICS & CIMSDB2.    RECFM=VB.
//*
//*        CIMS REQUIRES SMF RECORDS:
//*             FOR BATCH              30-1,30-2,30-3,
//*                                    30-4,30-5
//*             FOR TSO SUPPORT        30-1,30-2,30-3,
//*                                    30-4,30-5
//*             FOR STC SUPPORT        30-1,30-2,30-3,
//*                                    30-4,30-5
//*             FOR INTERVAL ACCOUNTING 30-2,30-3
//*             FOR SYSOUT SUPPORT     6/26
//*             FOR CICS               110
//*             FOR DB2                101
//*             FOR CA DISPATCH        206 (DISPATCH TYPE 6 RECORD)
//*
//*        TO DELETE CIMSSMF, CIMSACCT, CIMSCICS, CIMSDB2
//*        REMOVE THE APPROPRIATE DD STATEMENT.
//*
//*        CONTROL RECORDS FOR PROGRAM CIMSDATA ARE DOCUMENTED IN
//*        CHAPTER 1 CIMSDATA
//* ****************************************************************
//*                                                              *
//*          CLEAN UP DATASETS                                   *
//*           REVIEW THIS STEP                                   *
//* ****************************************************************
//*
//CIMS2AA  EXEC PGM=IEFBR14,REGION=0K
//*
//DD1     DD DSN=CIMS.CIMSACCT.DATA,DISP=(MOD,DELETE),
//          UNIT=SYSDA,
//          SPACE=(TRK,1)           DD CIMSACCT STEP CIMS2A
//*
//DD2     DD DSN=CIMS.CIMSACCT.DAILY,DISP=(MOD,DELETE),
//          UNIT=SYSDA,
//          SPACE=(TRK,1)           DD CIMSACCT STEP CIMS2B
//*
```

```
//CIMS2A   EXEC PGM=CIMSDATA,REGION=OK
//*
//*          THIS IS THE DAILY JOB STEP TO READ & CONVERT SMF DATA
//*          FOR BATCH, TSO, CICS, & DB2 ACCOUNTING.
//*
//*          RUN THESE STEPS DAILY.....................
//*
//STEPLIB  DD DSN=CIMS.LOAD.MODULES,DISP=SHR
//*
//SYSUDUMP DD SYSOUT=*
//*
//SYSOUT   DD SYSOUT=*
//*
//CIMSPRNT DD SYSOUT=*
//*
//SMFIN    DD DSN=XXXXXX.XX,           SMF DATA FROM DUMP PROGRAM
//           DISP=OLD,
//           UNIT=TAPE
//*
//*          RECORDS WRITTEN TO DD 'SYSOUT' ARE RECORDS WHICH DO NOT
//*          PASS A VALIDITY TEST.
//*
//*          THE FIRST 24 BYTES OF THE OUTPUT ARE:
//*          4 BYTES(NUMBER OF LOGICAL RECORDS WRITTEN TO DD CIMSSMF)
//*          4 BYTES(NUMBER OF LOGICAL RECORDS WRITTEN TO DD CIMSACCT)
//*          4 BYTES(NUMBER OF LOGICAL RECORDS READ FROM  DD SMFIN)
//*          4 BYTES(NUMBER OF SMF RECORDS IN ERROR
//*          4 BYTES(BLOCK COUNT OF INVALID SMF RECORD(DD SMFIN)
//*          4 BYTES(ERROR CODE) 2 = NO OPEN DATA SETS.
//*          4=INVALID SMF RECORD
//*
//*          THE REMAINING DATA IS THE DATA RECORD IN ERROR.
//*          REG(9) POINTS TO THE BEGINNING OF THE RECORD.
//*          THE ACCESS METHOD USED IS QSAM MOVE MODE, RECFM=VBS.
//*          CIMSDATA WILL GENERATE A MAXIMUM OF 5 SNAP'S.
//*          AFTER 5 SNAP'S, PROCESSING CONTINUES.
//*
//*          IF SNAP ID = 2, THEN AN ERROR HAS OCCURRED DURING
//*          PROCESSING AND THIS SNAP IS GENERATED AT END OF JOB.
//*          ONLY THE SIX FIELDS NOTED ABOVE ARE DISPLAYED.
//* ****************************************************************
//* ****************************************************************
//*
//*CIMSDATA  DD DSN=CIMS.SMF.HISTORY(0),DISP=OLD
//*
//*            TO READ THE OUTPUT DATA SET CIMSSMF, USE DD CIMSDATA
//*            AND SUPPLY A CONTROL RECORD WITH  "PROCESS CIMS"
//*            IN THE CIMSCNTL DATASET.............................
//*
//* ****************************************************************
//* ****************************************************************
//*
//*          ALL REQUESTED RECORDS ARE WRITTEN TO DD CIMSSMF
//*
```

```
//CIMSSMF  DD DSN=CIMS.SMF.DAILY,
//           DISP=(NEW,CATLG,DELETE),
//           DCB=(RECFM=VB,BLKSIZE=32760),
//           UNIT=TAPE
//*
//*        CIMS.SMF.DAILY   IS USED BY THE CIMS REPORT WRITER
//*        SETUP A TAPE GDG FOR DSN CIMS.SMF.DAILY
//*
//*        DSN CIMS.SMF.DAILY SHOULD BE MERGED DAILY TO CREATE
//*        A HISTORY FILE FOR CIMS CONVERTED RECORDS.
//*
//*        SETUP A TAPE GDG FOR DSN CIMS.SMF.HISTORY WITH
//*        32K BLOCKSIZE.
//*
//*        SEE CIMS.DATAFILE(SMFMERGE)....
//*
//***********************************************************************
//*
//*        SMF RECORDS 6, 30, 101, & 110 ARE WRITTEN TO DD CIMSACCT
//*
//*          RECORD TYPE 6   = SYSOUT ACCOUNTING RECORD
//*          RECORD TYPE 30  = JES2/JES3, TSO & STC ACCOUNTING RECORD
//*          RECORD TYPE 101 = DB2 TRANSACTION ACCOUNTING RECORD
//*          RECORD TYPE 110 = CICS TRANSACTION ACCOUNTING RECORD
//*
//CIMSACCT DD DSN=CIMS.CIMSACCT.DATA,
//           DISP=(NEW,CATLG,DELETE),
//           UNIT=SYSDA,
//           SPACE=(CYL,(200,30),RLSE),
//           DCB=(RECFM=VB,BLKSIZE=32760)
//***********************************************************************
//*
//*        SMF RECORD TYPE 110 IS WRITTEN TO DD CIMSCICS
//*        USED FOR CICS TRANSACTION ACCOUNTING
//*        SEE JCL IN MEMBER CIMSCICS. REMOVE * IN JCL
//*
//*CIMSCICS DD DSN=CIMS.CIMSCICS.DATA,
//*           DISP=(NEW,CATLG,DELETE),
//*           UNIT=SYSDA,
//*           SPACE=(CYL,(100,30),RLSE),
//*           DCB=(RECFM=VB,BLKSIZE=32760)
//***********************************************************************
//*
//*        SMF RECORD TYPE 101 IS WRITTEN TO DD CIMSDB2
//*        USED FOR DB2 TRANSACTION ACCOUNTING
//*        SEE JCL IN MEMBER CIMSDB2. REMOVE * IN JCL
//*
//*CIMSDB2  DD DSN=CIMS.CIMSDB2.DATA,
//*           DISP=(NEW,CATLG,DELETE),
//*           UNIT=SYSDA,
//*           SPACE=(CYL,(50,20),RLSE),
//*           DCB=(RECFM=VB,BLKSIZE=27998)
//***********************************************************************
//*
//*        SEE CIMSDATA CHAPTER FOR DESCRIPTION OF INPUT PARAMETERS
//*        MEMBER DATAINPT OF CIMS.DATAFILE CONTAINS CONTROL RECORDS
//*
```

```
//CIMSCNTL  DD DSN=CIMS.DATAFILE(DATAINPT),DISP=SHR
//*
//*           NOTE:  IF ABEND CODE  IEC036I-RC-002-18 IS ENCOUNTERED
//*                  FOR DDNAME CIMSDB2, INCREASE THE BLKSIZE PARAMETER
//*                  TO 32760.
//*
//***********************************************************************
//*
//*           SMF MERGE JOB CONTROL GOES HERE IN THE DAILY PROCESS
//*
//***********************************************************************
//*
//CIMSSORT EXEC PGM=SORT,REGION=0M
//*
//SORTLIB  DD DSNAME=SYS1.SORTLIB,DISP=SHR
//*
//SYSOUT   DD SYSOUT=*
//*
//SORTWK01 DD UNIT=SYSDA,SPACE=(CYL,(200,50))
//*
//SORTWK02 DD UNIT=SYSDA,SPACE=(CYL,(200,50))
//*
//SORTWK03 DD UNIT=SYSDA,SPACE=(CYL,(200,50))
//*
//SORTWK04 DD UNIT=SYSDA,SPACE=(CYL,(200,50))
//*
//SORTIN   DD DSN=CIMS.CIMSACCT.DATA,DISP=SHR
//*       DD DSN=CIMS.CIMSACCT.SUSPENSE(0), REMOVE * AFTER FIRST RUN
//*         DISP=SHR
//*
//***********************************************************************
//* NOTE: THE ABOVE DATASET MUST BE CONCATENATED TO EITHER THIS DD    *
//*       OR TO DD CIMSDATA IN STEP CIMS2A, BUT NOT BOTH..........    *
//***********************************************************************
//*
//SORTOUT  DD DSN=CIMS.CIMSACCT.SORTED,
//          DISP=(NEW,PASS),
//          UNIT=SYSDA,
//          SPACE=(CYL,(200,20),RLSE),
//          DCB=(RECFM=VB,LRECL=32756,BLKSIZE=32760)
//*
//SYSIN    DD *
 SORT FIELDS=(29,8,CH,A,25,4,PD,A,21,4,BI,A,7,1,CH,A)
/*
//*
//* ********************************************************************
//*                                                                   *
//*         CLEAN UP DATASETS                                         *
//*         REVIEW THIS STEP                                          *
//* ********************************************************************
//*
//CIMS2BB  EXEC PGM=IEFBR14,REGION=0K
//*
//DD1      DD DSN=CIMS.CIMSACCT.DAILY,DISP=(MOD,DELETE),
//          UNIT=SYSDA,
//          SPACE=(TRK,1)            DD CIMSACCT STEP CIMS2B
//*
```

```
//CIMS2B   EXEC PGM=CIMSACCT,REGION=0M
//*********************************************************************
//*
//*            THIS STEP CREATES THE CIMS JOB ACCOUNTING FILE.
//*            IT IS PART OF THE STANDARD DAILY JOB.
//*
//*
//*            CONTROL RECORDS FOR PROGRAM CIMSACCT ARE
//*            ARE DOCUMENTED IN CHAPTER 2
//*********************************************************************
//*
//STEPLIB  DD DSN=CIMS.LOAD.MODULES,DISP=SHR
//*
//SYSUDUMP DD SYSOUT=*
//*
//SYSOUT   DD SYSOUT=*,DCB=BLKSIZE=133
//*
//CIMSPRNT DD SYSOUT=*
//*
//CIMSMSG  DD SYSOUT=*
//SORTWK01 DD UNIT=SYSDA,SPACE=(CYL,(200,50))
//SORTWK02 DD UNIT=SYSDA,SPACE=(CYL,(200,50))
//SORTWK03 DD UNIT=SYSDA,SPACE=(CYL,(200,50))
//SORTWK04 DD UNIT=SYSDA,SPACE=(CYL,(200,50))
//*
//CIMSSORT DD *,DCB=BLKSIZE=80
  OPTION DYNALLOC=OFF,MAINSIZE=1000000,
        FILSZ=E100000
/*
//*
//CIMSPASS DD DSN=CIMS.DATAFILE(CIMSNUMS),DISP=SHR
//*
//CIMSCLDR DD DSN=CIMS.DATAFILE(CALENDAR),DISP=SHR
//*
//CIMSTABL DD DSN=CIMS.DATAFILE(ACNTTABL),DISP=SHR
//*
//CIMSDATA DD DSN=CIMS.CIMSACCT.SORTED,
//           DISP=(OLD,DELETE,CATLG)
//*         DD DSN=CIMS.CIMSACCT.SUSPENSE(0), REMOVE * AFTER FIRST RUN
//*           DISP=SHR
//*
//*********************************************************************
//* NOTE: THE ABOVE DATASET MUST BE CONCATENATED TO EITHER THIS DD    *
//*       OR TO DD SORTIN IN STEP CIMSSORT, BUT NOT BOTH..........    *
//*       WHEN THE CONTROL STATEMENT NO-SORT IS USED, YOU MUST        *
//*       CONCATENATE THE SUSPENSE FILE TO DD SORTIN IN STEP CIMSSORT. *
//*********************************************************************
//*
```

```
//CIMSACCT DD DSN=CIMS.CIMSACCT.DAILY,
//           DISP=(NEW,CATLG,DELETE),
//           DCB=(RECFM=VB,LRECL=6508,BLKSIZE=27998),
//           UNIT=SYSDA,
//           SPACE=(CYL,(150,30),RLSE)
//*
//*         DD CIMSACCT IS THE CIMS JOB ACCOUNTING AND CHARGEBACK
//*         DATASET. MAKE THIS FILE A GDG, AND REMOVE IEFBR14 IN
//*         STEP CIMS2BB.......................................
//*
//*         NOTE GDG JCL IS IN MEMBER CIMSGDG........................
//*
//CIMSACT1 DD DUMMY,(DCB=RECFM=VB,BLKSIZE=27998)
//* CIMSACT1 DD DSN=CIMS.CIMSACCT.DAILY.R791,
//*           DISP=(NEW,CATLG,DELETE),
//*           DCB=(RECFM=VB,LRECL=6508,BLKSIZE=27998),
//*           UNIT=SYSDA,
//*           SPACE=(CYL,(100,20),RLSE)
//*
//CIMSACT2 DD DUMMY,(DCB=RECFM=VB,BLKSIZE=27998)
//* CIMSACT2 DD DSN=CIMS.CIMSACCT.DAILY.R792,
//*           DISP=(NEW,CATLG,DELETE),
//*           DCB=(RECFM=VB,LRECL=6508,BLKSIZE=27998),
//*           UNIT=SYSDA,
//*           SPACE=(CYL,(150,30),RLSE)
//*
//CIMSACT3 DD DUMMY,(DCB=RECFM=VB,BLKSIZE=27998)
//* CIMSACT3 DD DSN=CIMS.CIMSACCT.DAILY.R793,
//*           DISP=(NEW,CATLG,DELETE),
//*           DCB=(RECFM=VB,LRECL=6508,BLKSIZE=27998),
//*           UNIT=SYSDA,
//*           SPACE=(CYL,(150,30),RLSE)
//*
//* CIMSDTVS CONTAINS THE OPTIONAL CIMS SERVER DICTIONARY DEFINITIONS
//*         MUST BE AVAILABLE WHEN USING 'WRITE 792' & 'WRITE 793'
//*         (CIMSACT2, CIMSACT3)
//*
//CIMSDTVS DD DUMMY,DCB=(RECFM=FB,LRECL=140,BLKSIZE=1400)
//*
//*CIMSDTVS DD DSN=CIMS.DICT.VSAM,
//*           DISP=SHR
//*
//* CIMSPDS IS USED ONLY WHEN PROCESS CIMS SERVER RESOURCE RECORDS
//* HAS BEEN SPECIFIED. THE DATASET CONTAINS THE CIMSACCT CONTROL
//* OPTIONS FOR THE DIFFERENT TYPES OF SERVER RESOURCE RECORDS
//* THE MEMBER ALIASACC CONTAINS THE MAPPING BETWEEN THE RECORD AND
//* THE CIMSACCT CONTROL STATEMENT MEMBER
//*
//CIMSPDS DD DISP=SHR,DSN=CIMS.DATAFILE
//*
//* CIMSUNSP CONTAINS CIMS SERVER RESOURCE RECORDS THAT DO NOT HAVE DEFINITIONS
//* IN THE CIMS SERVER DICTIONARY (CIMSDTVS)
//* ***NOTE*** THIS FILE IS USED ONLY DURING PROCESS CIMS SERVER
//* RESOURCE RECORDS
//*
//*CIMSUNSP DD DSN=CIMS.CIMSACCT.SERVER.UNSP,
//*           DISP=(NEW,CATLG,CATLG),
//*           DCB=(RECFM=VB,LRECL=6508,BLKSIZE=27998),
//*           UNIT=SYSDA,
```

```
//*            SPACE=(CYL,(10,3),RLSE)
//*
//* CIMSSEL IS CREATED WHEN COMMANDS 'NON-SELECTED FILE PROCESSING ON'
//*                  AND DATE SELECTION ARE SPECIFIED
//*          THIS FILE WILL CONTAIN ALL OF THE UNSELECTED RECORDS
//*          VALID ONLY IN PROCESS CIMS MODE
//*
//CIMSSEL DD DUMMY,(DCB=RECFM-VB,BLKSIZE=27998)
//* CIMSSEL DD DSN=CIMS.CIMSACCT.DATE.SELECT,
//*            DISP=(NEW,CATLG,DELETE)
//*            DCB=(RECFM=VB,LRECL=6508,BLKSIZE=27998),
//*            UNIT=SYSDA,
//*            SPACE=(CYL,(10,3),RLSE)
//*
//CIMSEXCP DD DSN=CIMS.CIMSACCT.NOMATCH.FILE,
//            DISP=(MOD,CATLG,DELETE),
//            DCB=(RECFM=VB,BLKSIZE=27998),
//            UNIT=SYSDA,
//            SPACE=(CYL,(150,30),RLSE)
//
//            DD CIMSEXCP IS THE CIMS JOB ACCOUNTING AND CHARGEBACK
//            EXCEPTION FILE.  RECORDS WRITTEN TO THIS FILE DO NOT
//            MATCH ANY OF THE ACCOUNT CODE CONVERSION ENTRIES IN DD
//            CIMSTABL.
//
//CIMSUSPN DD DSN=CIMS.CIMSACCT.SUSPENSE(+1),
//            DISP=(NEW,CATLG,DELETE),
//            DCB=(RECFM=VB,LRECL=32756,BLKSIZE=32760),
//            UNIT=SYSDA,
//            SPACE=(CYL,(50,10),RLSE)
//*
//*          DD CIMSUSPN CONTAINS UNMATCHED JOB ACCOUNTING RECORDS.
//*          THESE RECORDS ARE REPROCESSED FOR n DAYS FROM THE
//*          DATE THEY WERE CREATED. IF AFTER n DAYS, THE RECORDS
//*          ARE STILL UNMATCHED, THEY ARE WRITTEN TO THE CIMSACCT
//*          DATASET WITH THE ACCOUNT CODE FIELD SET AS FOLLOWS:
//*
//*              FIRST 8 POSITIONS = !########!
//*              NEXT  8 POSITIONS = JOBNAME (IF AVAILABLE)
//*              NEXT  8 POSITIONS = SMF RECORD TYPE
//*              NEXT  8 POSITIONS = !########!
//*
//*          I.E. 32 CHARACTERS STARTING AT POSITION 22 OF RECORD
//*
//*          CIMS.CIMSACCT.SUSPENSE IS NOT AN EXCEPTION FILE.  THIS IS A
//*          SUSPENSE FILE.  JOB STEPS AND/OR PRINTER RECORDS WILL REMAIN IN
//*          THE CIMS.CIMSACCT.SUSPENSE FILE UNTIL THEY ARE EITHER MATCHED
//*          WITH A JOB START OR JOB STOP RECORD, OR SUSPENSE DAYS HAS
//*          EXPIRED!
//*
//****************************************************************************

//CIMSCNTL DD DSN=CIMS.DATAFILE(ACCTINPT),DISP=SHR
//*
//*          SEE CIMSACCT CHAPTER FOR DEFINITION OF CONTROL RECORDS
//*
//*          THIS IS THE END OF THE DAILY PROCESSING FOR BATCH AND
//*          TSO JOB ACCOUNTING.
//*
```

```
//*          TO INTEGRATE CICS   CHARGES, SEE MEMBER CIMSCICS
//*
//*          TO INTEGRATE DB2    CHARGES, SEE MEMBER CIMSDB2
//*
//*          TO INTEGRATE IMS    CHARGES, SEE MEMBER CIMSIMS
//*
//*          TO INTEGRATE VM/CMS CHARGES, SEE MEMBER CIMSCMS
//*
//*          TO INTEGRATE EXTERNAL TRANSACTIONS
//*                              SEE MEMBER CIMSJB2A
//*
//*          TO PROCESS CIMS MAINTENANCE, SEE MEMBER CIMSJB2B
//*
//*          EXECUTE CIMSMERG JCL AFTER ALL BATCH & ONLINE PROCESSING
//*          SEE CIMS.DATAFILE(CIMSMERG)
//*
//***********************************************************************
//*
//*          CIMSMERG JOB CONTROL GOES HERE IN THE DAILY PROCESS
//*
```

> **Note** • **See member** CIMSMERG **for additional documentation.**
> **See member** CIMSEOM **for information on archiving accounting data.**

Step Six: Create Invoices and Reports

After processing CIMSJOB2, you're ready to create invoices and Computer Center Resource reports.

■ CIMSJOB3 contains the job control to process Program CIMSBILL.

■ The SORT step CIMS3A places the file in Account Code sequence.

■ If you follow our suggestion about sorting and merging the daily file, you can skip this step. However, at initial installation, and for documentation purposes, the SORT step is appropriate.

■ Billing Control Statements are contained in member BILLCTL1. Edit these statements to customize CIMS for your installation.

■ You can use the CIMS defaults as distributed until you decide on client information, billing rates, and control information.

CIMSJOB3 EXPLANATION

CIMS3A

This step sorts the dataset created by CIMSJOB2 into Account Code, Job Name and Job Log Number sequence.

CIMS3B

This step verifies VSAM files CIMS.CLIENT.VSAM and CIMS.CIMSRATE.VSAM.

CIMS3C

This is the Computer Center Billing System.

INPUT	DDNAME CIMSACCT	Integrated chargeback dataset.
INPUT	DDNAME CIMSCLVS	Client records.
INPUT	DDNAME CIMSCNTL	Control statements.
INPUT	DDNAME CIMSRTVS	Billing rates.
INPUT	DDNAME CIMSCLDR	CIMS calendar file.
OUTPUT	DDNAME SYSOUT	Messages
OUTPUT	DDNAME CIMSPRNT	Detail/Summary reports.
OUTPUT	DDNAME CIMSINVC	Invoices.
OUTPUT	DDNAME CIMSMSG	Informational messages.
OUTPUT	DDNAME CIMSYRTD	Summary records by account. Obsolete - used for compatibility.
OUTPUT	DDNAME CIMSSUM	Summary records by account. A superset of CIMSYRTD. One record per account and billable item—(Rate Code).
OUTPUT	DDNAME CIMSRESC	Summary records by account. One record per invoice.
OUTPUT	DDNAME CIMSDIST	This dataset contains summary data. This data can be file transferred to the CIMS Desktop System.

See the *Accounting File Record Descriptions* appendix of the *CIMS Chargeback for OS/390 User Guide* and CIMS.REPTLIB for record descriptions.

CIMSJOB3 Job Control

```
//CIMSJOB3 JOB  'COMPUTER CENTER BILLING'

//CIMS3A   EXEC PGM=SORT,REGION=0M
//SORTLIB  DD DSNAME=SYS1.SORTLIB,DISP=SHR
//SYSOUT   DD SYSOUT=*
//SORTWK01 DD UNIT=SYSDA,SPACE=(CYL,(150),,CONTIG)
//SORTWK02 DD UNIT=SYSDA,SPACE=(CYL,(150),,CONTIG)
//SORTWK03 DD UNIT=SYSDA,SPACE=(CYL,(150),,CONTIG)
//SORTWK04 DD UNIT=SYSDA,SPACE=(CYL,(150),,CONTIG)
//*
//SORTIN   DD DSN=CIMS.CIMSACCT.DAILY,DISP=SHR
//*        DD DSN=CIMS.CIMSACCT.CICS.DAILY,DISP=SHR
//*        DD DSN=OTHER.CIMS.SUB.SYSTEM.DATA,DISP=SHR
//*
//SORTOUT  DD DSN=&&SORTED,DISP=(,PASS),UNIT=SYSDA,
//           DCB=(RECFM=VB,BLKSIZE=27998),
//           SPACE=(CYL,(100,20),RLSE)
//SYSIN    DD *
 SORT FIELDS=(22,32,CH,A,14,8,CH,A,75,4,CH,A,88,4,CH,A)
/*
//* SORT STEP NOT REQUIRED IF CIMS MERGE JCL IS USED.  SEE MEMBER CIMSMERG.
//*
//CIMS3B   EXEC PGM=IDCAMS
//*
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//INPUT    DD DSN=CIMS.CLIENT.VSAM,DISP=OLD
//SYSIN    DD *,DCB=BLKSIZE=80
  VERIFY DATASET(CIMS.CLIENT.VSAM)
  VERIFY DATASET(CIMS.CIMSRATE.VSAM)
/*
//*
//CIMS3C   EXEC PGM=CIMSBILL,REGION=0M
//STEPLIB  DD DSN=CIMS.LOAD.MODULES,DISP=SHR
//SYSUDUMP DD SYSOUT=*
//SYSOUT   DD SYSOUT=*,DCB=BLKSIZE=133
//CIMSPRNT DD SYSOUT=*,DCB=BLKSIZE=133
//CIMSMSG  DD SYSOUT=*
//*
//CIMSACCT DD DSN=&&SORTED,DISP=OLD
//*
//*CIMSACCT DD DSN=CIMS.CIMSBILL.DATA(0),DISP=SHR
//*
//CIMSINVC DD SYSOUT=*,DCB=BLKSIZE=133
//CIMSCLVS DD DSN=CIMS.CLIENT.VSAM,DISP=SHR
//*
//CIMSJOBC DD DSN=CIMS.CIMSBILL.JOBCOST(+1),
//           DISP=(NEW,CATLG,DELETE),
//           UNIT=SYSDA,
//           SPACE=(CYL,(5,2)),
//           DCB=(RECFM=FB,LRECL=104,BLKSIZE=27976)
//*
//CIMSDIST DD DSN=CIMS.CIMSBILL.DESKTOP,
//           DISP=(MOD,CATLG,DELETE),
//           DCB=(RECFM=FB,LRECL=180,BLKSIZE=27900),
//           SPACE=(CYL,(5,2)),
//           UNIT=SYSDA
```

```
//*
//CIMSSUM  DD DSN=CIMS.CIMSBILL.DAILY(+1),
//           DISP=(NEW,CATLG,DELETE),
//           UNIT=SYSDA,
//           SPACE=(CYL,(5,2)),
//           DCB=(RECFM=FB,LRECL=140,BLKSIZE=27860)
//*
//CIMSRTVS DD DSN=CIMS.CIMSRATE.VSAM,DISP=SHR
//*
//CIMSRESC DD DSN=CIMS.CIMSBILL.RESOURCE(+1),
//           DISP=(NEW,CATLG,DELETE),
//           UNIT=SYSDA,
//           SPACE=(CYL,(5,3)),
//           DCB=(RECFM=FB,LRECL=12600,BLKSIZE=25200)
//*
//CIMSCNTL DD DSN=CIMS.DATAFILE(BILLCTL1),DISP=SHR
//*
//CIMSCLDR DD DSN=CIMS.DATAFILE(CALENDAR),DISP=SHR
//*
//*    USE MEMBER CIMS.DATAFILE(CALNDR13) FOR 13 PERIOD CALENDAR
```

CIMS.DATAFILE (BILLCTL1)

Edit & Change member `BILLCTL1` as required.

CIMS.DATAFILE (CIMSRATE)

Edit & Change member `CIMSRATE` as required.

Note • **Refer to** the *Accounting File Creation Program—CIMSACCT* chapter of the *CIMS Chargeback for OS/390 User Guide*, **for information on Billing Control and Rate Records.**

Step Seven: Run Standard Usage Reports

The next step is to run some of the standard `CIMS` usage reports.

■ `CIMSJOB4` contains job control for `CIMS` Report Writer. Refer to the *CIMS Chargeback Report Writer Sample Reports for OS/390* for report examples.

■ Request reports by changing the member name in `DDNAME SYSIN`.

Member `AALEGEND` in `CIMS.REPTLIB` contains the current list of the `CIMS` Report Writer sample reports. The Report Writer is documented in a separate manual.

CIMSJOB4 Explanation

```
INPUT    DDNAME     DESCRIPTION

INPUT    CIMSACCT   CIMS FILE OR ANY OTHER DEFINED FILE.
INPUT    SYSIN      REPORT WRITER CONTROL STATEMENTS
                    (CIMS STANDARD REPORTS)
INPUT    SWOPTION   REPORT OPTIONS
INPUT    SWCOPY     RECORD DEFINITION PDS

OUTPUT   DDNAME     DESCRIPTION

OUTPUT   SWREPORT   CIMS REPORT
OUTPUT   SWLIST     CONTROL STATEMENT LISTING
```

CIMSJOB4 Job Control

```
//CIMSJOB4 JOB (XXXX,YYYY),'REPORT WRITER',
//         CLASS=A,MSGCLASS=X,NOTIFY=??????
//*
//JSTEP010 EXEC PGM=SPECTWTR,REGION=0M
//*
//STEPLIB  DD DSN=CIMS.LOAD.MODULES,DISP=SHR       LOAD MODULE LIB
//*
//SWLIST   DD SYSOUT=*                             CONTROL LISTING
//SWREPORT DD SYSOUT=*                             REPORT
//SYSOUT   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//*
//SORTWK01 DD UNIT=SYSDA,SPACE=(CYL,(200),,CONTIG)
//SORTWK02 DD UNIT=SYSDA,SPACE=(CYL,(200),,CONTIG)
//SORTWK03 DD UNIT=SYSDA,SPACE=(CYL,(200),,CONTIG)
//SORTWK04 DD UNIT=SYSDA,SPACE=(CYL,(200),,CONTIG)
//*
//SWCOPY   DD DSN=CIMS.REPTLIB,DISP=SHR            REPORT LIB
//SWOPTION DD DSN=CIMS.REPTLIB(SWOPTION),DISP=SHR  REPORT FILE
//*
//CIMSACCT DD DSN=CIMS.CIMSACCT.DAILY,DISP=SHR     ACCT FILE (DAILY)
//*
//*CIMSACCT DD DSN=CIMS.CIMSBILL.DATA(0),DISP=SHR  ACCT FILE (HIST)
//*
//*CIMSACCT DD DSN=CIMS.CIMSACCT.TEMP,DISP=SHR     ACCT FILE (SELECTED)
//*
//CIMSCLVS DD DSN=CIMS.CLIENT.VSAM,DISP=SHR        CLIENT FILE
//*
//*CICSONE7 DD DSN=CIMS.CICS.CIMSCMF2.DATA,DISP=SHR  CICS FILE (DAILY)
//*
//*CICSONE7 DD DSN=CIMS.CICSDATA(0),DISP=SHR       CICS FILE (HIST)
//*
//*CIMSEXOT DD DSN=CIMS.CIMSDISK.EXECPT(0),DISP=SHR  EXCEPTION FILE
//*CIMSEXOT DD DSN=CIMS.CIMSTAPE.EXECPT(0),DISP=SHR  EXCEPTION FILE
//*CIMSEXOT DD DSN=CIMS.CIMSUNIV.EXECPT(0),DISP=SHR  EXCEPTION FILE
//*
//*CIMSRESC DD DSN=CIMS.CIMSBILL.RESOURCE(0),DISP=SHR RESOURCE FILE
//*
//CIMSRTVS  DD DSN=CIMS.CIMSRATE.VSAM,DISP=SHR     RATE FILE
//*
//*CIMSSUM  DD DSN=CIMS.CIMSBILL.DAILY(0),DISP=SHR  SUMMARY FILE
//*
//*CIMSYRTD DD DSN=CIMS.CIMSBILL.SUMMARY,DISP=SHR   SUMMARY FILE
//*
//*       CHANGE MEMBER NAME IN FOLLOWING DD STATEMENT TO SELECT
//*       SPECIFIED REPORTS.
//*
//*       SEE REPORT LEGEND IN CIMS.REPTLIB
//*
//SYSIN    DD DSN=CIMS.REPTLIB(SPWTR001),DISP=SHR  REPORT FILE
/*
```

Step Eight: Customize for Batch Chargeback

`CIMS` is now installed and ready to be customized for batch chargeback.

After you are comfortable with the results you are receiving from the `CIMS MVS` batch system, you can start integrating data from the wide range of sub-systems that are supported by `CIMS`.

To integrate a CIMS sub-system

1 Edit the appropriate `JCL` Member. (for example, `CIMSCICS`)

2 Create an account code conversion table.

3 Process the job.

4 Merge the output with the input to program `CIMSBILL`. (`CIMSJOB3`)

5 Process `CIMSJOB3` to generate integrated invoices.

Sub-System Member Names (Partial List)

`CIMS` is consistently enhanced to support new sub-systems.

Following is a partial list of member names for the most commonly used `CIMS` subsystems.

SUBSYSTEM MEMBER NAME	DESCRIPTION
CIMSCICS	`CICS` Support
CIMSCMS	`VM/CMS`
CIMSDB2	`DB2`
CIMSVSE	`VSE` Power Account File
CIMSDCOL/ CIMSDISK	`DASD` Space
CIMSTAPE	Tape Storage
CIMSIMS	`IMS`
CIMSUNIV	`ROSCOE, ADABAS/SMF, IDMS/SMF, RJE, WYLBUR,` and so forth.

Step Nine: CICS-Based Online Screens

CIMS provides CICS-Based online screens for:

■ Rate Table Maintenance

■ Client/Budget File Maintenance

■ Miscellaneous External Transaction Entry

■ Recurring External Transaction Entry

■ CA/DISPATCH Report Distribution Maildrop Conversion

■ Account Code Validation and Correction

These screens are not required for CIMS. However, the online screens enhance the maintainability of the product.

The CIMS Lab recommends that the CICS screens are installed after you have an understanding of CIMSJOB1-CIMSJOB4.

CICS Online Screens Installation Instructions

Members CICSTABL and CICSVSAM in dataset CIMS.DATAFILE contain information needed to define the CIMS transactions to the target CICS system and to define various VSAM files.

■ Member CICSTABL contains DFHFCT, DFHPCT and DFHPPT statements. These statements must be altered as required.

■ Give this page to your CICS Administrator and he or she should know exactly what to do to install the CIMS CICS screens.

■ Member CICSVSAM contains define cluster statements for VSAM files used within the CIMS CICS support programs.

■ The DSNAMES and space requirements should be reviewed with respect to installation standards and expected processing volumes.

Step Ten: CIMS Web-Based Reporting Feature

CIMS Lab has introduced a Web-based Reporting feature to its system; it is referred to as *CIMS Server*. To use this feature with mainframe-processed data, *CIMS for OS/390* must build 791, 792 and 793 records and a resource record. The 791, 792 and 793 record will be a mainframe formatted `EBCIDIC` record that contains character, binary, and packed data. The resource record is a character-based format of the information contained in the 791, 792, and 793 records. The resource record will be the record that is processed by *CIMS Server*. To generate the resource records, a `VSAM` file that stores information about the 791, 792 and 793 records along with the resource records must be built. This file is referred to as the *CIMS Server* dictionary. It is referenced by the `DD` name `CIMSDTVS`.

◼ Member `CIMSDTC` in the dataset `CIMS.DATAFILE` will allocate the *CIMS Server* dictionary file.

◼ Member `CIMSDTLD` in the dataset `CIMS.DATAFILE` will load the *CIMS Server* dictionary file with the default record definitions.

Refer to the *CIMS for OS/390 CIMS Chargeback for OS/390 User Guide*, release 11.6, for more information on the *CIMS Server* dictionary file and the CIMS Web-based reporting feature.

Member Lists

The following pages list the various members that are contained in:

◼ `CIMS.CICS.LOADMODS`

◼ `CIMS.DATAFILE`

◼ `CIMS.REPTLIB`

Note • The `CIMS` **Distribution Tape might be updated more often than these printed lists.**

Contents of CIMS.CICS.LOADMODS

After executing `INSTJOB3`, the following load modules will be present if installing from the web. They support `CICS` releases 5.2 and above.

MEMBER	RELEASE	DESCRIPTION
CIMMCLN		Client `CICS` Screen Map
CIMMHLP		Help `CICS` Screen Map
CIMMMDR		Mail Drop `CICS` Screen Map
CIMMMEN		Menu `CICS` Screen Map
CIMMMIS		Miscellaneous Transaction `CICS` Screen Map
CIMMRAT		Rate `CICS` Screen Map

MEMBER	RELEASE	DESCRIPTION
CIMMRCU		Recurring Transaction CICS Screen Map
CIMMREJ		Reject CICS Screen Map
CIMOCLN	5.2+	Client CICS Screen Program
CIMOMDR	5.2+	Maildrop CICS Screen Program
CIMOMEN	5.2+	Menu CICS Screen Program
CIMOMIS	5.2+	Miscellaneous Transaction CICS Screen Program
CIMORAT	5.2+	Rate CICS Screen Program
CIMORCU	5.2+	Recurring Transaction Screen Program
CIMOREJ	5.2+	Reject CICS Screen Program

CICS Programs for Releases 4.1 & 5.1

To install the CICS release 5.1 and lower programs (CIMOCLN, CIMOMDR, CIMOMEN, CIMOMIS, CIMORAT, CIMORCU, CIMOREJ), submit job INSTJOB5 from the CIMS.LINKJCL library.

Contents of CIMS.DATAFILE

Please see member AAAALIST for a complete listing and description of each member in CIMS.DATAFILE.

Contents of CIMS.REPTLIB

Please see member AALEGEND for a complete listing and description of each member in CIMS.REPTLIB.

3

Upgrade Instructions

Upgrading from CIMS OS/390 releases 11.2, 11.3, 11.4, and 11.5

Overview

This chapter describes the upgrade process from *CIMS for OS/390* 11.2, 11.3, 11.4 and 11.5 to *CIMS for OS/390* 11.6. If you are performing a new CIMS installation, please refer to *Chapter 2, New Installation Instructions.*

Your current release of *CIMS for OS/390* already contains customized `JCL`, control members and report specifications. A global replacement of these files is not advisable. This chapter provides the detailed information that is needed to make the new changes to the `CIMS.DATAFILE` and `CIMS.REPTLIB` members without loss of previous customization.

The major changes are as follows:

Release 11.3

■ *CIMS for OS/390* is compiled using `COBOL` for `OS/390` and uses the `COBOL LE` runtime. The `COBOL LE` runtime must be accessible to the modules.

Release 11.4

■ The account code conversion process has been updated and standardized. There might be some changes needed in your control members as described below.

■ `CIMSMSG DD` processing has been added to more modules, which entails updating the `JCL` to add a `CIMSMSG DD` statement.

■ An updated version of the *CIMS Report Writer* which supports `HTML` generation.

■ New programs `CIMSIMS1`, `CIMSIMS2`, and `CIMSCMFP` have been added.

Release 11.5

■ Support for *CIMS Server* (the Web-based reporting feature).

  • New Programs `CIMSEXTR` and `CIMSDTLD` were added.

  • `CIMSACT2 DD`, `CIMSACT3 DD` and `CIMSDTVS DD` have been added to some of the processing modules, which entails updating the `JCL` to add these `DD` statements.

■ Updated `CIMS` record types 30 and 6.

Release 11.6

■ The CIMS Record Type 79x records have been changed.

■ The CIMSUNIV 001 record has been expanded to include stop date/time values and a 128-byte account code area.

■ The CIMS Record Type 6 record has been expanded to provide better support for the Enhanced Sysout Section.

■ The CIMSEXTR program can ensure accurate start and stop dates/times during the aggregation process.

Refer to the upgrade checklist on and then follow the specific upgrade for the release that you currently have installed. Upgrades from release 11.2 and 11.3 are very similar because the only change in the original release of 11.3 from 11.2 was that *CIMS for OS/390* was compiled using `COBOL` for `OS/390`. All other updates to *CIMS for OS/390* 11.3 were made during maintenance releases.

Data Conversion

Rate and Client VSAM Files

There have been no rate or client file changes; therefore these files do not need any conversion.

CIMS Server Dictionary VSAM File Upgrade

Note • **If you are upgrading from a release prior to 11.5, you can disregard this section.**

There are changes to the CIMS Server Dictionary VSAM file (`CIMSDTVS`), which was first introduced in release 11.5. You need to upgrade your CIMS Server Dictionary as follows:

■ If you have a standard CIMS Server Dictionary (no user modifications), run the `CIMSDTLD JCL` in the `CIMS.DATAFILE` library to add the 01 version of the dictionary records.

■ If you have made updates to your CIMS Server Dictionary, run the `CIMSDUTL JCL` in `CIMS.DATAFILE` to upgrade the dictionary.

Exception Record Format Change

The exception record format for the `CIMSDISK`, `CIMSTAPE`, `CIMSDB2`, `CIMSUNIV`, and `CIMSUNO2` programs has changed. You cannot use 11.6 to process exception files from previous releases.

CIMS Historical Data

Should you convert CIMS data from older release to the CIMS version 11.6 format?

You do not need to convert the data. There were minor changes made to the CIMS Record Types 26 and 6. The CIMS programs will convert old records "on the fly" while processing.

If you wish to convert your historic data, you can run the program `CIMSACCT` in a `PROCESS CIMS` execution. Sample job control is contained in member `CONVERTA` in the `CIMS.DATAFILE` library.

Upgrade Checklist

■ Determine the release that is currently in production and follow those upgrade instructions.

■ Install the new release into a test area.

■ Determine the genlevel of the new release. Make sure it is the most current one. Apply all applicable fixes since the genlevel was made.

■ Review program updates and new options. Some updates and new options might change some of your control options.

■ Make any necessary `CIMS.DATAFILE JCL` updates.

■ Make any necessary `CIMS.REPTLIB` Report Writer updates.

■ If you are upgrading from release 11.5, upgrade your CIMS Server Dictionary VSAM file (See *CIMS Server Dictionary VSAM File Upgrade* on page 3-3).

■ Install passwords - New release of Report Writer (`SPECTWTR`) - requires new password (unless you are upgrading from release 11.4).

■ Update the `CICS` online Programs.

■ Reapply User Exits.

Install the New Release into a Test Area

Install the new release of *CIMS for OS/390* from the CIMS Product Tape, Product CD, or CIMS Lab Web site, http://www.cimslab.com.

Installing from the CIMS Product Tape

To install from the CIMS Product Tape, follow *Step One: Install the Partitioned Datasets from the CIMS Product Tape, Product CD, or Web Site* on page 2-8, included in *Chapter 2, New Installation Instructions.*

Installing from the CIMS Product CD

To install from the CIMS Product CD, download the self-extracting file `cimss390_<genleveldate>.exe` from the `CIMSS390` folder. This file contains the files needed to install *CIMS for OS/390* and a `readme` file. Follow the instructions in the `readme` file to perform the installation.

Installing from the CIMS Lab Web Site

 To install from the Web site, do the following:

1 Click the Customer Area link on the CIMS Lab Web site. To gain access to the product information, select your product from the Product/Category pull down (`CIMS` for `OS/390`). Enter your *CIMS for OS/390* password as the key and click **Save my key** so that you won't have to re-enter it each time you access this area. You can determine your current password from the `CIMSNUMS` member of your current `CIMS.DATAFILE` production library.

2 Click the Product Downloads link after gaining access to the Customer Area.

3 Scroll through the product list download the self-extracting file `cimss390_<genleveldate>.exe`. This file contains the files needed to install *CIMS for OS/390* and a `readme` file. Follow the instructions in the `readme` file to perform the installation.

Upgrade Documentation

Information regarding updates and enhancements to *CIMS for OS/390* is available in the documentation discussed in *Upgrades* on page 1-4.

Upgrading from 11.2

Note • To determine whether you have the latest release or genlevel of *CIMS for OS/390*, see *About Installing the Most Current Release* on page 1-2.

Install the New Release into a Test Area

See *Install the New Release into a Test Area* on page 3-5.

Program Updates/Changes/Additions

1 `COBOL LE` Runtime

Since the release of 11.3 of *CIMS for OS/390*, all of the `COBOL` programs have been compiled using `COBOL` for `OS/390` and linked with the `COBOL LE` stubs. All of the `CIMS` modules must have access to the `COBOL LE` runtime. If it is not link listed, you must add the runtime library to all `JCL` in the `STEPLIB DD` concatenation. To check if the `COBOL LE` runtime is in the linklist, edit the `CIMS.LINKJCL` member `INSTJOB4`. If the job abends with an `0C4`, then `LE` is not link listed. If it ends with a Return Code of 0 the output will display the level of `COBOL LE` runtime installed at your shop.

If you have installed from the product tape, the `CIMS` load modules were linked with `COBOL LE` release 1.8. You must have at least this level to run these programs. If you are at a lower release, you can re-link the `CIMS` programs with your release of `LE` by editing and submitting the `CIMS.LINKJCL` member `INSTJOB2`. You must edit `CIMS.LINKJCL` member `LINKPROC` prior to submitting `INSTJOB2`.

2 Account Code Conversion

Since release 11.4, *CIMS for OS/390* has been modified to support a single account code conversion routine. Changes have been made to all the programs that perform account code conversion (`CIMSACCT`, `CIMSCMF2`, `CIMSDB2`, `CIMSDISK`, `CIMIMS2`, `CIMSTAPE`, `CIMSUNIV`, and `CIMSUN02`). Based on the new account code conversion routine, there have been some processing changes.

- There are now 10 `DEFINE FIELD` and 10 `MOVEFLD` statements supported. These `DEFINE FIELD` and `DEFINE MOVEFLD` statements must be in numerical order. For example:

```
DEFINE FIELD1,1,2
DEFINE FIELD3,3,10
```

Would be invalid and an error message would be produced and processing halted. You must code it as follows:

```
DEFINE FIELD1,1,2
DEFINE FILED2,3,10
```

- An exception file is now supported in the preceding programs. For programs that did not support exception files, the default is to have them turned OFF. To turn them on, add the control statement `EXCEPTION FILE PROCESSING ON` to the control file and add the `CIMSEXOT DD` to the `JCL`. Reference the `JCL` listed in the `CIMS.DATAFILE` section for the `DD` characteristics.

The following control statements were added for managing the use of wildcards during account code conversion:

- `TURN OFF ACC WILDCARDS`. Turns off wildcard matching during account code conversion.

- `CHANGE ACC ? WILDCARD TO` and `CHANGE ACC * WILDCARD TO`. Change the default wildcard characters during account code conversion.

3 Message File Processing

Modules `CIMSCMF2`, `CIMSDISK`, `CIMSTAPE`, `CIMSUNIV`, and `CIMSUNO2` now write out all information and all non-matched account record messages to the `CIMSMSG DD`. Reference the `JCL` listed in the `CIMS.DATAFILE` section for the `DD` characteristics. You will need to add the `CIMSMSG DD` to each step that executes one of these programs to be able to see any informational messages. The `CIMSPRNT DD` will still contain the control parameters and the programs results.

4 New `IMS` Processing

Two new programs `CIMSIMS1` and `CIMSIMS2` have been added to *CIMS for OS/390*. These programs replace the functionality of `CIMSIMSP` and `CIMSIMS` for `IMS` releases 5.1 and higher. `CIMSIMS1` and `CIMSIMS2` must be run together, you can no longer skip program `CIMSIMS1`. Please refer to the *CIMS Chargeback for OS/390 User Guide* for more information on the new `IMS` processing. Refer to `CIMS.DATAFILE` member `CIMSIMS` for the new `JCL` needed to execute `CIMSIMS1` and `CIMSIMS2`. `DATFILE` member `CIMSIMS0` contains the old `IMS JCL` for `CIMSIMSP` and `CIMSIMS`.

5 `OS/390` Release 2.10 Support

A common routine, `CIMSRD00`, was updated to support `OS/390` R2.10. This routine is linked into `CIMSACCT`, `CIMSBILL`, `CIMSCMF2`, `CIMSDB2`, `CIMSDISK`, `CIMSEDIT`, `CIMSIMS`, `CIMSIMS2`, `CIMSMULT`, `CIMSMVSE`, `CIMSRTLD`, `CIMSTAPE`, `CIMSUNIV`, `CIMSUNO1`, and `CIMSUNO2`. Also program `CIMSDATA` was updated to support `OS/390` R2.10. The R2.10 updates are a very important modification but only impact the execution load library.

6 Support for the new Web-based reporting feature

CIMS Lab has introduced a new Web-Based Reporting feature to its system; it is referred to as *CIMS Server*. With this new feature, users can create a wide variety of reports (including drill down detail reports), graphics, and spreadsheets in a browser-based point-and-click environment. Combining efficient processing and ease of use, this new feature gives users the flexibility to produce customized reports, invoices, and graphs based upon multiple user-defined criteria, such as organizational hierarchy, processing platforms, sites, cost centers, projects, systems, and subsystems.

To use this new feature with mainframe-processed data, *CIMS for OS/390* must build 791, 792 and 793 records and a resource record. The 791, 792 and 793 record will be a mainframe formatted `EBCDIC` record that contains character, binary, and packed data. The new resource record is a character-based format of the information contained in the 791, 792, and 793 records. The resource record will be the record that is processed by *CIMS Server*. To generate the resource records, a new `VSAM` file that stores information about the 791, 792 and 793 records along with the resource records must be built. This file is referred to as the *CIMS Server* Dictionary.

7 Individual Program Updates that could cause some processing changes:

- `CIMSACCT`

    - Supports *CIMS Server* - creation of record type 792 and 793 added. `CIMSACT2 DD`, `CIMSACT3 DD` and `CIMSDTVS DD` were added.

    - The `CIMS` Type 30 and Type 6 records were updated to include the latest `OS/390` updates and to prevent data conversion problems.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

    - Calls the new account code conversion routine.

    - The `USERID` from the `SMF` 6 record was added to the account code conversion string at offset 93 for a length of 8. To reference it, use the following `DEFINE FIELD` statement: `DEFINE FIELD1,93,8`

    - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

    - The optional conversion of the current CIMS record types 6, 30, 991-998 to CIMS Server record types 791, 792 and 793.

    - The ability to reprocess the CIMS Server record type 791, 792 and 793.

    - When processing CIMS records, all records that fail date selection can be optionally written to a separate file.

    - Update suspense file processing. The SMF type 26 record is used to purge extraneous records on the suspense file.

- Added the following control statements:

  - UPPERCASE ACCOUNT FIELDS. Specifies that the account code built from the account fields be converted to uppercase.

  - SMF ESS SUPPORT ON. Parses the Enhanced Sysout Section of the SMF Type 6 records and places ESS fields in the CIMS account code character string.

  - NON-PRIME SHIFT CODE =. Sets the non-prime shift code when the NON-PRIME DAY and WEEKENDS ARE NON-PRIME control statements are used.

  - SMF6 ESS Fixed Format. Parses the text units field of the Enhanced Sysout Section of the SMF Type 6 record and formats the field into a fixed format in the CIMS Record Type 6.

- Steps with no CPU and I/O were incorrectly marked invalid (for example, IEFBR14).

- Unsupported records processed using the PROCESS CIMS MAINTENANCE control statement will be written to CIMSUNSP DD.

- CIMSBILL

  - Support for the updated formats of the CIMS record types 30 and 6.

  - Two new options were added:

    - PRINT BUDGET LINE OFF turns off the budget line in the Invoice.

    - IN012AA Added the ability to override invoice line LIN012AA (Actual Amount).

  - New option added to control file: INVOICE NUMBERS OFF - turns off all invoice numbers.

  - New option added to control file: PRINT INVOICE NUMBERS FOR CONTROL BREAKS x1x2x3x4 - prints invoice numbers only on the specified control breaks.

  - During the CIMSSUM file creation, the ZTOT line was created when there was no resource or dollar amount. In this case, the ZTOT line is no longer being produced.

  - Performs windowing on older user written 991-998 records that do not have the century byte set. If the year is less than 88 CIMS assumes the year 2000, if it's between 88 and 99 CIMS assumes 1900.

  - Processing was added to show rate codes in the RATE CODE NOT FOUND message that had rate totals of 0 (there were positive and negative entries for the rate code) and were not defined in the rate file.

- CIMSCICS

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

  - Support for the CICS CIMS Server record (791) has been added. Refer to the *CIMS Chargeback for OS/390 User Guide* for more information.

- CIMSCMF2

  - Supports *CIMS Server* - creation of record type 791 added. CIMSACT2 DD and CIMSDTVS DD were added.

  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

  - CIMSMSG DD was added.

  - Calls the new account code conversion routine.

  - The CICS program name has been added to the account code conversion string at offset 116 for a length of 8. To reference it, use the following DEFINE FIELD statement: DEFINE FIELD1,116,8

  - New control statement LIMIT ACCOUNT CODE NO-MATCH MSGS TO nnn was added. The default is to display 1000 no-match messages.

  - Added control statement ON EMPTY INPUT FILE SET RC TO nnnn (where nnnn=a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSCMFP

  - This program replaces CIMSCMF1. It supports all levels of CICS. This program was added during a maintenance release of 11.2. Refer to the *CIMS Chargeback CICS User Guide* for more information. The CIMS.DATAFILE member CIMSCICS contains the updated JCL needed to run this new program. The CIMS.DATAFILE member CIMSCICO has the old JCL.

- CIMSDATA

  - Updated to support OS/390 Release 2.10.

  - Updated to support newer version of the SMF Type 6 record.

- CIMSDB2

  - Supports *CIMS Server* - creation of record type 791 added. CIMSACT2 DD and CIMSDTVS DD were added.

  - Sets return code to 16 is an out of space condition happens when writing to the CIMSACCT DD.

  - Updated to handle some DB2 6.1 SMF record problems (negative CPU values, invalid segment lengths).

- New option added to control file: `NO SORT` - causes the internal sort not to be invoked. This should only be used when the control card `NO SUM` is specified.

- Calls the new account code conversion routine.

- Support for `DB2` 6.1 was added. `DB2REC DD LRECL` was increased to 3120 from 2600 to support the updated `DB2` 6.1 records.

- Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

- Added control statements `ZERO CPU TIME FOR CICS CONNECTION cccccccc PLAN pppppppp` (where `cccccccc`=the CICS connection name and `pppppppp`=the CICS plan name) and `ZERO CPU REPORT`. These statements set the DB2 Transaction CPU Time to 0 and print a report that details the number of transactions and total CPU time reset to 0.

- Limited the number of invalid CPU time messages to 100.

- `CIMSDISK`

  - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

  - `CIMSMSG DD` was added.

  - Calls the new account code conversion routine.

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

  - Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- `CIMSDTLD`

  - New Module - it supports the loading and updating of the new *CIMS Server* Dictionary `VSAM` file.

- `CIMSEXTR`

  - New Module - it supports creation of the mainframe resource records that can be processed by *CIMS Server*.

- `CIMSIMS1`

  - New program. Replaces `CIMSIMSP`.

- `CIMSIMS2`

    - New program. Replaces `CIMSIMS`.

    - Calls the new account code conversion routine.

    - For `IMS` release 5.1, IBM does not set the century byte correctly. Their stated position is to window the dates. If the years are between 00-59 they assume 2000, if the years are between 60-99 they assume 1900. We do the same windowing.

- `CIMSLEVC`

    - This is a new program that checks the version of `COBOL LE` installed.

- `CIMSLEVL`

    - This is a new program that will display the base release genlevel installed of *CIMS for OS/390*.

- `CIMSTAPE`

    - Added `TMS` virtual tape support.

    - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

    - `CIMSMSG DD` was added.

    - Calls the new account code conversion routine.

    - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

    - `RMM` interface has been updated. The `RVMEDREC` field is now used to determine the media type instead of `RVNAME`. Based on this the control cards `RMM REELS =`, `RMM 3480 =`, `RMM 3490 =`, `and RMM 3590 =` are now obsolete.

    - Added support for 3590 tapes in `TMS`, 3490 and 3590 tapes in `TLMS`. Rates need to be updated to support the updates. For `TMS` the 3590 count is in the `ZTPE@@04` field. For `TLMS` the 3490 count is in the `TLMS@@04` field and the 3590 count is in the `TLMS@@05` field.

    - Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSUNIV

  - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

  - `CIMSMSG DD` was added.

  - Calls the new account code conversion routine.

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

  - Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSUN02

  - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

  - `CIMSMSG DD` was added.

  - Calls the new account code conversion routine.

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

  - Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSUSER

  - The `CIMSACU7` exit was updated to support `DB2` 6.1. The source for `CIMSUSER` is contained in the `CIMS.DATAFILE` library member: `CIMSUSER`.

- `CIMS` Report Writer - `SPECTWTR`

  - New release of `CIMS` Report Writer 2.8 was released with *CIMS for OS/390* 11.4. An updated authorization code is required. This authorization code is specified in the `SWOPTIONS` member in the `CIMS.REPTLIB`.

CIMS.DATAFILE Updates/Additions

1 The following members were updated to add 10 sample `DEFINE FIELD` and `DEFINE MOVEFLD` statements:

- `ACCTINPT, ACCTINP2, ACCTINP3, ACCTINP6, CMF2INPT, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IMSINPT, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT`

2 The following members were updated to add the `CIMSMSG DD` for message processing:

- `CIMSCICS, CIMSDISK, CIMSRJE, CIMSRMM, CIMSROSC, CIMSRSCA, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS402, SUBDATC1, SUBDATC2`

3 The following members were updated to add the `CIMSACT2`, `CIMSACT3` and `CIMSDTVS DD` for support for the new *CIMS Server*.

- `ATMONJCL, ATMO2JCL, CIMSADA1, CIMSCICS, CIMSDB2, CIMSDISK, CIMSEOM, CIMSFALC, CIMSJB2A, CIMSJB2B, CIMSJOB2, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS, SUBDATC1, SUBDATC2`

4 The following members were updated to increase the `LRECL` of the exception file (`CIMSEXOT`). The record size increased from 300 to 376, and the `BLKSIZE` was changed from 27900 to 27824.

- `CIMSADA1, CIMSDISK, CIMSFALC, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBDATC1, SUBDATC2`

5 The following members were updated to add the new control statements to support the creation of the new *CIMS Server* records.

- `ACCTINPT, CMF2INPT, DATACIN1, DATACIN2, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTL, ZARAINPT, ZDBCNTL, ZDCCCNTL, ZFALCNTL, ZRJECNTL, ZROSCNTL, ZWYLCNTL`

6 The following members are new. They contain the default *CIMS Server* dictionary definitions.

- `DCTNBATU, DCTNBGDU, DCTNCICS, DCTNCTLD, DCTNCTLT, DCTNDASD, DCTNDB2, DCTNDB2U, DCTNDB2W, DCTNEVTW, DCTNFSMU, DCTNHDR, DCTNIMS, DCTNINTU, DCTNMQSR, DCTNORCU, DCTNORCV, DCTNORCW, DCTNPRTU, DCTNPRTW, DCTNRMM, DCTNR792, DCTNR793, DCTNR794, DCTNR999, DCTNSPMU, DCTNSPMW, DCTNSTOO, DCTNSTOU, DCTNSTOW, DCTNTAPE, DCTNTLMS, DCTNTMS, DCTNTSO, DCTNUNIV, DCTNV00, DCTNZARA, DCTNZZZZ`

7 The following members are new. They contain the *CIMS Server* Dictionary and Extract control `JCL` and input parameters.

- `CIMSDTC, CIMSDTD, CIMSDTLD, CIMSDUTL, CIMSEXTR, EXTRINPT`

8 The following members were updated to change the `BLKSIZE` values to ½ track blocking (27998):

`CIMSADA1, CIMSDB2, CIMSDISK, CIMSFALC, CIMSIMS, CIMSJOB3, CIMSRJE, CIMSRMM,`
`CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB,`
`CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBBILL2`

9 Individual `CIMS.DATAFILE` member updates:

- `ACCTINP3`

  - Added new control statement `CONVERT TO CIMS SERVER` to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement `NO-SELECT FILE PROCESSING ON` to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- `ACCTINP4`

  - Added new control statement `CONVERT TO CIMS SERVER` to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement `NO-SELECT FILE PROCESSING ON` to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- `ACCTINP5`

  - Added new control statement `CONVERT TO CIMS SERVER` to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement `NO-SELECT FILE PROCESSING ON` to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- `ACCTINPT`

  - Changed option `PROCESS PLATINUM RESOURCE RECORDS` to `PROCESS CIMS RESOURCE RECORDS`

  - Changed `PLAT-REC INPUT` and `PLAT-REC OUTPUT` to `CIMS-REC INPUT` and `CIMS-REC OUTPUT`

  - Added new control statement `CONVERT TO CIMS SERVER` to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement `NO-SELECT FILE PROCESSING ON` to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- CIMRCT54, CIMRECTL

  - New members that contain the CA-DYNAM/TLMS record layouts.

- CIMREC14

  - Updated format of CIMSUNIV 001 input record.

- CIMREC30

  - Updated format of the CIMS Record Type 30.

  - Uncommented the '01' redefines statement. CIMSUSER exit code was not properly addressing the record without the redefines statement.

- CIMSCICS

  - Changed to call the new CIMSCMFP module. This step added DDs CMFPTABD, CICSTABS, CIMSUNSP, and CIMSEXOT.

  - The step that executes CIMSCMF2 added the DD CIMSMSG.

- CIMSCMPL

  - This member was updated to compile the user exit (CIMSUSER) with COBOL for OS/390 instead of COBOL II.

- CIMSDB2

  - The LRECL of the CIMSEXIN DD was changed from 200 to 248 and the block size from 27800 to 26536.

  - The LRECL of DB2RECS was changed from 2600 to 3120 to support DB2 6.1.

- CIMSEOM

  - DD statement CIMSSEL was added. All records that fail date selection will be written to the DD statement CIMSSEL if the CIMSACCT control card: NO-SELECT FILE PROCESSING ON is specified.

- CIMSJOB2

  - DD statement CIMSSEL was added. All records that fail date selection will be written to the DD statement CIMSSEL if the CIMSACCT control card: NO-SELECT FILE PROCESSING ON is specified.

- CIMSLEVL

  - New member added to support the CIMSLEVL program. This program will display the base genlevel of CIMS installed.

- CIMSIMS

  - Totally updated JCL. This JCL now calls CIMSIMS1 and CIMSIMS2.

- CIMSIMSP, CIMSIMSL, CIMSIMSR, CIMSIMSS

  - These are obsolete. Use the updated CIMSIMS JCL and programs CIMSIMS1 and CIMSIMS2.

- CMFPINPT

  - This is a new member used by the CIMSCMFP program in the CIMSCICS JCL. This was added during a maintenance release of 11.2.

- CIMSRATE, CIMSRT, CIMSRT02

  - All rate descriptions were changed from MVS to OS/390

- CIMSUSER

  - The user exit source entry point CIMSACU7 was updated for DB2 6.1 support.

- DATAINPT

  - Added 26 to the default records to be processed to support the new suspense file purging of extraneous records.

- IDMSJCL1, IDMSJCL2 and IDMSJCL3

  - SWOUTPUT DCB information changed to RECFM=VB,LRECL=263, BLKSIZE=27998.

  - CIMSEXIN and CIMSEXOT DCB information changed to LRECL=376, BLKSIZE=27824.

- M204JCL1

  - SWOUTPUT DCB information changed to RECFM=VB,LRECL=263, BLKSIZE=27998.

  - CIMSEXIN and CIMSEXOT DCB information changed to LRECL=376, BLKSIZE=27824.

- RMMINPT

  - RMM REELS =, RMM 3480 =, RMM 3490 =, RMM 3590 = have been removed. They are obsolete. CIMS uses a different field to determine the media type.

- SUBAS401 and SUBAS402

  - SWOUTPUT DCB information changed to RECFM=VB,LRECL=263, BLKSIZE=27998.

  - CIMSEXIN and CIMSEXOT DCB information changed to LRECL=376, BLKSIZE=27824.

- SUBDATC1 and SUBDATC2

    - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263,`
      `BLKSIZE=27998.`

    - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376,`
      `BLKSIZE=27824.`

- SUBDB21

    - CIMSEXOT DCB information changed to `LRECL=248, BLKSIZE=26536.`

CIMS.REPTLIB Updates/Additions

1 The following members were updated to support the new format of the `CIMS` record
type 6 and 30:

- `CIMREC06, CIMREC30, SPWTRH02, SPWTR001, SPWTR002, SPWTR003, SPWTR004,`
  `SPWTR005, SPWTR006, SPWTR007, SPWTR008, SPWTR009, SPWTR010, SPWTR012,`
  `SPWTR013, SPWTR015, SPWTR017, SPWTR018, SPWTR020, SPWTR021, SPWTR022,`
  `SPWTR023, SPWTR110, SPWTR111, SPWTR112, SPWTR113, SPWTR510, SPWTR811,`
  `SPWTR905`

2 The following members are new reports that support the new `CIMS` 791, 792, and 793
records and also the new *CIMS Server* dictionary record.

- `CIMRCDCT, CIMRC791, CIMRC792, CIMRC793, CNVT11D5, RC791V00, RC792V00,`
  `RC793V00, SPWRPCN1, SPWRP940, SPWRP941, SPWRP942, SPWRP943, SPWTR011,`
  `SPWTR056, SPWTR065, SPWTR146, SPWTR181, SPWTR757, SPWTR758, SPWTR759,`
  `SPWTR763, SPWTR791, SPWTR792, SPWTR793, SPWTR815, SPWTR816`

3 The following members were updated to support the new CIMSUNIV 001 record. The
001 record has been expanded to a total of 263 bytes.

- `SPWTR201, SPWTR203, SPWTR205, SPWTR710, SPWTR712 SPWTR722, SPWTR723,`
  `SPWTR771`

4 Individual `CIMS.REPTLIB` member updates:

- `ARUNJCLH`

    - This is a new member that has the execution `JCL` to run the `HTML` reports
      (`SPWTRH01-04`).

- `CICSRC13`

    - This record was updated for `CICS` release 5.2 record layout. This record is
      produced by program `CIMSCMFP`.

- `CICSRC14`

    - This member was added to show the `CICS` release 5.3 record layout. This record
      is produced by program `CIMSCMFP`.

- `CIMRC006`

    - A fixed format option was added for the Enhanced Sysout Section.

- CIMREC06

  - Updated record format - new fields and re-formatted fields.

- CIMREC30

  - Updated record format - new fields and re-formatted fields.

- CIMSEXOT

  - Updated `CIMSUNIV` Exception record format. `USER-IDENT` field and the stop date and time were added.

- CIMSIMSI, CIMSIMSJ, CIMSIMSP

  - These members are obsolete. They were part of the `CIMSIMSP` and `CIMSIMS` processing that has been replaced by `CIMSIMS1` and `CIMSIMS2`.

- CIMSIMS1

  - This is a new record with the intermediate layout of the combined type 1/3/31 `IMS` log record. This record is produced by `CIMSIMS1`.

- CIMSIMS2

  - This is a new record with the intermediate record layout for the type 7 and 8 `IMS` log record. This record is produced b `CIMSIMS1`.

- CIMSMF06

  - Updated record format - new fields and re-formatted fields.

- CIMSSAMS

  - This is a new member with the `SAMS` record layout. Used in `SPWTR790`.

- CIMSZASJ

  - New fields have been added to the end of this `AS400` record layout.

- CIMSZLM3

  - Added support for TMON 2.2.

- DB2RECS2

  - This is a new record layout for the detail `DB2` record written by `CIMSDB2` to support `DB2` release 6.1. This takes the place of `DB2RECS1`.

  - The `LRECL` was increased.

- LINKRWDB

  - This member was added to provide `JCL` to link the `DB2` option into `CIMS` Report Writer.

- RMMEXOT

    - Updated RMM Exception record format. USER-IDENT field and the stop date and time were added.

- SMFRC116

    - New member that contains the record layout for the SMF 116 record.

- SMFRC222

    - New member that contains the record layout for the Control-D SMF record.

- SPWTRH01

    - These reports were added to show HTML support in CIMS Report Writer 2.8.

- SPWTRH02

    - Updated to support the 2001 and 9701 versions of the CIMS Record Type 30.

    - These reports were added to show HTML support in CIMS Report Writer 2.8.

- SPWTRH03

    - These reports were added to show HTML support in CIMS Report Writer 2.8.

- SPWTRH04

    - Updated format of the report.

    - These reports were added to show HTML support in CIMS Report Writer 2.8.

- SPWTR070, SPWTR071

    - TMS reports updated to support 3490s and 3590s.

- SPWTR120

    - This is a new sample report showing how to do shift charge processing within CIMS.

- SPWTR121

    - This is a new sample report showing how to do shift charge processing with interval accounting within CIMS.

- SPWTR141

    - This report was updated to reflect the new DB2RECS2 field names (to support DB2 release 6.1).

- SPWTR751

    - TMS reports updated to support 3490s and 3590s.

- SPWTR790

  - This is a new report that converts a `SAMS` record into a `DCOLLECT` format so that it can be processed by `CIMSDISK`.

- SWALIAS

  - Defined RC79#V00-RECORD as an alias for RC79#V00.

- TLMSEXOT

  - Updated `TLMS` Exception record format. `USER-IDENT` field and the stop date and time were added.

- TMS991

  - Added fields to support 3590 tapes.

- TMSEXOT

  - Updated `TMS` Exception record format. `USER-IDENT` field and the stop date and time were added.

  - Added fields to support 3590 tapes.

- ZARAEXOT

  - Updated `ZARA` Exception record format. `USER-IDENT` field and the stop date and time were added.

Install Passwords

CIMS for OS/390 releases 11.2 through 11.6 use the same passwords. **Do not use the new** `CIMS.DATAFILE` **member during your testing.**

The *CIMS Report Writer* password has changed. You will need to update the `SWOPTION` member of the `CIMS.REPTLIB` with the password for *CIMS Report Writer* release 2.8. You can obtain a valid password by contacting the CIMS Lab (see page viii).

Update the CICS Online Programs

If you are using the CIMS data entry screens, you will need to update your `CICS` startup `JCL` to `STEPLIB` to the `CICS` online load modules for testing.

Reapply User Exits

You need to reapply any user exits that you have coded. To find out if you are calling any user exits, check your control file members and look for `EXIT` starting in column 1. If you find `EXIT`, then that program is calling a user exit. The `CIMSUSER` exit has been updated to support DB2 release 6.1. You must re-compile the user exit pointing to the new `CIMS.DATAFILE` where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the `CIMS.DATAFILE JCL` member `CIMSCMPL` to compile and link these programs.

Upgrading from 11.3

While looking over the program, `CIMS.DATAFILE`, and `CIMS.REPTLIB` changes, you might notice that you already see some of these changes in your libraries. That is because some of these new features were added during maintenance releases of 11.3. The only original difference between 11.2 and 11.3 of *CIMS for OS/390* was that 11.3 was compiled using `COBOL` for `OS/390`.

Install the New Release into a Test Area

See *Install the New Release into a Test Area* on page 3-5.

Program Updates/Changes/Additions

1 Account Code Conversion

Since release 11.4, *CIMS for OS/390* has been modified to support a single account code conversion routine. Changes have been made to all the programs that perform account code conversion (`CIMSACCT`, `CIMSCMF2`, `CIMSDB2`, `CIMSDISK`, `CIMIMS2`, `CIMSTAPE`, `CIMSUNIV`, and `CIMSUNO2`). Based on the new account code conversion routine, there have been some processing changes.

- There are now 10 `DEFINE FIELD` and 10 `MOVEFLD` statements supported. These `DEFINE FIELD` and `DEFINE MOVEFLD` statements must be in numerical order. For example:

  ```
  DEFINE FIELD1,1,2
  DEFINE FIELD3,3,10
  ```

  Would be invalid and an error message would be produced and processing halted. You must code it as follows:

  ```
  DEFINE FIELD1,1,2
  DEFINE FILED2,3,10
  ```

- An exception file is now supported in the preceding programs. For programs that did not support exception files the default is to have them turned OFF. To turn them on add the control statement `EXCEPTION FILE PROCESSING ON` to the control file and add the `CIMSEXOT DD` to the `JCL`. Reference the `JCL` listed in the `CIMS.DATAFILE` section for the `DD` characteristics.

The following control statements were added for managing the use of wildcards during account code conversion:

- `TURN OFF ACC WILDCARDS`. Turns off wildcard matching during account code conversion.

- `CHANGE ACC ? WILDCARD TO` and `CHANGE ACC * WILDCARD TO`. Change the default wildcard characters during account code conversion.

2 Message File Processing

Modules `CIMSCMF2`, `CIMSDISK`, `CIMSTAPE`, `CIMSUNIV`, and `CIMSUN02` now write out all information and all non-matched account record messages to the `CIMSMSG DD`. Reference the `JCL` listed in the `CIMS.DATAFILE` section for the `DD` characteristics. You will need to add the `CIMSMSG DD` to each step that executes one of these programs to be able to see any informational messages. The `CIMSPRNT DD` will still contain the control parameters and the programs results.

3 New `IMS` Processing

Two new programs `CIMSIMS1` and `CIMSIMS2` have been added to *CIMS for OS/390*. These programs replace the functionality of `CIMSIMSP` and `CIMSIMS` for `IMS` releases 5.1 and higher. `CIMSIMS1` and `CIMSIMS2` must be run together, you can no longer skip program `CIMSIMS1`. Please refer to the *CIMS Chargeback for OS/390 User Guide* for more information on the new `IMS` processing. Refer to the `CIMS.DATAFILE` member `CIMSIMS` for the new `JCL` needed to execute `CIMSIMS1` and `CIMSIMS2`. `CIMS.DATFILE` member `CIMSIMS0` contains the old `IMS JCL` for `CIMSIMSP` and `CIMSIMS`. These programs were added during a maintenance release of 11.3.

4 `OS/390` Release 2.10 Support

A common routine, `CIMSRD00`, was updated to support `OS/390` R2.10. This routine is linked into `CIMSACCT`, `CIMSBILL`, `CIMSCMF2`, `CIMSDB2`, `CIMSDISK`, `CIMSEDIT`, `CIMSIMS`, `CIMSIMS2`, `CIMSMULT`, `CIMSMVSE`, `CIMSRTLD`, `CIMSTAPE`, `CIMSUNIV`, `CIMSUN01`, and `CIMSUN02`. Also program `CIMSDATA` was updated to support `OS/390` R2.10. The R2.10 updates are a very important modification but only impact the execution load library.

5 Support for the new Web-based reporting feature

CIMS Lab has introduced a new Web-Based Reporting feature to its system; it is referred to as *CIMS Server*. With this new feature, users can create a wide variety of reports (including drill down detail reports), graphics, and spreadsheets in a browser-based point-and-click environment. Combining efficient processing and ease of use, this new feature gives users the flexibility to produce customized reports, invoices, and graphs based upon multiple user-defined criteria, such as organizational hierarchy, processing platforms, sites, cost centers, projects, systems, and subsystems.

To use this new feature with mainframe-processed data, *CIMS for OS/390* must build 791, 792 and 793 records and a resource record. The 791, 792 and 793 record will be a mainframe formatted `EBCDIC` record that contains character, binary, and packed data. The new resource record is a character-based format of the information contained in the 791, 792, and 793 records. The resource record will be the record that is processed by *CIMS Server*. To generate the resource records, a new `VSAM` file that stores information about the 791, 792 and 793 records along with the resource records must be built. This file is referred to as the *CIMS Server* Dictionary.

6 Individual Program Updates that could cause some processing changes:

- CIMSACCT

    - Supports *CIMS Server* - creation of record type 792 and 793 added. `CIMSACT2 DD`, `CIMSACT3 DD` and `CIMSDTVS DD` were added.

    - The `CIMS` Type 30 and Type 6 records were updated to include the latest `OS/390` updates and to prevent data conversion problems.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

    - Calls the new account code conversion routine.

    - The `USERID` from the `SMF` 6 record was added to the account code conversion string at offset 93 for a length of 8. To reference it, use the following `DEFINE FIELD` statement: `DEFINE FIELD1,93,8`

    - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

    - The optional conversion of the current CIMS record types 6, 30, 991-998 to CIMS Server record types 791, 792 and 793.

    - The ability to reprocess the CIMS Server record type 791, 792 and 793.

    - When processing CIMS records, all records that fail date selection can be optionally written to a separate file.

    - Update suspense file processing. The SMF type 26 record is used to purge extraneous records on the suspense file.

    - Added the following control statements:

        - `UPPERCASE ACCOUNT FIELDS`. Specifies that the account code built from the account fields be converted to uppercase.

        - `SMF ESS SUPPORT ON`. Parses the Enhanced Sysout Section of the SMF Type 6 records and places ESS fields in the CIMS account code character string.

        - `NON-PRIME SHIFT CODE =`. Sets the non-prime shift code when the `NON-PRIME DAY` and `WEEKENDS ARE NON-PRIME` control statements are used.

        - `SMF6 ESS Fixed Format`. Parses the text units field of the Enhanced Sysout Section of the SMF Type 6 record and formats the field into a fixed format in the CIMS Record Type 6.

    - Steps with no CPU and I/O were incorrectly marked invalid (for example, IEFBR14).

    - Unsupported records processed using the `PROCESS CIMS MAINTENANCE` control statement will be written to the `CIMSUNSP DD`.

- CIMSBILL

    - Support for the updated formats of the `CIMS` record types 30 and 6.

    - Two new options were added:

        - `PRINT BUDGET LINE OFF` turns off the budget line in the Invoice.

        - `IN012AA` added the ability to override invoice line `LIN012AA` (Actual Amount).

    - New option added to control file: `INVOICE NUMBERS OFF` - turns off all invoice numbers.

    - New option added to control file: `PRINT INVOICE NUMBERS FOR CONTROL BREAKS` x1x2x3x4 - prints invoice numbers only on the specified control breaks.

    - During the `CIMSSUM` file creation, the `ZTOT` line was created when there was no resource or dollar amount. In this case, the `ZTOT` line is no longer being produced.

    - Performs windowing on older user written 991-998 records that do not have the century byte set. If the year is less than 88 `CIMS` assumes the year 2000, if it's between 88 and 99 `CIMS` assumes 1900.

    - Processing was added to show rate codes in the RATE CODE NOT FOUND message that had rate totals of 0 (there were positive and negative entries for the rate code) and were not defined in the rate file.

- CIMSCICS

    - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

    - Support for the CICS *CIMS Server* record (791) has been added. Refer to the *CIMS Chargeback CICS User Guide* for more information.

- CIMSCMF2

    - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

    - `CIMSMSG DD` was added.

    - Calls the new account code conversion routine.

    - The `CICS` program name has been added to the account code conversion string at offset 116 for a length of 8. To reference it, use the following `DEFINE FIELD` statement: `DEFINE FIELD1,116,8`.

    - New control statement `LIMIT ACCOUNT CODE NO-MATCH MSGS TO nnn` was added. The default is to display 1000 no-match messages.

- Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- `CIMSDATA`

  - Updated to support `OS/390` Release 2.10.

  - Updated to support newer version of the `SMF` Type 6 record.

- `CIMSDB2`

  - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

  - Sets return code to 16 if an out of space condition happens when writing to the `CIMSACCT DD`.

  - Updated to handle some `DB2` 6.1 `SMF` record problems (negative `CPU` values, invalid segment lengths).

  - New option added to control file: `NO SORT` - causes the internal sort not to be invoked. This should only be used when the control card `NO SUM` is specified.

  - Calls the new account code conversion routine.

  - Support for `DB2` 6.1 was added. `DB2REC DD LRECL` was increased to 3120 from 2600 to support the updated `DB2` 6.1 records.

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

  - Added control statements `ZERO CPU TIME FOR CICS CONNECTION ccccccccc PLAN ppppppppp` (where `ccccccccc`=the CICS connection name and `ppppppppp`=the CICS plan name) and `ZERO CPU REPORT`. These statements set the DB2 Transaction CPU Time to 0 and print a report that details the number of transactions and total CPU time reset to 0.

  - Limited the number of invalid CPU time messages to 100.

- `CIMSDISK`

  - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

  - `CIMSMSG DD` was added.

  - Calls the new account code conversion routine.

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

- Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- `CIMSDTLD`

  - New Module - it supports the loading and updating of the new *CIMS Server* Dictionary `VSAM` file.

- `CIMSEXTR`

  - New Module - it supports creation of the mainframe resource records that can be processed by *CIMS Server*.

- `CIMSLEVC`

  - This is a new program that checks for the version of `LE` installed.

- `CIMSLEVL`

  - This is a new program that will display the base release genlevel installed of *CIMS for OS/390*.

- `CIMSIMS1`

  - New program. Replaces `CIMSIMSP`.

- `CIMSIMS2`

  - New program. Replaces `CIMSIMS`.

  - Calls the new account code conversion routine.

  - For `IMS` release 5.1, IBM does not set the century byte correctly. Their stated position is to window the dates. If the years are between 00-59 they assume 2000, if the years are between 60-99 they assume 1900. We do the same windowing.

- `CIMSTAPE`

  - Added `TMS` virtual tape support.

  - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

  - `CIMSMSG DD` was added.

  - Calls the new account code conversion routine.

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

- RMM interface has been updated. The `RVMEDREC` field is now used to determine the media type instead of `RVNAME`. Based on this the control cards `RMM REELS =`, `RMM 3480 =`, `RMM 3490 =`, and `RMM 3590 =` are now obsolete.

- Added support for 3590 tapes in `TMS`, 3490 and 3590 tapes in `TLMS`. Rates need to be updated to support the updates. For `TMS` the 3590 count is in the `ZTPE@@04` field. For `TLMS` the 3490 count is in the `TLMS@@04` field and the 3590 count is in the `TLMS@@05` field.

- `CIMSUNIV`

  - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

  - `CIMSMSG DD` was added.

  - Calls the new account code conversion routine.

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

- `CIMSUN02`

  - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

  - `CIMSMSG DD` was added.

  - Calls the new account code conversion routine.

  - Sets return code to 16 if the internal sort fails. Before the return code was set to 0 even if the internal sort failed.

- `CIMSUSER`

  - The `CIMSACU7` exit was updated to support `DB2` 6.1. The source for `CIMSUSER` is contained in the `CIMS.DATAFILE` library member: `CIMSUSER`.

7 `CIMS` Report Writer - `SPECTWTR`

- New release of `CIMS` Report Writer 2.8 was released with *CIMS for OS/390* 11.4. An updated authorization code is required. This authorization code is specified in the `SWOPTIONS` member in the `CIMS.REPTLIB`.

CIMS.DATAFILE Updates/Additions

1 The following members were updated to add 10 sample `DEFINE FIELD` and `DEFINE MOVEFLD` statements:

- `ACCTINPT, ACCTINP2, ACCTINP3, ACCTINP6, CMF2INPT, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IMSINPT, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT`

2 The following members were updated to add the `CIMSMSG DD` for message processing:

- `CIMSCICS, CIMSDISK, CIMSRJE, CIMSRMM, CIMSROSC, CIMSRSCA, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS402, SUBDATC1, SUBDATC2`

3 The following members were updated to add the `CIMSACT2`, `CIMSACT3` and `CIMSDTVS DD` for support for the new *CIMS Server*.

- `ATMONJCL, ATMO2JCL, CIMSADA1, CIMSCICS, CIMSDB2, CIMSDISK, CIMSEOM, CIMSFALC, CIMSJB2A, CIMSJB2B, CIMSJOB2, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS, SUBDATC1, SUBDATC2`

4 The following members were updated to increase the `LRECL` of the exception file (`CIMSEXOT`). The record size increased from 300 to 376 and the BLKSIZE was changed from 27900 to 27824.

- `CIMSADA1, CIMSDISK, CIMSFALC, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBDATC1, SUBDATC2`

5 The following members were updated to add the new control statements to support the creation of the new *CIMS Server* records.

- `ACCTINPT, CMF2INPT, DATACIN1, DATACIN2, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTL, ZARAINPT, ZDBCNTL, ZDCCCNTL, ZFALCNTL, ZRJECNTL, ZROSCNTL, ZWYLCNTL`

6 The following members are new. They contain the default *CIMS Server* dictionary definitions.

- `DCTNBATU, DCTNBGDU, DCTNCICS, DCTNCTLD, DCTNCTLT, DCTNDASD, DCTNDB2, DCTNDB2U, DCTNDB2W, DCTNEVTW, DCTNFSMU, DCTNHDR, DCTNIMS, DCTNINTU, DCTNMQSR, DCTNORCU, DCTNORCV, DCTNORCW, DCTNPRTU, DCTNPRTW, DCTNRMM, DCTNR792, DCTNR793, DCTNR794, DCTNR999, DCTNSPMU, DCTNSPMW, DCTNSTOO, DCTNSTOU, DCTNSTOW, DCTNTAPE, DCTNTLMS, DCTNTMS, DCTNTSO, DCTNUNIV, DCTNV00, DCTNZARA, DCTNZZZZ`

7 The following members are new. They contain the *CIMS Server* Dictionary and Extract control `JCL` and input parameters.

- `CIMSDTC, CIMSDTD, CIMSDTLD, CIMSDUTL, CIMSEXTR, EXTRINPT`

8 The following members were updated to change the BLKSIZE values to ½ track blocking (27998):

CIMSADA1, CIMSDB2, CIMSDISK, CIMSFALC, CIMSIMS, CIMSJOB3, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBBILL2

9 Individual CIMS.DATAFILE member updates:

- ACCTINP3

  - Added new control statement CONVERT TO CIMS SERVER to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement NO-SELECT FILE PROCESSING ON to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- ACCTINP4

  - Added new control statement CONVERT TO CIMS SERVER to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement NO-SELECT FILE PROCESSING ON to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- ACCTINP5

  - Added new control statement CONVERT TO CIMS SERVER to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement NO-SELECT FILE PROCESSING ON to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- ACCTINPT

  - Added new control statement CONVERT TO CIMS SERVER to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement NO-SELECT FILE PROCESSING ON to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- CIMRCT54, CIMRECTL

  - New members that contain the CA-DYNAM/TLMS record layouts.

- CIMREC14

  - Updated format of the CIMSUNIV 001 input record.

- CIMREC30

    - Updated format of the `CIMS` Record Type 30.

    - Uncommented the `'01'` redefines statement. CIMSUSER exit code was not properly addressing the record without the redefines statement.

- CIMSCICS

    - The step that executes `CIMSCMF2` added the `DD CIMSMSG`.

- CIMSCMPL

    - This member was updated to compile the user exit (`CIMSUSER`) with `COBOL` for `OS/390` instead of `COBOL` II.

- CIMSDB2

    - The `LRECL` of the `CIMSEXIN DD` was changed from 200 to 248 and the block size from 27800 to 26536.

    - The `LRECL` of `DB2RECS` was changed from 2600 to 3120 to support `DB2` 6.1.

- CIMSEOM

    - DD statement CIMSSEL was added. All records that fail date selection will be written to the DD statement CIMSSEL if the CIMSACCT control card: `NO-SELECT FILE PROCESSING ON` is specified.

- CIMSJOB2

    - DD statement CIMSSEL was added. All records that fail date selection will be written to the DD statement CIMSSEL if the CIMSACCT control card: `NO-SELECT FILE PROCESSING ON` is specified.

- CIMSLEVL

    - New member added to support the `CIMSLEVL` program. This program will display the base genlevel of `CIMS` installed.

- CIMSIMS

    - New `JCL`. This `JCL` now calls `CIMSIMS1` and `CIMSIMS2`.

- CIMSIMSP, CIMSIMSL, CIMSIMSR, CIMSIMSS

    - Obsolete. Use the updated `CIMSIMS JCL` and programs `CIMSIMS1` and `CIMSIMS2`.

- CIMSRATE, CIMSRT, CIMSRT02

    - All rate descriptions were changed from `MVS` to `OS/390`

- CIMSUSER

    - The user exit source entry point `CIMSACU7` was updated for `DB2` 6.1 support.

- `DATAINPT`

  - Added 26 to the default records to be processed to support the new suspense file purging of extraneous records.

- `IDMSJCL1`, `IDMSJCL2`, and `IDMSJCL3`

  - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263, BLKSIZE=27998`.

  - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376, BLKSIZE=27824`.

- `M204JCL1`

  - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263, BLKSIZE=27998`.

  - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376, BLKSIZE=27824`.

- `RMMINPT`

  - `RMM REELS =`, `RMM 3480 =`, `RMM 3490 =`, `RMM 3590 =` have been removed. They are obsolete. `CIMS` uses a different field to determine the media type.

  - subas401

- `SUBAS401` and `SUBAS402`

  - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263, BLKSIZE=27998`.

  - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376, BLKSIZE=27824`.

- `SUBDATC1` and `SUBDATC2`

  - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263, BLKSIZE=27998`.

  - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376, BLKSIZE=27824`.

- `SUBDB21`

  - CIMSEXOT DCB information changed to `LRECL=248, BLKSIZE=26536`.

CIMS.REPTLIB Updates/Additions

1 The following members were updated to support the new format of the `CIMS` record type 6 and 30:

- `CIMREC06, CIMREC30, SPWTRH02, SPWTR001, SPWTR002, SPWTR003, SPWTR004, SPWTR005, SPWTR006, SPWTR007, SPWTR008, SPWTR009, SPWTR010, SPWTR012, SPWTR013, SPWTR015, SPWTR017, SPWTR018, SPWTR020, SPWTR021, SPWTR022, SPWTR023, SPWTR110, SPWTR111, SPWTR112, SPWTR113, SPWTR510, SPWTR811, SPWTR905`

2 The following members are new reports that support the new `CIMS` 791, 792, and 793 records and also the new *CIMS Server* dictionary record.

- `CIMRCDCT, CIMRC791, CIMRC792, CIMRC793, CNVT11D5, RC791V00, RC792V00, RC793V00, SPWRPCN1, SPWRP940, SPWRP941, SPWRP942, SPWRP943, SPWTR011, SPWTR056, SPWTR065, SPWTR146, SPWTR181, SPWTR757, SPWTR758, SPWTR759, SPWTR763, SPWTR791, SPWTR792, SPWTR793, SPWTR815, SPWTR816`

3 The following members were updated to support the new CIMSUNIV 001 record. The 001 record has been expanded to a total of 263 bytes.

- `SPWTR201, SPWTR203, SPWTR205, SPWTR710, SPWTR712 SPWTR722, SPWTR723, SPWTR771`

4 Individual `CIMS.REPTLIB` member updates:

- `ARUNJCLH`

    - This is a new member that had the execution `JCL` to run the `HTML` reports (`SPWTRH01-04`).

- `CICSRC13`

    - This record was updated for `CICS` release 5.2 record layout. This record is produced by program `CIMSCMFP`.

- `CICSRC14`

    - This member was added to show the `CICS` release 5.3 record layout. This record is produced by program `CIMSCMFP`.

- `CIMRC006`

    - A fixed format option was added for the Enhanced Sysout Section.

- `CIMREC06`

    - Updated record format - new fields and re-formatted fields.

- `CIMREC30`

    - Updated record format - new fields and re-formatted fields.

- `CIMSEXOT`

    - Updated `CIMSUNIV` Exception record format. `USER-IDENT` field and the stop date and time were added.

- CIMSIMSI, CIMSIMSJ, CIMSIMSP

  - These members are obsolete. They were part of the CIMSIMSP and CIMSIMS processing that has been replaced by CIMSIMS1 and CIMSIMS2.

- CIMSIMS1

  - This is a new record with the intermediate layout of the combined type 1/3/31 IMS log record. This record is produced by CIMSIMS1.

- CIMSIMS2

  - This is a new record with the intermediate record layout for the type 7 and 8 IMS log record. This record is produced by CIMSIMS1.

- CIMSMF06

  - Updated record format - new fields and re-formatted fields.

- CIMSSAMS

  - This is a new member with the SAMS record layout. Used in SPWTR790.

- CIMSZASJ

  - New fields have been added to the end of this AS400 record layout.

- CIMSZLM3

  - Added support for TMON 2.2.

- DB2RECS2

  - This is a new record layout for the detail DB2 record written by CIMSDB2 to support DB2 release 6.1. This takes the place of DB2RECS1.

  - The LRECL was increased.

- LINKRWDB

  - This member was added to provide JCL to link the DB2 option into CIMS Report Writer.

- RMMEXOT

  - Updated RMM Exception record format. USER-IDENT field and the stop date and time were added.

- SMFRC116

  - New member that contains the record layout for the SMF 116 record.

- SMFRC222

  - New member that contains the record layout for the Control-D SMF record.

- SPWTRH01

  - These reports were added to show HTML support in CIMS Report Writer 2.8.

- SPWTRH02

  - These reports were added to show `HTML` support in `CIMS` Report Writer 2.8.

- SPWTRH03

  - These reports were added to show `HTML` support in `CIMS` Report Writer 2.8.

- SPWTRH04

  - Updated format of the report.

  - These reports were added to show `HTML` support in `CIMS` Report Writer 2.8.

- SPWTR070, SPWTR071

  - `TMS` reports updated to support 3490s and 3590s.

- SPWTR120

  - This is a new sample report showing how to do shift charge processing within `CIMS`.

- SPWTR121

  - This is a new sample report showing how to do shift charge processing with interval accounting within `CIMS`.

- SPWTR141

  - This report was updated to reflect the new `DB2RECS2` field names (to support `DB2` release 6.1).

- SPWTR751

  - `TMS` reports updated to support 3490s and 3590s.

- SPWTR790

  - This is a new report that converts a `SAMS` record into a `DCOLLECT` format so that it can be processed by `CIMSDISK`.

- SWALIAS

  - Defined RC79#V00-RECORD as an alias for RC79#V00.

- TLMSEXOT

  - Updated `TLMS` Exception record format. `USER-IDENT` field and the stop date and time were added.

- TMS991

  - Added fields to support 3590 tapes.

- TMSEXOT

    - Updated TMS Exception record format. USER-IDENT field and the stop date and time were added.

    - Added fields to support 3590 tapes.

- ZARAEXOT

    - Updated ZARA Exception record format. USER-IDENT field and the stop date and time were added.

Install Passwords

CIMS for OS/390 releases 11.2 through 11.6 use the same passwords. **Do not use the new** CIMS.DATAFILE **member during your testing.**

The *CIMS Report Writer* password has changed. You will need to update the SWOPTION member of the CIMS.REPTLIB with the password for *CIMS Report Writer* release 2.8. You can obtain a valid password by contacting the CIMS Lab (see page viii).

Update the CICS On-line Programs

If you are using the CIMS data entry screens, you will need to update your CICS startup JCL to STEPLIB to the CICS online load modules for testing.

Reapply User Exits

You need to reapply any user exits that you have coded. To find out if you are calling any user exits, check your control file members and look for EXIT starting in column 1. If you find EXIT, then that program is calling a user exit. The CIMSUSER exit has been updated to support DB2 release 6.1. You must re-compile the user exit pointing to the new CIMS.DATAFILE where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the CIMS.DATAFILE JCL member CIMSCMPL to compile and link these programs.

Upgrading from 11.4

Install the New Release into a Test Area

See *Install the New Release into a Test Area* on page 3-5.

Program Updates/Changes/Additions

1 Support for the new Web-based reporting feature

CIMS Lab has introduced a new Web-Based Reporting feature to its system; it is referred to as *CIMS Server*. With this new feature, users can create a wide variety of reports (including drill down detail reports), graphics, and spreadsheets in a browser-based point-and-click environment. Combining efficient processing and ease of use, this new feature gives users the flexibility to produce customized reports, invoices, and graphs based upon multiple user-defined criteria, such as organizational hierarchy, processing platforms, sites, cost centers, projects, systems, and subsystems.

To use this new feature with mainframe-processed data, *CIMS for OS/390* must build 791, 792 and 793 records and a resource record. The 791, 792 and 793 record will be a mainframe formatted `EBCDIC` record that contains character, binary, and packed data. The new resource record is a character-based format of the information contained in the 791, 792, and 793 records. The resource record will be the record that is processed by *CIMS Server*. To generate the resource records, a new `VSAM` file that stores information about the 791, 792 and 793 records along with the resource records must be built. This file is referred to as the *CIMS Server* Dictionary.

2 Account Code Conversion

The following control statements were added for managing the use of wildcards during account code conversion:

- `TURN OFF ACC WILDCARDS.` Turns off wildcard matching during account code conversion.

- `CHANGE ACC ? WILDCARD TO` and `CHANGE ACC * WILDCARD TO`. Change the default wildcard characters during account code conversion.

3 Individual Program Updates that could cause some processing changes:

- `CIMSACCT`

   - Supports *CIMS Server* - creation of record type 792 and 793 added. `CIMSACT2 DD`, `CIMSACT3 DD` and `CIMSDTVS DD` were added.

   - The `CIMS` Type 30 and Type 6 records were updated to include the latest `OS/390` updates and to prevent data conversion problems.

   - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

   - The optional conversion of the current CIMS record types 6, 30, 991-998 to CIMS Server record types 791, 792 and 793.

- The ability to reprocess the CIMS Server record type 791, 792 and 793.

- When processing CIMS records, all records that fail date selection can be optionally written to a separate file.

- Update suspense file processing. The SMF type 26 record is used to purge extraneous records on the suspense file.

- Added the following control statements:

  - UPPERCASE ACCOUNT FIELDS. Specifies that the account code built from the account fields be converted to uppercase.

  - SMF ESS SUPPORT ON. Parses the Enhanced Sysout Section of the SMF Type 6 records and places ESS fields in the CIMS account code character string.

  - NON-PRIME SHIFT CODE =. Sets the non-prime shift code when the NON-PRIME DAY and WEEKENDS ARE NON-PRIME control statements are used.

  - SMF6 ESS Fixed Format. Parses the text units field of the Enhanced Sysout Section of the SMF Type 6 record and formats the field into a fixed format in the CIMS Record Type 6.

- Steps with no CPU and I/O were incorrectly marked invalid (for example, IEFBR14).

- Unsupported records processed using the PROCESS CIMS MAINTENANCE control statement will be written to CIMSUNSP DD.

- CIMSBILL

  - Support for the updated formats of the CIMS record types 30 and 6.

  - Two new options were added:

    - PRINT BUDGET LINE OFF turns off the budget line in the Invoice.

    - INO12AA added the ability to override invoice line LINO12AA (Actual Amount).

  - Processing was added to show rate codes in the RATE CODE NOT FOUND message that had rate totals of 0 (there were positive and negative entries for the rate code) and were not defined in the rate file.

- CIMSCICS

  - Support for the CICS CIMS Server record (791) has been added. Refer to the *CIMS Chargeback for OS/390 User Guide* for more information.

- CIMSCMF2

    - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

    - Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSDATA

    - Updated to support `OS/390` Release 2.10.

    - Updated to support newer version of the `SMF` Type 6 record.

- CIMSDB2

    - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

    - Sets return code to 16 is an out of space condition happens when writing to the `CIMSACCT DD`.

    - Updated to handle some `DB2` 6.1 `SMF` record problems (negative `CPU` values, invalid segment lengths).

    - New option added to control file: `NO SORT` - causes the internal sort not to be invoked. This should only be used when the control card `NO SUM` is specified.

    - Added control statements `ZERO CPU TIME FOR CICS CONNECTION ccccccc PLAN ppppppp` (where `ccccccc`=the CICS connection name and `ppppppp`=the CICS plan name) and `ZERO CPU REPORT`. These statements set the DB2 Transaction CPU Time to 0 and print a report that details the number of transactions and total CPU time reset to 0.

    - Limited the number of invalid CPU time messages to 100.

- CIMSDISK

    - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

    - Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSDTLD

    - New Module - it supports the loading and updating of the new *CIMS Server* Dictionary `VSAM` file.

- `CIMSEXTR`

    - New Module - it supports creation of the mainframe resource records that can be processed by *CIMS Server*.

- `CIMSIMS1`

    - New processing was added to determine LTERM/LUNAME name for transactions.

- `CIMSIMS2`

    - New processing was added to support API-C (explicit APPC) IMS transactions.

- `CIMSTAPE`

    - Added `TMS` virtual tape support.

    - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

- `CIMSUNIV`

    - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

- `CIMSUN02`

    - Supports *CIMS Server* - creation of record type 791 added. `CIMSACT2 DD` and `CIMSDTVS DD` were added.

    - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.

CIMS.DATAFILE Updates/Additions

1 The following members were updated to add the `CIMSACT2`, `CIMSACT3` and `CIMSDTVS DD` for support for the new *CIMS Server*.

- `ATMONJCL, ATMO2JCL, CIMSADA1, CIMSCICS, CIMSDB2, CIMSDISK, CIMSEOM, CIMSFALC, CIMSJB2A, CIMSJB2B, CIMSJOB2, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS, SUBDATC1, SUBDATC2`

2 The following members were updated to increase the `LRECL` of the exception file (`CIMSEXOT`). The record size increased from 300 to 376 and the BLKSIZE was changed from 27900 to 27824.

- `CIMSADA1, CIMSDISK, CIMSFALC, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBDATC1, SUBDATC2`

3 The following members were updated to add the new control statements to support the creation of the new *CIMS Server* records.

- `ACCTINPT, CMF2INPT, DATACIN1, DATACIN2, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTL, ZARAINPT, ZDBCNTL, ZDCCCNTL, ZFALCNTL, ZRJECNTL, ZROSCNTL, ZWYLCNTL`

4 The following members are new. They contain the default *CIMS Server* dictionary definitions.

- `DCTNBATU, DCTNBGDU, DCTNCICS, DCTNCTLD, DCTNCTLT, DCTNDASD, DCTNDB2, DCTNDB2U, DCTNDB2W, DCTNEVTW, DCTNFSMU, DCTNHDR, DCTNIMS, DCTNINTU, DCTNMQSR, DCTNORCU, DCTNORCV, DCTNORCW, DCTNPRTU, DCTNPRTW, DCTNRMM, DCTNR792, DCTNR793, DCTNR794, DCTNR999, DCTNSPMU, DCTNSPMW, DCTNSTOO, DCTNSTOU, DCTNSTOW, DCTNTAPE, DCTNTLMS, DCTNTMS, DCTNTSO, DCTNUNIV, DCTNV00, DCTNZARA, DCTNZZZZ`

5 The following members are new. They contain the *CIMS Server* Dictionary and Extract control `JCL` and input parameters.

- `CIMSDTC, CIMSDTD, CIMSDTLD, CIMSDUTL, CIMSEXTR, EXTRINPT`

6 The following members were updated to change the `BLKSIZE` values to ½ track blocking (27998):

`CIMSADA1, CIMSDB2, CIMSDISK, CIMSFALC, CIMSIMS, CIMSJOB3, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBBILL2`

7 Individual `CIMS.DATAFILE` member updates:

- `ACCTINP3`

  - Added new control statement `CONVERT TO CIMS SERVER` to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement `NO-SELECT FILE PROCESSING ON` to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- ACCTINP4

  - Added new control statement `CONVERT TO CIMS SERVER` to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement `NO-SELECT FILE PROCESSING ON` to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- ACCTINP5

  - Added new control statement `CONVERT TO CIMS SERVER` to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement `NO-SELECT FILE PROCESSING ON` to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- ACCTINPT

  - Added new control statement `CONVERT TO CIMS SERVER` to be used during PROCESS CIMS to convert the current CIMS records to *CIMS Server* records.

  - Added new control statement `NO-SELECT FILE PROCESSING ON` to be used during PROCESS CIMS to write all records that failed date selection to the DD statement CIMSSEL.

- CIMRCT54, CIMRECTL

  - New members that contain the CA-DYNAM/TLMS record layouts.

- CIMREC14

  - Updated format of CIMSUNIV 001 input record.

- CIMREC30

  - Updated format of the `CIMS` Record Type 30.

  - Uncommented the '01' redefines statement. CIMSUSER exit code was not properly addressing the record without the redefines statement.

- CIMSDB2

  - The `LRECL` of the `CIMSEXIN DD` was changed from 200 to 248 and the block size from 27800 to 26536.

- CIMSEOM

  - DD statement CIMSSEL was added. All records that fail date selection will be written to the DD statement CIMSSEL if the CIMSACCT control card: `NO-SELECT FILE PROCESSING ON` is specified.

- CIMSIMS

  - A summarization step was added to the end of the job.

- CIMSJOB2

    - DD statement CIMSSEL was added. All records that fail date selection will be written to the DD statement CIMSSEL if the CIMSACCT control card: `NO-SELECT FILE PROCESSING ON` is specified.

- DATAINPT

    - Added 26 to the default records to be processed to support the new suspense file purging of extraneous records.

- IDMSJCL1, IDMSJCL2 and IDMSJCL3

    - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263, BLKSIZE=27998`.

    - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376, BLKSIZE=27824`.

- M204JCL1

    - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263, BLKSIZE=27998`.

    - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376, BLKSIZE=27824`.

- SUBAS401 and SUBAS402

    - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263, BLKSIZE=27998`.

    - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376, BLKSIZE=27824`.

- SUBDATC1 and SUBDATC2

    - SWOUTPUT DCB information changed to `RECFM=VB,LRECL=263, BLKSIZE=27998`.

    - CIMSEXIN and CIMSEXOT DCB information changed to `LRECL=376, BLKSIZE=27824`.

- SUBDB21

    - CIMSEXOT DCB information changed to `LRECL=248, BLKSIZE=26536`.

CIMS.REPTLIB Updates/Additions

1 The following members were updated to support the new format of the `CIMS` record type 6 and 30:

- CIMREC06, CIMREC30, SPWTRH02, SPWTR001, SPWTR002, SPWTR003, SPWTR004, SPWTR005, SPWTR006, SPWTR007, SPWTR008, SPWTR009, SPWTR010, SPWTR012, SPWTR013, SPWTR015, SPWTR017, SPWTR018, SPWTR020, SPWTR021, SPWTR022, SPWTR023, SPWTR110, SPWTR111, SPWTR112, SPWTR113, SPWTR510, SPWTR811, SPWTR905

2 The following members are new reports that support the new `CIMS` 791, 792, and 793 records and also the new *CIMS Server* dictionary record.

- `CIMRCDCT, CIMRC791, CIMRC792, CIMRC793, CNVT11D5, RC791V00, RC792V00, RC793V00, SPWRPCN1, SPWRP940, SPWRP941, SPWRP942, SPWRP943, SPWTR011, SPWTR056, SPWTR065, SPWTR146, SPWTR181, SPWTR757, SPWTR758, SPWTR759, SPWTR763, SPWTR791, SPWTR792, SPWTR793, SPWTR815, SPWTR816`

3 The following members were updated to support the new CIMSUNIV 001 record. The 001 record has been expanded to a total of 263 bytes.

- `SPWTR201, SPWTR203, SPWTR205, SPWTR710, SPWTR712 SPWTR722, SPWTR723, SPWTR771`

4 Individual `CIMS.REPTLIB` member updates:

- `CIMRC006`

  - A fixed format option was added for the Enhanced Sysout Section.

- `CIMREC06`

  - Updated record format - new fields and re-formatted fields.

- `CIMREC30`

  - Updated record format - new fields and re-formatted fields.

- `CIMSEXOT`

  - Updated `CIMSUNIV` Exception record format. `USER-IDENT` field and the stop date and time were added.

- `CIMSMF06`

  - Updated record format - new fields and re-formatted fields.

- `CIMSZLM3`

  - Added support for TMON 2.2.

- `RMMEXOT`

  - Updated `RMM` Exception record format. `USER-IDENT` field and the stop date and time were added.

- `SMFRC116`

  - New member that contains the record layout for the SMF 116 record.

- `SMFRC222`

  - New member that contains the record layout for the Control-D SMF record.

- `SPWTR751`

  - `TMS` reports updated to support 3490s and 3590s.

- SWALIAS

    - Defined RC79#V00-RECORD as an alias for RC79#V00.

- TLMSEXOT

    - Updated `TLMS` Exception record format. `USER-IDENT` field and the stop date and time were added.

- TMSEXOT

    - Updated `TMS` Exception record format. `USER-IDENT` field and the stop date and time were added.

- ZARAEXOT

    - Updated `ZARA` Exception record format. `USER-IDENT` field and the stop date and time were added.

Passwords

CIMS for OS/390 releases 11.2 through 11.6 use the same passwords. **Do not use the new** `CIMS.DATAFILE` **member during your testing.**

The release of the `CIMS` Report Writer is 2.8. This is the same release that was included with *CIMS for OS/390* 11.4. Therefore, a new password is not required.

Update the CICS On-line Programs

If you are using the `CIMS` DATA ENTRY Screens you will need to update your `CICS` startup `JCL` to `STEPLIB` to the `CICS` online load modules for testing.

Reapply User Exits

You need to reapply any user exits that you have coded. To find out if you are calling any user exits, check your control file members and look for `EXIT` starting in column 1. If you find `EXIT`, then that program is calling a user exit. The `CIMSUSER` exit has been updated to support DB2 release 6.1. You must re-compile the user exit pointing to the new `CIMS.DATAFILE` where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the `CIMS.DATAFILE` `JCL` member `CIMSCMPL` to compile and link these programs.

Upgrading from 11.5

Install the New Release into a Test Area

See *Install the New Release into a Test Area* on page 3-5.

Program Updates/Changes/Additions

1 CIMS 79x records

The CIMS 79x records have been changed. The account code area of these records has been expanded from 80 to 128 bytes for use in a future release of *CIMS for OS/390*. Additional fields were also added to the common header section of the 79x records to support common stop date/time fields.

The definitions of the 79x records in the CIMSDTVS dictionary and report writer definitions has been simplified by using relative addressing to the Resource and Identifier sections.

For any existing JCL producing 79x records, increase the space allocations to accommodate the larger records. Look for DD statements CIMSACT1, CIMSACT2, and CIMSACT3. A 20 percent increase should provide sufficient space for the larger records.

Additional *CIMS Report Writer* record descriptions have been added so that reporting can be done using the old and new formats of the 79x records. In most cases, the old and new formats of the 79x records can co-exist. When CIMSACCT is used to re-process 79x records using the PROCESS CIMS MAINTENANCE control statement, the old formats will automatically be converted into the new formats. The CIMSEXTR program can also process old and new formats of the 79x records.

If the 79x records are being saved in a history file, the JCL used to sort and merge the files will need to be changed to reflect the new offsets of the start dates and times. A new history file should be created as soon as the new 79x records are produced. CIMSACCT and CIMSEXTR can handle the different formats of the 79x records, but the sort and merge JCL use hard-coded offsets that can support only one format.

2 Account Code Conversion

The following control statements were added for managing the use of wildcards during account code conversion:

- TURN OFF ACC WILDCARDS. Turns off wildcard matching during account code conversion.

- CHANGE ACC ? WILDCARD TO and CHANGE ACC * WILDCARD TO. Change the default wildcard characters during account code conversion.

3 `CIMSUNIV 001` records

The `CIMSUNIV 001` record has been expanded to include stop date/time values and a 128-byte account code area.

Exception file processing for programs `CIMSUNIV`, `CIMSTAPE`, `CIMSDISK`, and `CIMSUNO2` use a new record format. All existing exception files must be processed before implementing these new programs.

4 CIMS Record Type 6 records

The `CIMSDATA` program was changed to provide additional information in the CIMS Record Type 6 records. The Enhanced Sysout Section was moved to the end of the record and increased to 400 bytes. The resulting larger record may require additional space allocation for the `CIMSACCT DD` statement.

5 The `CIMSEXTR` program can ensure accurate Start and Stop dates/times during the aggregation process.

6 Individual Program Updates that could cause some processing changes:

- `CIMSACCT`

  - Supports the new format of the 792 and 793 records along with the new stop date/time in the common header.

  - The `PROCESS CIMS MAINTENANCE` control statement converts the older version of the 792 and 793 records into the new version.

  - Added the following control statements:

    - `UPPERCASE ACCOUNT FIELDS`. Specifies that the account code built from the account fields be converted to uppercase.

    - `SMF ESS SUPPORT ON`. Parses the Enhanced Sysout Section of the SMF Type 6 records and places ESS fields in the CIMS account code character string.

    - `NON-PRIME SHIFT CODE =`. Sets the non-prime shift code when the `NON-PRIME DAY` and `WEEKENDS ARE NON-PRIME` control statements are used.

    - `SMF6 ESS Fixed Format`. Parses the text units field of the Enhanced Sysout Section of the SMF Type 6 record and formats the field into a fixed format in the CIMS Record Type 6.

  - Steps with no CPU and I/O were incorrectly marked invalid (for example, IEFBR14).

  - Unsupported records processed using the `PROCESS CIMS MAINTENANCE` control statement will be written to `CIMSUNSP DD`.

- `CIMSBILL`

  - Processing was added to show rate codes in the RATE CODE NOT FOUND message that had rate totals of 0 (there were positive and negative entries for the rate code) and were not defined in the rate file.

- CIMSCICS

  - Supports the new format of the 791 records.

- CIMSCMF2

  - Supports the new format of the 791 records along with the new stop date/time in the common header.

  - Added the control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn` = a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSDATA

  - The Enhanced Sysout Section was moved to the end of the CIMS Record Type 6 record and increased to 400 bytes.

- CIMSDB2

  - Supports the new format of the 791 records along with the new stop date/time in the common header.

  - Added control statements `ZERO CPU TIME FOR CICS CONNECTION cccccccc PLAN pppppppp` (where `cccccccc`=the CICS connection name and `pppppppp`=the CICS plan name) and `ZERO CPU REPORT`. These statements set the DB2 Transaction CPU Time to 0 and print a report that details the number of transactions and total CPU time reset to 0.

  - Limited the number of invalid CPU time messages to 100.

- CIMSDISK

  - Supports the new format of the 791 records along with the new stop date/time in the common header.

  - The format of the Exception records has changed to include stop date/time. Any existing exception files must be processed using the same genlevel of `CIMSDISK` that generated that file. **The new** `CIMSDISK` **cannot process an older** `CIMSDISK` **exception file.**

  - The DCB information for the `CIMSEXIN` and `CIMSEXOT` has changed. Any existing JCL will need to be modified to include the new DCB attributes `LRECL=376 BLKSIZE=27824`.

  - Added control statement `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn`=a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSEXTR

    - Supports the new `AGGREGATE DATE` control statement. This control statement is used to identify how the output dates will be built for the CIMS Server Resource File. The use of `CIMSDTVS` dictionary field names in the date fields will result in aggregation at these field names and additional processing will be done to ensure accurate start and stop times. See the *CIMS Chargeback for OS/390 User Guide* for additional details about the `AGGREGATE DATE` control statement used by `CIMSEXTR`.

    - The dictionary field name, `CIMSSUBS`, has been added to the default aggregation points for 791 records. `CIMSSUBS` contains the subsystem name.

    - Support for BoxID definitions for 999 records has been added.

    - Changes were added in `CIMSDCTN` to allow a BoxID definition to be used during the building of the SORT commands. Identifiers from a BoxID definition can now be used in the `AGGREGATE` control statement.

    - EXTR018I messages are issued and processing terminates when processing with the NO-SORT command and using ALIAS entries in the `CIMSPDS DD`.

    - The processing for 793 (SMF 6 data) applied the PRINTER command followed by any ALL PRINT LOCAL/REMOTE. This was in the wrong order. The ALL PRINT LOCAL/REMOTE commands will now be applied followed by PRINTER command(s).

    - Form ID did not always appear as a resource for 793 records. This has been corrected.

    - The record ID moved into the CIMS Server Resource Record previously started with `S390`. Any records processed from other systems will now have the original record ID that appears in the 791 records.

    - Modified the `DATA VALIDATION` control statement to include `X'nn'` values (i.e., `DATA VALIDATION X'nn'  X'nn'`). This option enables a data validation check in which the first `X'nn'` value indicates the lowest acceptable hexadecimal value for a character in an Identification field. If a character is found that is less than this value, the character will be replaced by the character specified by the second `X'nn'` value.

    - Added the following control statements:

        - `ON EMPTY INPUT FILE SET RC TO nnnn` (where `nnnn` = a numeric value). Overrides the default return code of 16 when no input records are processed.

        - `LIMIT DCTN004W MSG nnnn` (where `nnnn` = a numeric value). Limits the number of DCTN004W warning messages.

- The default Stop time value has changed from 24:00:00 to 23:59:59.

- A time validation check is made to ensure that the Start and Stop times are between 00:00:00 and 24:00:00. If a value is outside this range, it will be changed to 23:59:59.

- CIMSIMS1

  - New processing was added to determine LTERM/LUNAME name for transactions.

- CIMSIMS2

  - New processing was added to support API-C (explicit APPC) IMS transactions.

- CIMSTAPE

  - Supports the new format of the 791 records along with the new stop date/time in the common header.

  - The format of the Exception records has changed to include stop date/time. Any existing exception files must be processed using the same genlevel of CIMSTAPE that generated that file. **The new** CIMSTAPE **cannot process an older** CIMSTAPE **exception file.**

  - The DCB information for the CIMSEXIN and CIMSEXOT has changed. Any existing JCL will need to be modified to include the new DCB attributes LRECL=376 BLKSIZE=27824.

  - Added the control statement ON EMPTY INPUT FILE SET RC TO nnnn (where nnnn = a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSUNIV

  - Supports the new format of the 791 records along with the new stop date/time in the common header.

  - The format of the Exception records has changed to include stop date/time. Any existing exception files must be processed using the same genlevel of CIMSUNIV that generated that file. **The new** CIMSUNIV **cannot process an older** CIMSUNIV **exception file.**

  - The DCB information for the CIMSEXIN and CIMSEXOT has changed. Any existing JCL will need to be modified to include the new DCB attributes LRECL=376 BLKSIZE=27824.

  - Added the control statement ON EMPTY INPUT FILE SET RC TO nnnn (where nnnn = a numeric value) to override the default return code of 16 when no input records are processed.

- CIMSUNO2

  - Supports the new format of the 791 records along with the new stop date/time in the common header.

  - The format of the Exception records has changed to include stop date/time. Any existing exception files must be processed using the same genlevel of CIMSUNO2 that generated that file. **The new** CIMSUNO2 **cannot process an older** CIMSUNO2 **exception file.**

  - The DCB information for the CIMSEXIN and CIMSEXOT has changed. Any existing JCL will need to be modified to include the new DCB attributes LRECL=376 BLKSIZE=27824.

  - Added the control statement ON EMPTY INPUT FILE SET RC TO nnnn (where nnnn = a numeric value) to override the default return code of 16 when no input records are processed.

CIMS.DATAFILE Updates/Additions

1 The following members were updated to increase the LRECL of the exception file. The record size increased from 300 to 376 and the BLKSIZE was changed from 27900 to 27824.

CIMSADA1, CIMSDISK, CIMSFALC, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE,CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBDATC1, SUBDATC2

2 The following members were updated to change the BLKSIZE values to ½ track blocking (27998):

CIMSADA1, CIMSDB2, CIMSDISK, CIMSFALC, CIMSIMS, CIMSJOB3, CIMSRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBBILL2

3 The DCTNxxxx members are used to build the default dictionary. All the members have been changed to support the larger common header that contains a 128-byte account code, stop date/time and offset values for Resource and Identifier sections. The version number for these definitions has been changed to 01.

4 The following members were updated to add the CIMSACT2 DD and CIMSDTVS DD for support for the new *CIMS Server*:

ATMONJCL, ATMO2JCL, SUBCICS

5 Individual `CIMS.DATAFILE` member updates:

- `CIMRCT54, CIMRECTL`

    - New members that contain the CA-DYNAM/TLMS record layouts.

- `CIMREC14`

    - Updated format of `CIMSUNIV 001` input record.

- `CIMREC30`

    - Uncommented the '01' redefines statement. `CIMSUSER` exit code was not properly addressing the record without the redefines statement.

- `CIMSDB2`

    - The `LRECL` of the `CIMSEXIN DD` was changed from 200 to 248 and the block size from 27800 to 26536.

- `CIMSDUTL`

    - New `JCL` that will convert a *CIMS for OS/390* 11.5 dictionary into the new format. The conversion process will build the dictionary definition for version number 01. The older version number 00 will remain in the dictionary. Any customization that was done to the version 00 dictionary definitions will be included in version 01.

- `CIMSEXTR`

    - Added `SORTSUM` and `SORTSGR DD` statements to support new aggregation options.

- `CIMSIMS`

    - A summarization step was added to the end of the job.

- `CIMSJOB2`

    - Increased the `CIMSACCT DD` statement space allocation for the step executing `CIMSDATA`.

- `DCTNCTLD`

    - New member that contains the Control-D record definition.

- `DCTNCTLT`

    - New member that contains the Control-T record definition.

- `DCTNMQSR`

    - New member that contains the MQSeries record definition.

- DCTNV00

  - This is the old version of the dictionary definitions. All the `DCTNxxxx` members that were used to build the version 00 of the default dictionary have been concatenated into this one member. This is being provided to allow the old definition to be re-added if needed.

CIMS.REPTLIB Updates/Additions

1 The following members were changed to support the new format of CIMS 791, 792, and 793 records.

   `CIMRCDCT, CIMRC791, CIMRC792, CIMRC793, CNVT11D5, SPWRPCN1, SPWTR011, SPWTR056, SPWTR065, SPWTR146, SPWTR181, SPWTR757, SPWTR758, SPWTR759, SPWTR763, SPWTR791, SPWTR792, SPWTR793, SPWTR815, SPWTR816`

2 The following members were updated to support the new `CIMSUNIV 001` record. The 001 record has been expanded to a total of 263 bytes.

   `SPWTR201, SPWTR203, SPWTR205, SPWTR710, PWTR712, SPWTR722, SPWTR723,SPWTR771`

3 All report writer programs that contain CIMRC791, CIMRC792, or CIMRC793 record definitions have an additional INCLUDEIF. The new INCLUDEIF will select only records that contain a version number of '01'. If you need to process the older version, version '00', then change the INPUT statement to RC79#V00 from CIMRC79#. The INCLUDEIF check will also need to be changed to include only version '00'.

4 The following members are new reports that support CIMS 791 records:

   `SPWRP940, SPWRP941, SPWRP942, SPWRP943`

5 Individual `CIMS.REPTLIB` member updates:

   - `CIMRC006`

     - Relative addressing is defined for the section reused by CIMRC793.

     - The Enhanced Sysout Section was moved to the end of the record, the length was increased to 400 bytes, and a fixed format option was added.

   - `CIMRC030`

     - Relative addressing is defined for the section reused by CIMRC792.

   - `CIMSEXOT`

     - Updated `CIMSUNIV` Exception record format. Stop date and time were added.

   - `CIMSMF06`

     - The Enhanced Sysout Section was moved to the end of the record and the length increased to 400 bytes.

- `CIMSZLM3`
  - Added support for TMON 2.2.
- `RC791V00`
  - This is the *CIMS for OS/390* 11.5 791 record description. This can be used to process 791 records with a version number 00.
- `RC792V00`
  - This is the *CIMS for OS/390* 11.5 792 record description. This can be used to process 792 records with a version number 00.
- `RC793V00`
  - This is the *CIMS for OS/390* 11.5 793 record description. This can be used to process 793 records with a version number 00.
- `RMMEXOT`
  - Updated RMM Exception record format. Stop date and time were added.
- `SMFRC116`
  - New member that contains the record layout for the SMF 116 record.
- `SMFRC222`
  - New member that contains the record layout for the Control-D SMF record.
- `SWALIAS`
  - Defined RC79#V00-RECORD as an alias for RC79#V00.
- `TLMSEXOT`
  - Updated `TLMS` Exception record format. Stop date and time were added.
- `TMSEXOT`
  - Updated `TMS` Exception record format. Stop date and time were added.
- `ZARAEXOT`
  - Updated `ZARA` Exception record format. Stop date and time were added.

Update the CIMS Server Dictionary VSAM File

There are changes to the CIMS Server Dictionary VSAM file, which was first introduced in release 11.5. You need to upgrade your CIMS Server Dictionary as described in *CIMS Server Dictionary VSAM File Upgrade* on page 3-3.

Passwords

CIMS for OS/390 11.5 uses the same passwords as 11.6. Do not use the new `CIMS.DATAFILE` member during your testing.

The release of *CIMS Report Writer* is 2.8. This is the same release that was included with *CIMS for OS/390* 11.5. Therefore, a new password is not required.

Update the CICS On-line Programs

If you are using the CIMS data entry screens, you need to update your `CICS` startup `JCL` to `STEPLIB` to the `CICS` online load modules for testing.

Reapply User Exits

You need to reapply any user exits that you have coded. To find out if you are calling any user exits, check your control file members and look for `EXIT` starting in column 1. If you find `EXIT`, then that program is calling a user exit. The `CIMSUSER` exit has been updated to support DB2 release 6.1. You must re-compile the user exit pointing to the new `CIMS.DATAFILE` where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the `CIMS.DATAFILE JCL` member `CIMSCMPL` to compile and link these programs.

Installation Flow Charts

Installation

The `CIMS` distribution tape contains ten (10) datasets.

Chapter 2, New Installation Instructions contains installation instructions for a new installation. *Chapter 3, Upgrade Instructions* contains instructions for an upgrade to an existing installation.

Please perform the following tasks to install the distribution tape:

■ Create Job Control to execute `IEBCOPY`.   page 2-8

■ Catalogue files:

   `'NODE'.CIMS.DATAFILE`

   `'NODE'.CIMS.LOAD.MODULES`

   `'NODE'.CIMS.CICS.LOADMODS`

   `'NODE'.CIMS.REPTLIB`

   `'NODE'.CIMS.OBJECT`

   `'NODE'.CIMS.LINKJCL`

   `'NODE'.DATAFILE.BACKUP`

   `'NODE'.CIMS.MESSAGES1`

   `'NODE'.CIMS.PANELS1`

   `'NODE'.CIMS.CLIST1`

■ Access `CIMS.DATAFILE` and follow the   page 2-9, page 2-12
instructions on page 2-9 & page 2-12.

[1]`NODE` is the high level identifier specified by the user. DO NOT CHANGE the low level identifiers.

Installation Flow Chart (Product Tape)
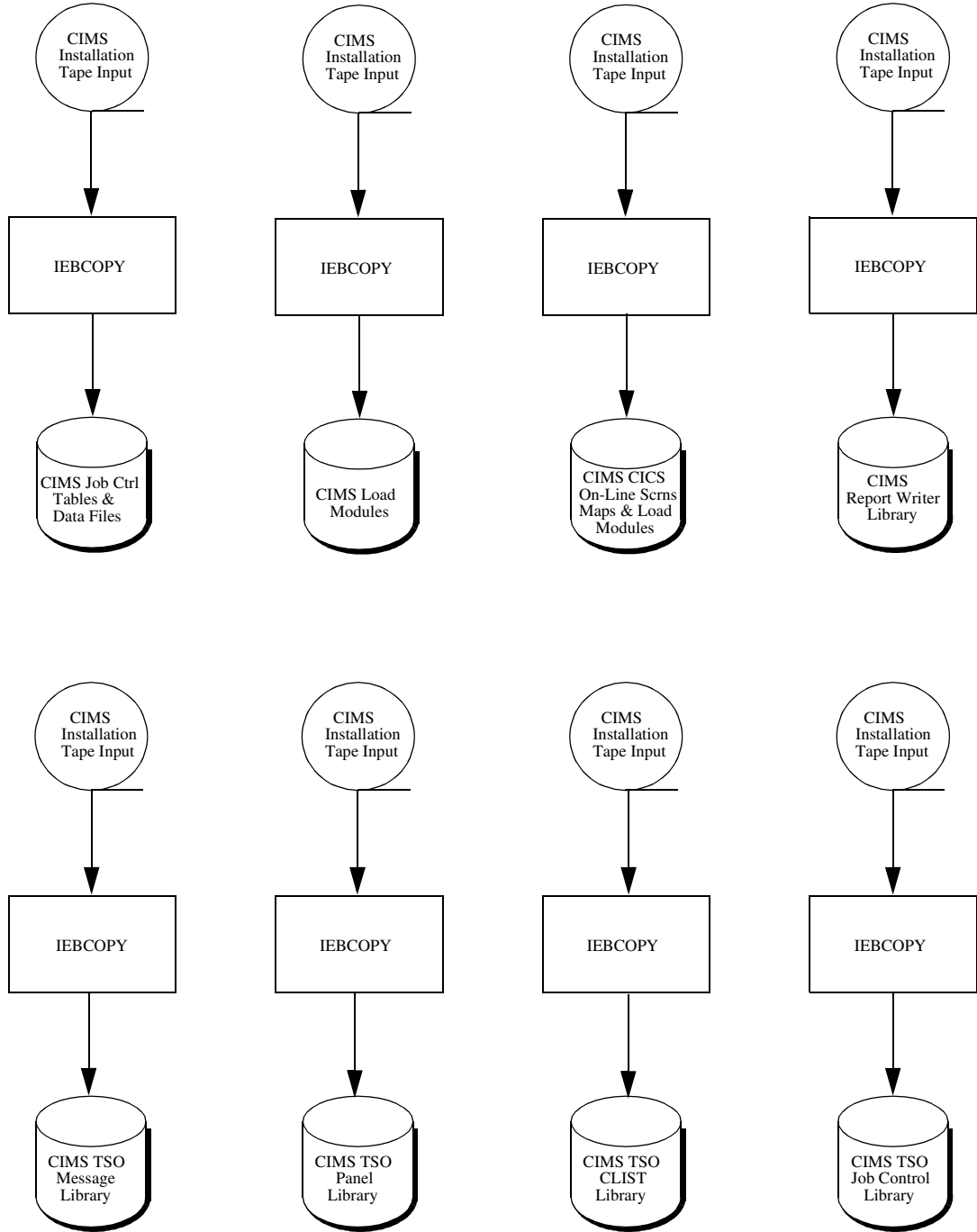
CIMSDATA

Interface Program to SMF Data

CIMSDATA provides one important function for CIMS. It processes IBM's System Management Facility (SMF) data and converts the data into a CIMS compatible format.

Job Control to execute CIMSDATA is contained in CIMS.DATAFILE as member CIMSJOB2 and is printed on page 2-22 of this manual.

CIMSDATA performs the following tasks:

■ Processes IBM's SMF data

■ Accepts control statements

■ Writes datasets containing:

All requested SMF records	DDNAME	CIMSSMF
Selected requested SMF records	DDNAME	CIMSACCT
CICS records: SMF record type 110	DDNAME	CIMSCICS
DB2 records: SMF record type 101	DDNAME	CIMSDB2

■ Prints statistics on the number of SMF records read and written.

All of the datasets that CIMSDATA catalogues can be processed by the CIMS Report Writer.

Connectors

[1/4]   Refers to the CIMSACCT flow chart on page 4-8 and CIMS Report Writer flow chart on page 4-30.

[2/4]   Refers to the CIMSCICS flow chart on page 4-25 and CIMS Report Writer flow chart on page 4-30.

[3/4]   Refers to CIMSDB2 flow chart on page 4-28 and CIMS Report Writer flow chart on page 4-30.

CIMSDATA Flow Chart

Interface Program to SMF Data
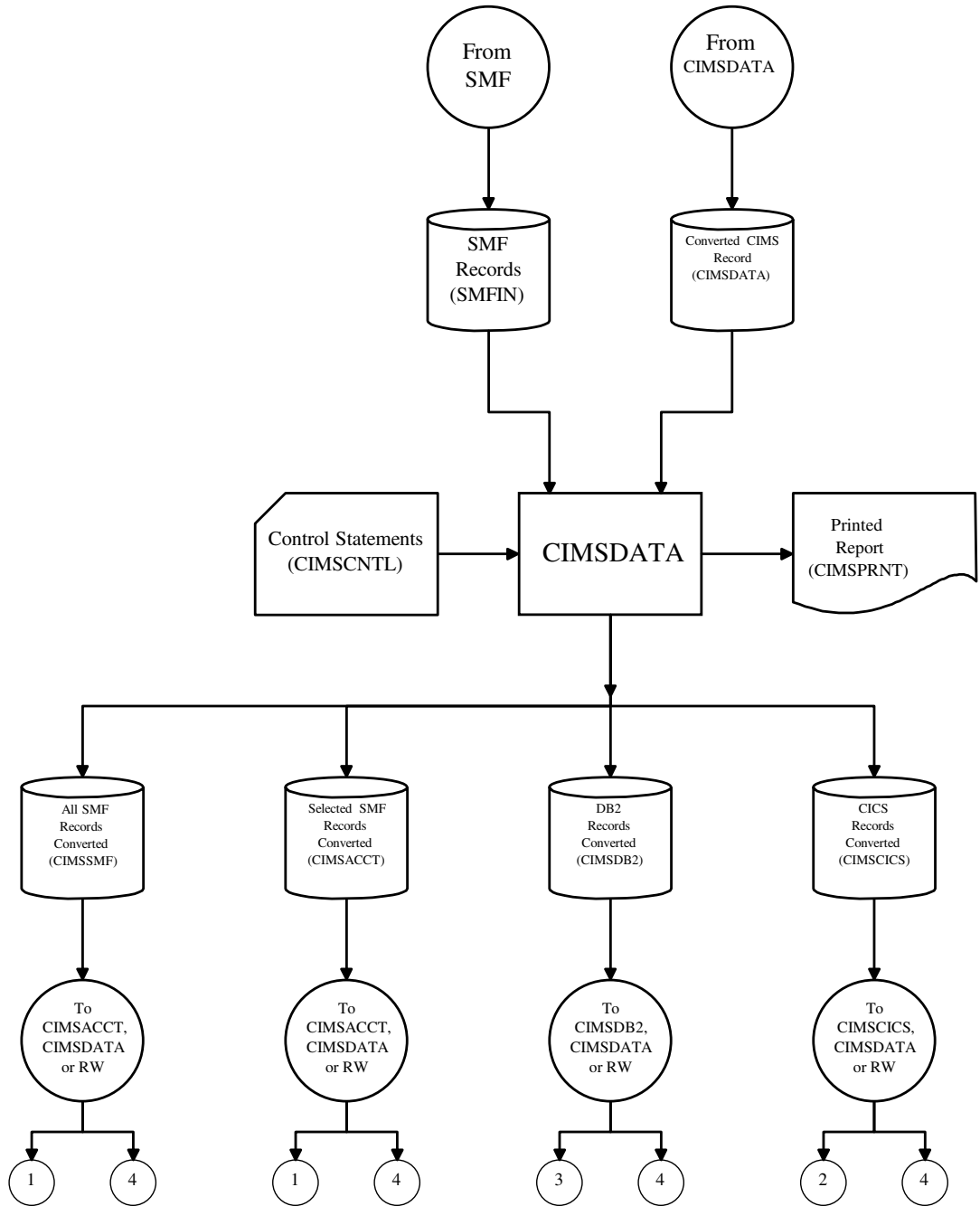
Note • **Values in Parentheses represents** `DDNAMES`.

CIMSACCT—Process SMF

CIMS Account File Creation Program

The **Process** SMF option of `CIMSACCT` processes `SMF` data created by program `CIMSDATA` and produces `CIMS` Accounting Data.

Job Control to execute `CIMSACCT` **(Process** SMF**)** is in `CIMS.DATAFILE` as member `CIMSJOB2` and is printed in the *SMF Record Descriptions* appendix of the *CIMS Chargeback for OS/ 390 User Guide*.

`CIMSACCT` performs the following tasks:

■ Processes `SMF` data created by `CIMSDATA`

■ Accepts `CIMS` Calendar file

■ Requires `CIMS` password file

■ Accepts control statements

■ Processes a Suspense file of unmatched accounting codes

■ Writes `CIMS` Accounting data

■ Writes a Suspense file of unmatched accounting codes

■ Prints statistics for each record type read and written

`CIMS` Accounting data is processed by `CIMSMERG`, `CIMSBILL`, and the `CIMS` Report Writer.

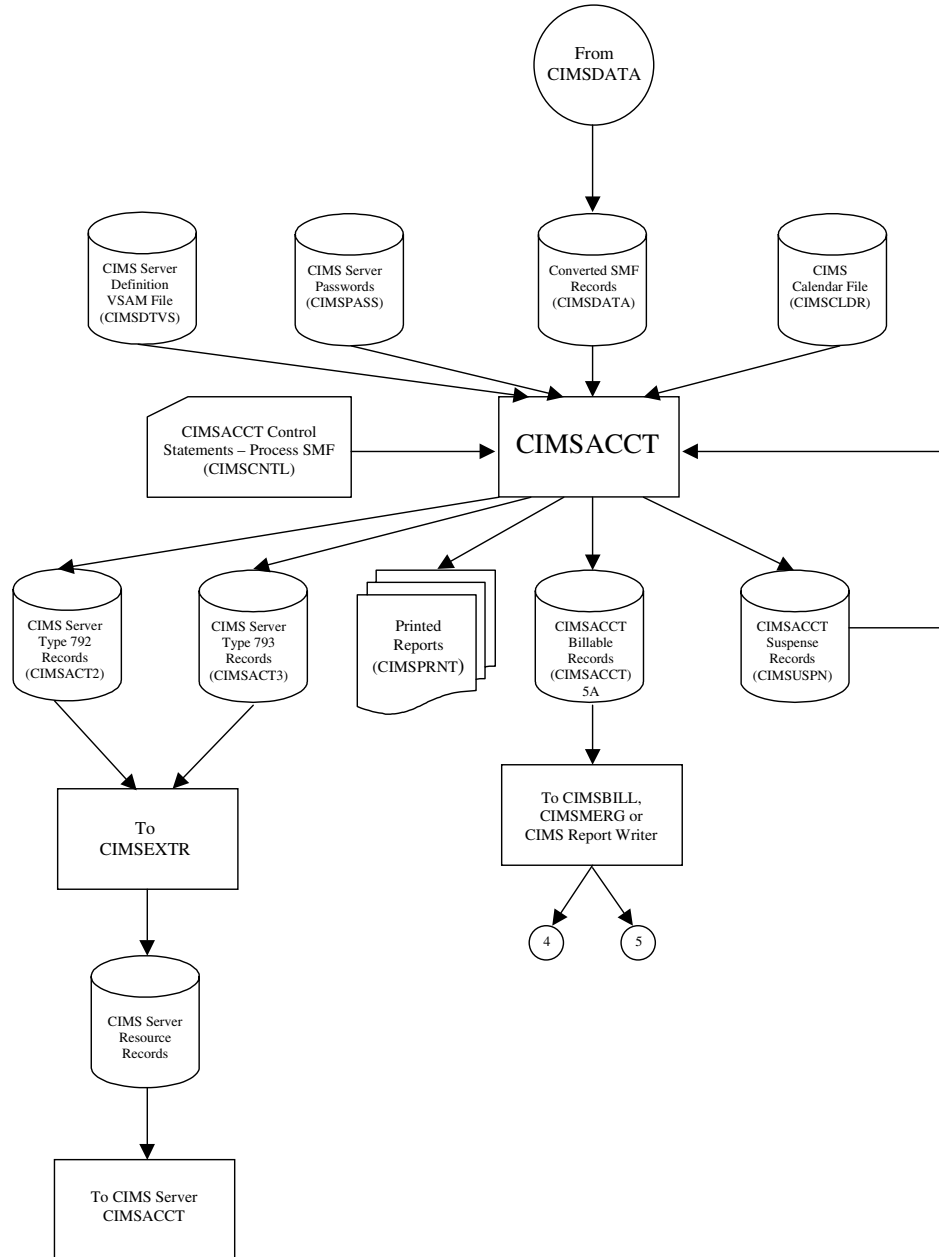## Connectors

[4/5]	Refers to Report Writer flow chart on page 4-30 and the `CIMSMERG` flow chart on page 4-32.
[5A]	Refers to the `CIMSMERG` flow chart on page 4-32. The data file created by `CIMSACCT` is input to `CIMSMERG`.

CIMSACCT−Process SMF Flow Chart

CIMS Account File Creation Program

Note • **Values in Parentheses represents** `DDNAMES`.

CIMSACCT−Process External Transactions

CIMS External Transaction Processing

The `PROCESS EXTERNAL` option of `CIMSACCT` processes external transactions and produces `CIMS` Accounting data.

Job Control to execute `CIMSACCT` (`PROCESS EXTERNAL`) is in `CIMS.DATAFILE` as member `CIMSJB2A`. An example of external transaction billing input is shown in the *Accounting File Creation Program—CIMSACCT* chapter of the *CIMS Chargeback for OS/390 User Guide*.

The `PROCESS EXTERNAL` option of `CIMSACCT` performs the following tasks:

■ Processes External Transactions

■ Processes External Transactions from `CIMS CICS` screens

■ Accepts `CIMS` Calendar file

■ Requires `CIMS` Password file

■ Accepts processing control statements

■ Writes `CIMS` accounting data

■ Prints statistics for each record type read and written

`CIMS` Accounting data is passed to `CIMSMERG`, `CIMSBILL`, and the `CIMS` Report Writer.

Connectors

[4/5]   Refers to the Report Writer flow chart on page 4-29 and the `CIMSMERG` flow chart on page 4-32.

[1B]   Refers to the `CIMS CICS` External Transaction Processing flow chart on page 4-12.

[5B]   Refers to the `CIMSMERG` flow chart on page 4-32.

[1F]   Refers to `DATE` processing for external transactions on page 4-19.

CIMSACCT−Process External Transactions Flow Chart

CIMS External Transaction Processing
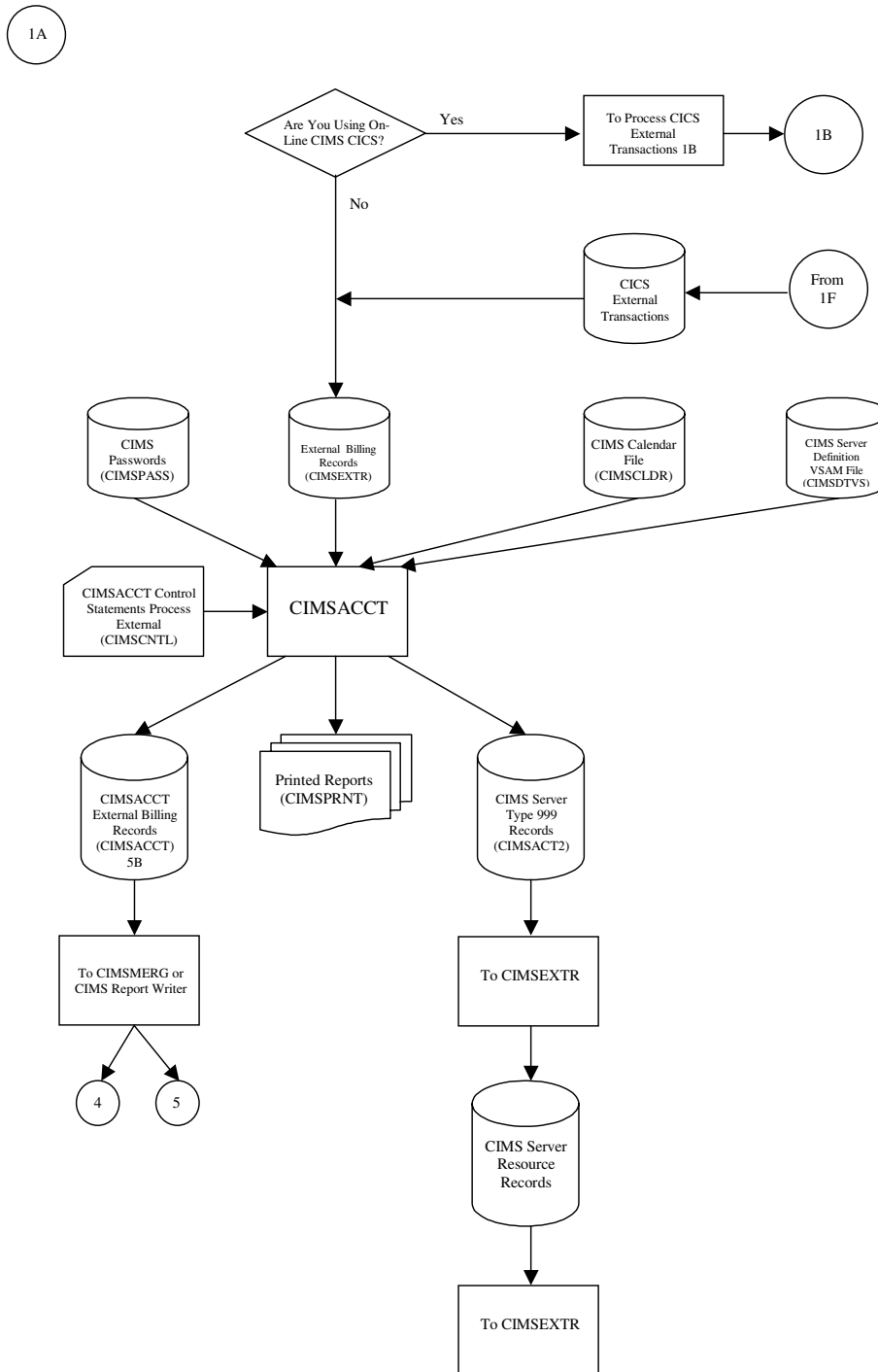
Note • Values in Parentheses represents `DDNAMES`.

Process CICS Online External Transactions

CIMS CICS ON-LINE External Transaction Processing

CIMS provides CICS on-line screens for the input of External Transactions. Refer to the *CIMS Data Entry Screens* chapter of the *CIMS Chargeback for OS/390 User Guide*, which provides documentation for CIMS CICS on-line screens.

The PROCESS EXTERNAL (CICS) option of CIMSACCT processes the following records:

■ Miscellaneous Transactions

■ CA/DISPATCH Transactions

■ Recurring Transactions

Job Control for CIMSMISS, CIMSDSPH, CIMSRECU, and CIMSBDTE are in CIMS.DATAFILE as members CIMSEXT1, CIMSEXT2, CIMSEXT3, and CIMSEXT4.

Job Control is provided in the *CIMS Data Entry Screens* chapter of the *CIMS Chargeback for OS/390 User Guide*.

Connectors

[1C]	Refers to Miscellaneous External Transactions Flow Chart on page 4-14.
[1D]	Refers to CA/DISPATCH External Transactions Flow Chart on page 4-16.
[1E]	Refers to Recurring External Transactions Flow Chart on page 4-17.

CICS Online External Transactions Flow Chart

CIMS CICS ON-LINE External Transaction Processing

```
        ( 1B )


  ◇ Do You Have          ◇ Do You Have          ◇ Do You Have
    CICS Misc External      CA/DISP External       CICS Recurring Ext
    Trans?                  Trans?                 Trans?

        │ YES                   │ YES                   │ YES
        ▼                       ▼                       ▼
      ( 1C )                  ( 1D )                  ( 1E )
```
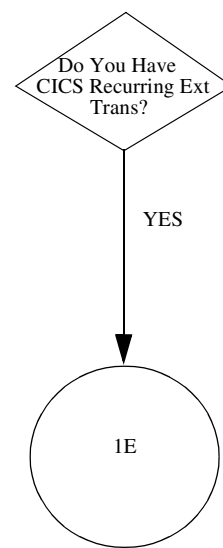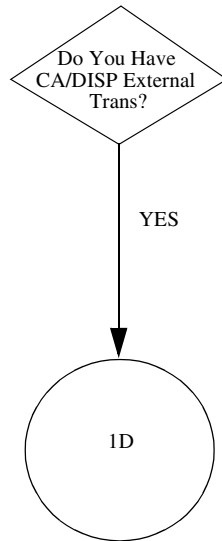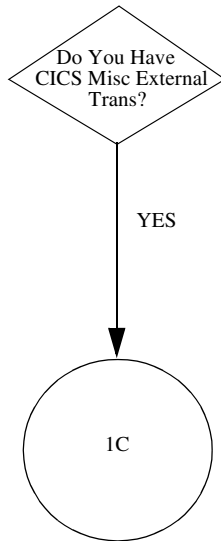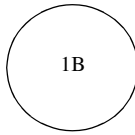
Process Miscellaneous CICS External Transactions

CIMS CICS Miscellaneous External Transaction Processing

Job Control `CIMSEXT1` for program `CIMSBMIS` performs the following tasks:

■ Processes Miscellaneous transactions from the `CICS` database

■ Writes Miscellaneous external transactions

■ Writes Miscellaneous transactions to the `CICS` database

■ Prints accepted Miscellaneous transactions

Connectors

[1C]   Refers to the Miscellaneous External Transaction data set in `CIMS` Batch External Date Flow Chart on page 4-19.

[1F]   Refers to `CIMS` Batch External Date Flow Chart on page 4-19.

Process Miscellaneous CICS External Transactions Flow Chart

CIMS CICS MISCELLANEOUS External Transaction Processing

1C

CICS Misc
Transactions
(CIMSMISI)

CIMSBMIS

CICS Misc
Transactions
(CIMSMISO)

CIMSACCT Misc
Ext Transactions
(CIMSEXT)
1C

Printed   Reports
(CIMSPRNT)

1F

Note • **Values in Parentheses represents** `DDNAMES`.

Process CA/DISPATCH CICS External Transactions

CIMS CA/DISPATCH External Transaction Processing

Job Control `CIMSEXT2` for program `CIMSBDSP` performs the following tasks:

■ Processes `CA/DISPATCH SMF` records

■ Processes `CA/DISPATCH` transactions from the `CICS` database

■ Writes `CA/DISPATCH` external transactions

■ Prints `CA/DISPATCH` transactions

Connectors

[**1D**]   Refers to `CIMS CA/DISPATCH` External Transaction data set in `CIMS` Batch External Date flow Chart on .

[**1F**]   Refers to `CIMS` Batch External Date Flow Chart on .

Process CA/DISPATCH CICS External Transactions Flow Chart

CIMS CA/DISPATCH External Transaction Processing

```
                    ┌─────┐
                    │ 1D  │
                    └─────┘
                            ╔═══════════════╗
                            ║  CA/DISP      ║
                            ║  SMF Records  ║
                            ║  (CIMSIN)     ║
                            ╚═══════════════╝
                                    │
                                    ▼
                    ┌────────────────┐         ╔═══════════════╗
                    │                │         ║ CICS CA/DISP  ║
                    │   CIMSBDSP     │◄────────║ Transactions  ║
                    │                │         ║ (CIMSMDRP)    ║
                    └────────────────┘         ╚═══════════════╝
                         │        │
                         ▼        └──────────────┐
            ╔═══════════════╗                    ▼
            ║  CIMSOUT      ║            ┌──────────────────┐
            ║  CA/DISP Ext  ║            │  Printed         │
            ║  Transactions ║            │  CA/DISPATCH     │
            ║  (CIMSEXT)    ║            │  Reports         │
            ║  1D           ║            │  (CIMSPRNT)      │
            ╚═══════════════╝            └──────────────────┘
                    │
                    ▼
                 ┌─────┐
                 │ 1F  │
                 └─────┘
```

Note • Values in Parentheses represents `DDNAMES`.

Process Recurring CICS External Transactions

CIMS Recurring External Transaction Processing

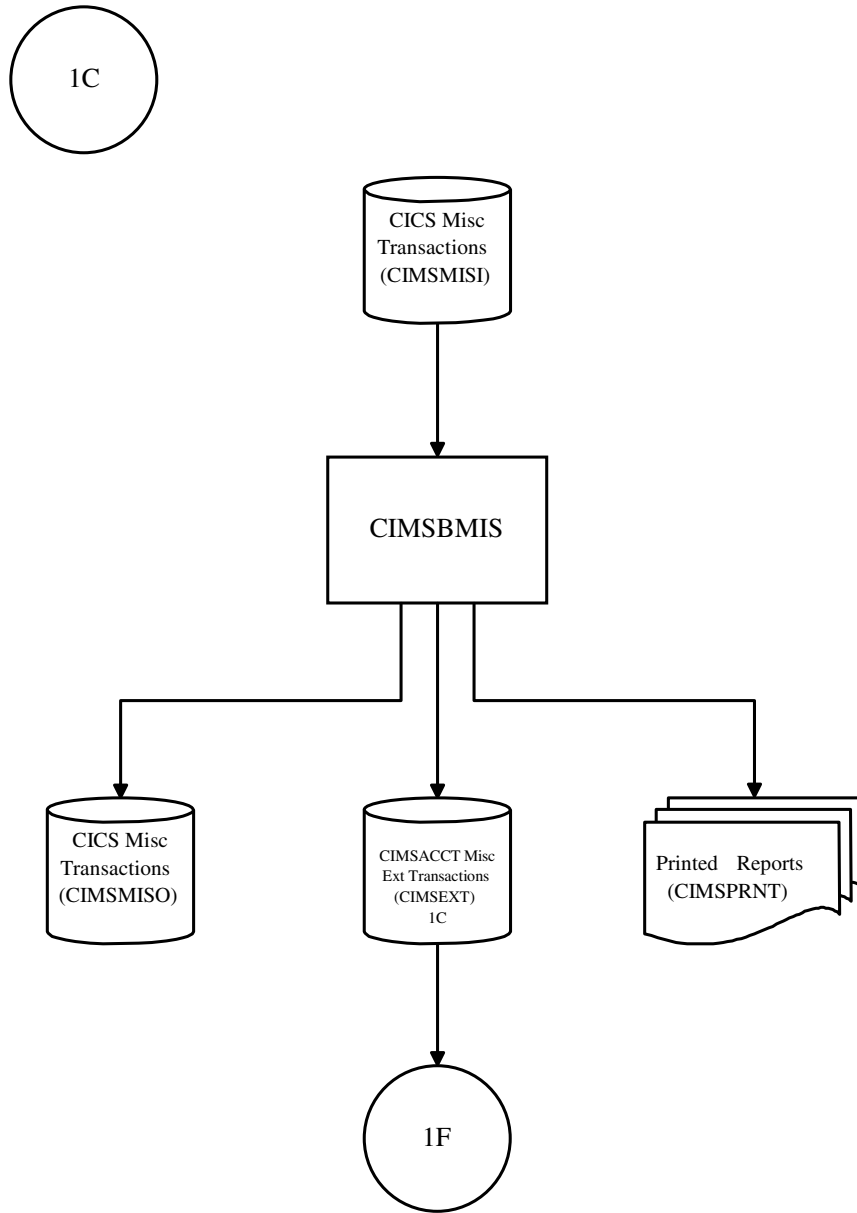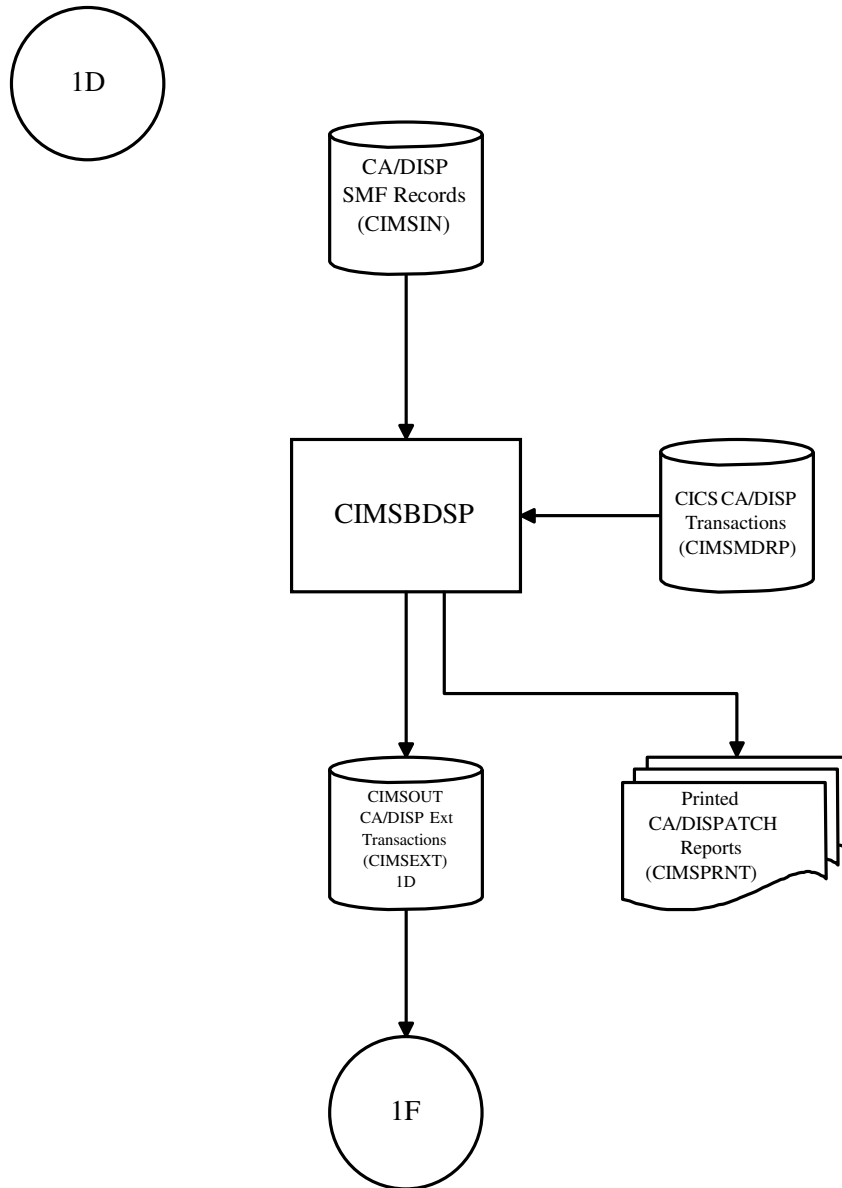Job Control `CIMSEXT3` for program `CIMSBRCU` performs the following tasks:

■ Processes Recurring transactions from the `CICS` database

■ Writes Recurring external transactions
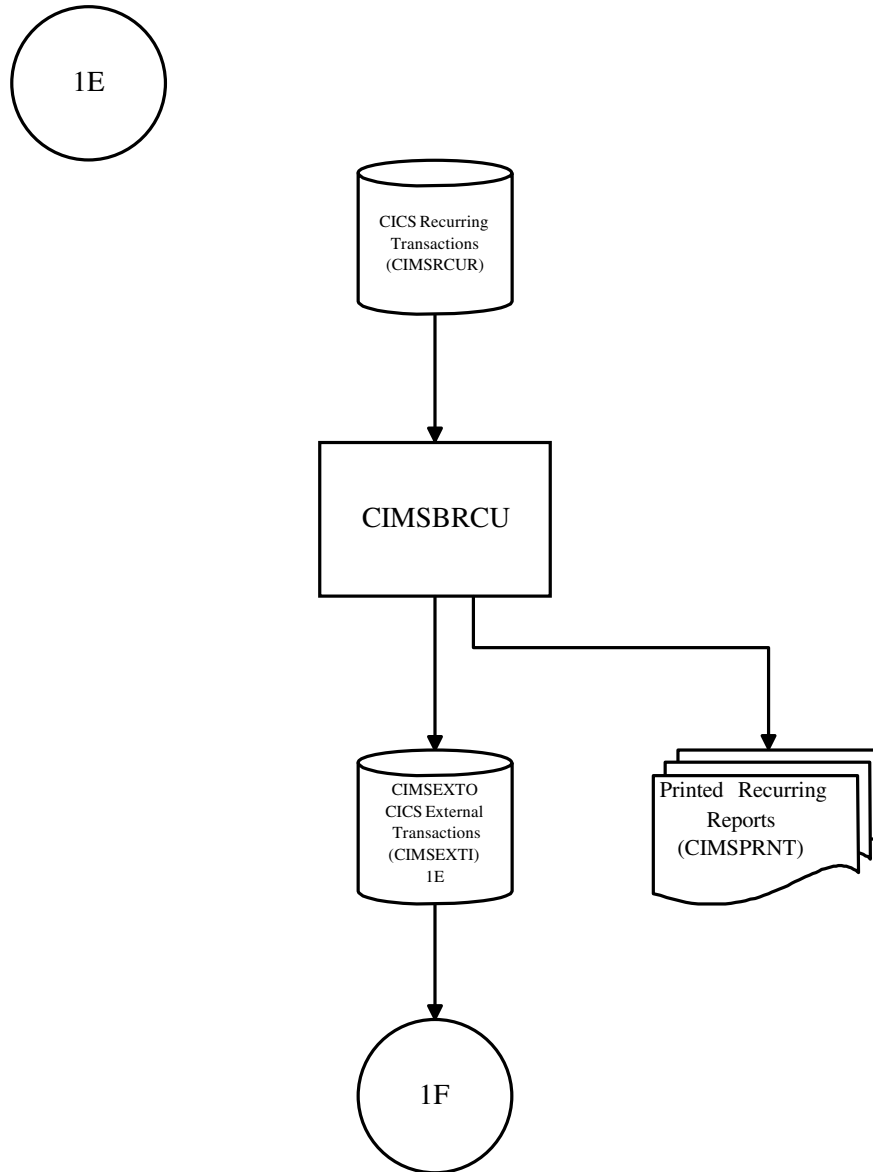
■ Prints Recurring transactions

Connectors

[1E]   Refers to the Recurring Transaction Data Set in `CIMS` Batch External Date Flow Chart on .

[1F]   Refers to `CIMS` Batch External Date Flow Chart on .

Process Recurring CICS External Transactions Flow Chart

CIMS Recurring External Transaction Processing

```
        ╭─────╮
        │ 1E  │
        ╰─────╯

              ┌──────────────┐
              │ CICS Recurring│
              │  Transactions │
              │  (CIMSRCUR)   │
              └──────────────┘
                     │
                     ▼
        ┌─────────────────────────┐
        │                         │
        │       CIMSBRCU          │
        │                         │
        └─────────────────────────┘
              │                │
              ▼                ▼
      ┌──────────────┐   ┌──────────────┐
      │  CIMSEXTO    │   │Printed Recurring│
      │ CICS External│   │   Reports     │
      │ Transactions │   │  (CIMSPRNT)   │
      │ (CIMSEXTI)   │   └──────────────┘
      │     1E       │
      └──────────────┘
              │
              ▼
        ╭─────╮
        │ 1F  │
        ╰─────╯
```

Note • Values in Parentheses represents `DDNAMES`.

CIMSBDTE Batch External Date Program

CIMS External Transaction Processing Date Program

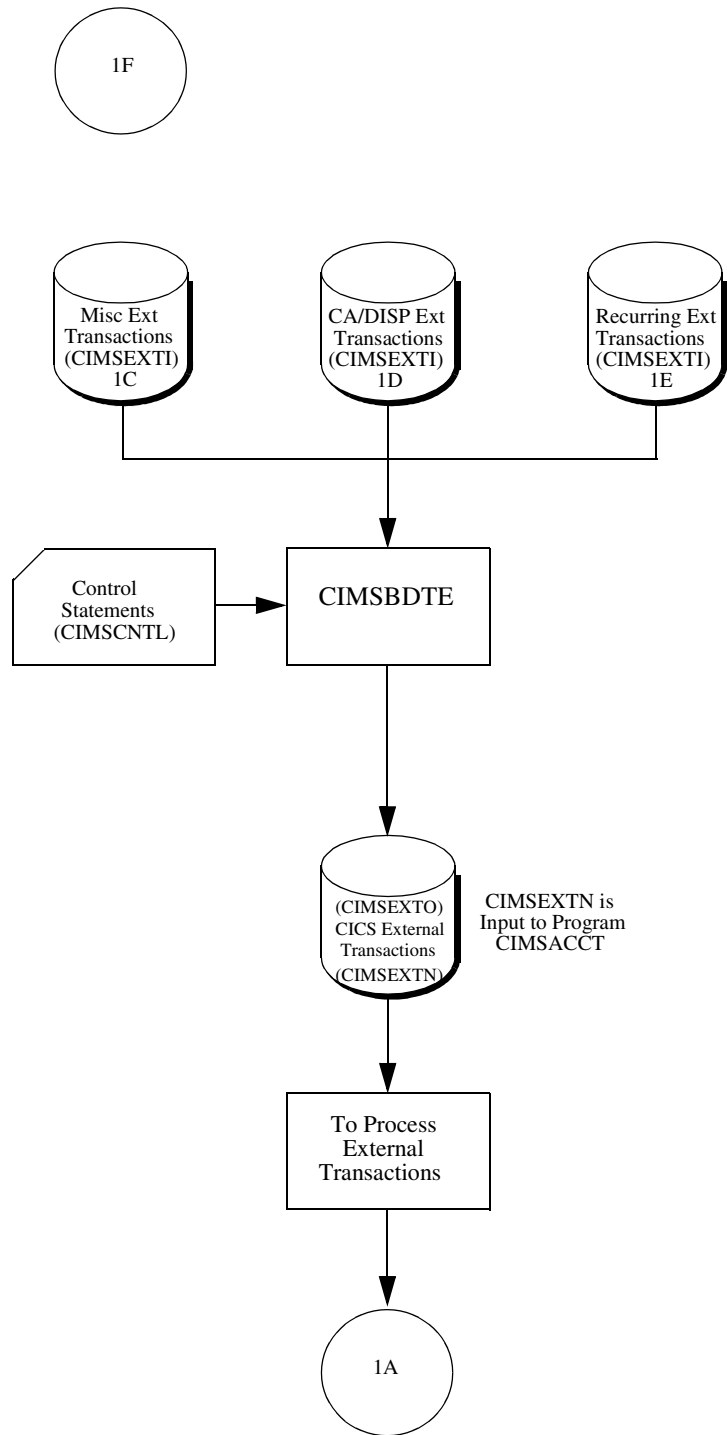Job Control `CIMSEXT4` for program `CIMSBDTE` performs the following tasks:

■ Processes Miscellaneous external transactions created by program `CIMSMISS`

■ Processes `CA/DISPATCH` external transactions created by program `CIMSDSPH`

■ Processes Recurring external transactions created by program `CIMSRECU`

■ Accepts processing control date statements

■ Writes external transactions with processing date

Connectors

[1A]   Refers to `CIMS` External Transaction Processing Flow Chart on page 4-10.

[1C]   Refers to `CIMSBMIS` Flow Chart on page 4-14.

[1D]   Refers to `CIMSBDSP` Flow Chart on page 4-16.

[1E]   Refers to `CIMSBRCU` Flow Chart on page 4-17.

CIMSBDTE−Batch External Date Program Flow Chart

CIMS External Transaction Processing Date Program

```
                          ┌──────────┐
                          │    1F    │
                          └──────────┘


   ┌──────────┐        ┌──────────┐        ┌──────────┐
   │ Misc Ext │        │CA/DISP Ext│       │Recurring Ext│
   │Transactions│      │Transactions│      │Transactions│
   │(CIMSEXTI)│        │(CIMSEXTI)│        │(CIMSEXTI)│
   │    1C    │        │    1D    │        │    1E    │
   └──────────┘        └──────────┘        └──────────┘
        └──────────────────┬──────────────────┘
                           ▼
  ┌──────────┐        ┌──────────┐
  │ Control  │        │          │
  │Statements│───────▶│ CIMSBDTE │
  │(CIMSCNTL)│        │          │
  └──────────┘        └──────────┘
                           ▼
                     ┌──────────┐
                     │(CIMSEXTO)│    CIMSEXTN is
                     │CICS External│  Input to Program
                     │Transactions│   CIMSACCT
                     │(CIMSEXTN)│
                     └──────────┘
                           ▼
                     ┌──────────┐
                     │To Process│
                     │ External │
                     │Transactions│
                     └──────────┘
                           ▼
                     ┌──────────┐
                     │    1A    │
                     └──────────┘
```

Note • Values in Parentheses represents `DDNAMES`.

CIMSACCT—Process CIMS Maintenance

Update and Change CIMS Account Records

The Process CIMS Maintenance option of CIMSACCT performs the following:

■ Processes a dataset created by CIMSACCT.   DDNAME CIMSACIN

■ Provides Account Code Edit capability.   **Ex: GLOBAL CHANGE**

■ Produces an edited Accounting File.   DDNAME CIMSACCT

Job Control to execute CIMSACCT (Process CIMS Maintenance) is in CIMS.DATAFILE as member CIMSJB2B. An example of changing accounting data is provided in the *Accounting File Creation Program—CIMSACCT* chapter of the *CIMS Chargeback for OS/390 User Guide*.

CIMS Accounting data is passed to CIMSMERG, CIMSBILL, and/or the CIMS Report Writer.

Connectors

CIMSACCT−Process CIMS Maintenance Flow Chart

Update and Change CIMS Account Records
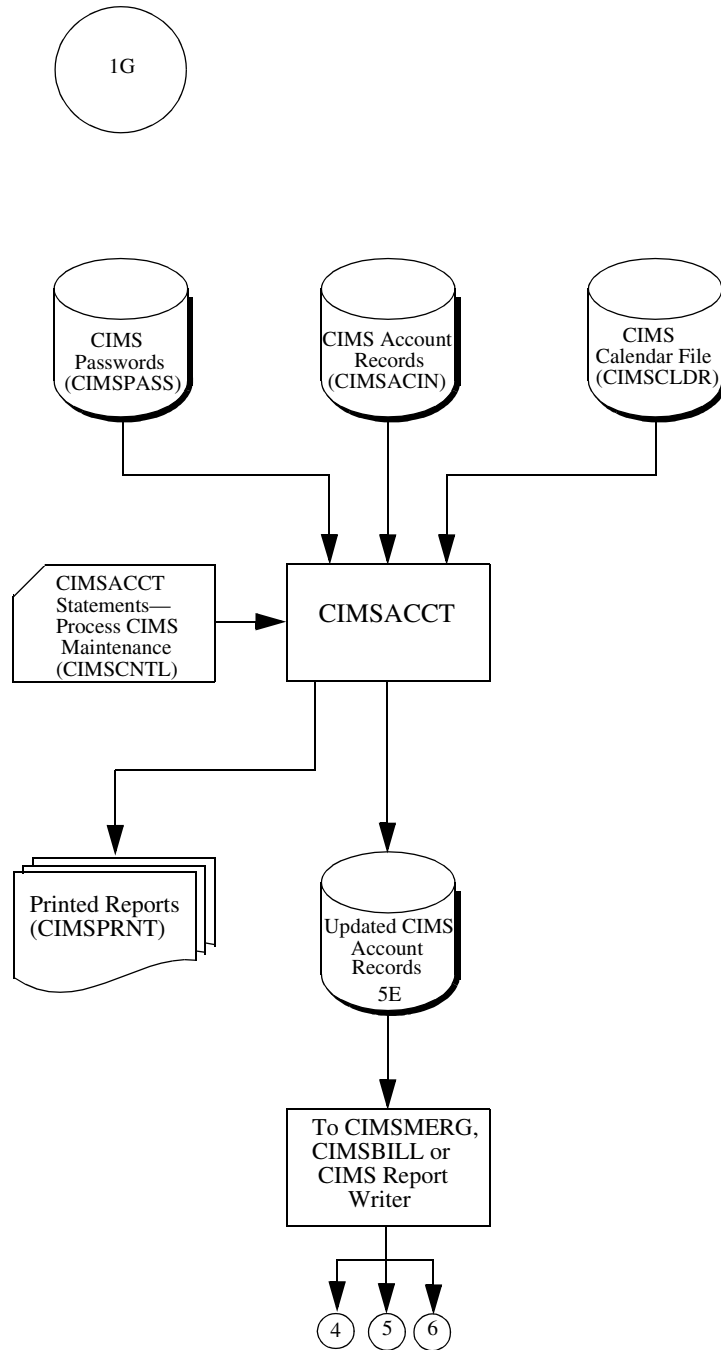
Note • **Values in Parentheses represents** `DDNAMES`.

CIMSCICS

CIMSCICS Transaction Chargeback

`CIMSCICS` executes three programs:

■ `CIMSCMFP`

■ `CIMSCMF2`

■ `CIMSCICS`

Job Control for programs `CIMSCMFP`, `CIMSCMF2`, and `CIMSCICS` are in `CIMS.DATAFILE` as member `CIMSCICS`. This `JCL` is printed in the *CIMS Chargeback CICS User Guide*.

These programs process `CICS` data and create `CIMS CICS` Accounting data.

■ Program `CIMSCMFP` performs the following tasks:

• Processes `SMF` record type 110 and selects Accounting and Performance records. These records were extracted by program `CIMSDATA` and written to `DDNAME CIMSCICS`. (See the `CIMSDATA` flow chart on .)

• Accepts control statements

• Writes reformatted `CICS` intermediate records

• Passes the re-formatted `CICS` records to `CIMSCMF2`

■ Program `CIMSCMF2` performs the following tasks:

• Processes reformatted `CICS` intermediate data set

• Processes the `CIMS CICS` Account Code Table

• Reads `CIMS` Password file

• Accepts control statements

• Writes the `CIMS CICS` Transaction dataset, which contains an account code for each transaction.

• Prints reports showing input parameters, records read and written, and records not matched to the Account Code Table.

• Passes the `CIMS CICS` Transaction dataset to `CIMSCICS` and the `CIMS` Report Writer

■ Program `CIMSCICS` performs the following tasks:

- Processes dataset created by `CIMSCMF2`

- Reads Client `VSAM` file

- Reads Rate `VSAM` file

- Accepts `CICS` input control statements

- Writes `CIMS CICS` Accounting data

- Prints reports displaying detail and summary `CICS` usage

- Passes the `CIMS CICS` Accounting dataset to `CIMSMERG` and the `CIMS` Report Writer

Connectors

[**2A**]   Refers to the `CIMS CICS` Flow Chart on page 4-26.

[**4/5**]   Refers to the `CIMS` Report Writer Flow Chart on page 4-30 and the `CIMSBILL` Flow Chart on page 4-34.

CIMSCICS Flow Chart

```
        ( 2 )


                              ( From
                                CIMSDATA )


                              [SMF 110
                               Records
                               (CMFIN)]


  [Input Control          ┌─────────────┐          [CICS Tables
   Statements (SYSIN)] ──▶ │  CIMSCMFP   │ ◀──       (CICSTABS)]
                           └─────────────┘
                  ┌──────────────┼──────────────┐
                  ▼              ▼              ▼
          [CICS Records   [CICS          [CICS Unsupport
           with no Table   Transactions   Release RECS
           Definition      (CIMSCMF)]     (CIMSUNSP)]
           (CIMSEXOT)]
                                 │
                                 ▼
  [Sort                    ┌─────────────┐
   Control             ──▶ │    SORT      │
   Statements]             └─────────────┘
                                 │
                                 ▼
                           ┌─────────────┐
                           │     To       │
                           │  CIMSCMF2    │
                           └─────────────┘
                                 │
                                 ▼
                              ( 2A )
```
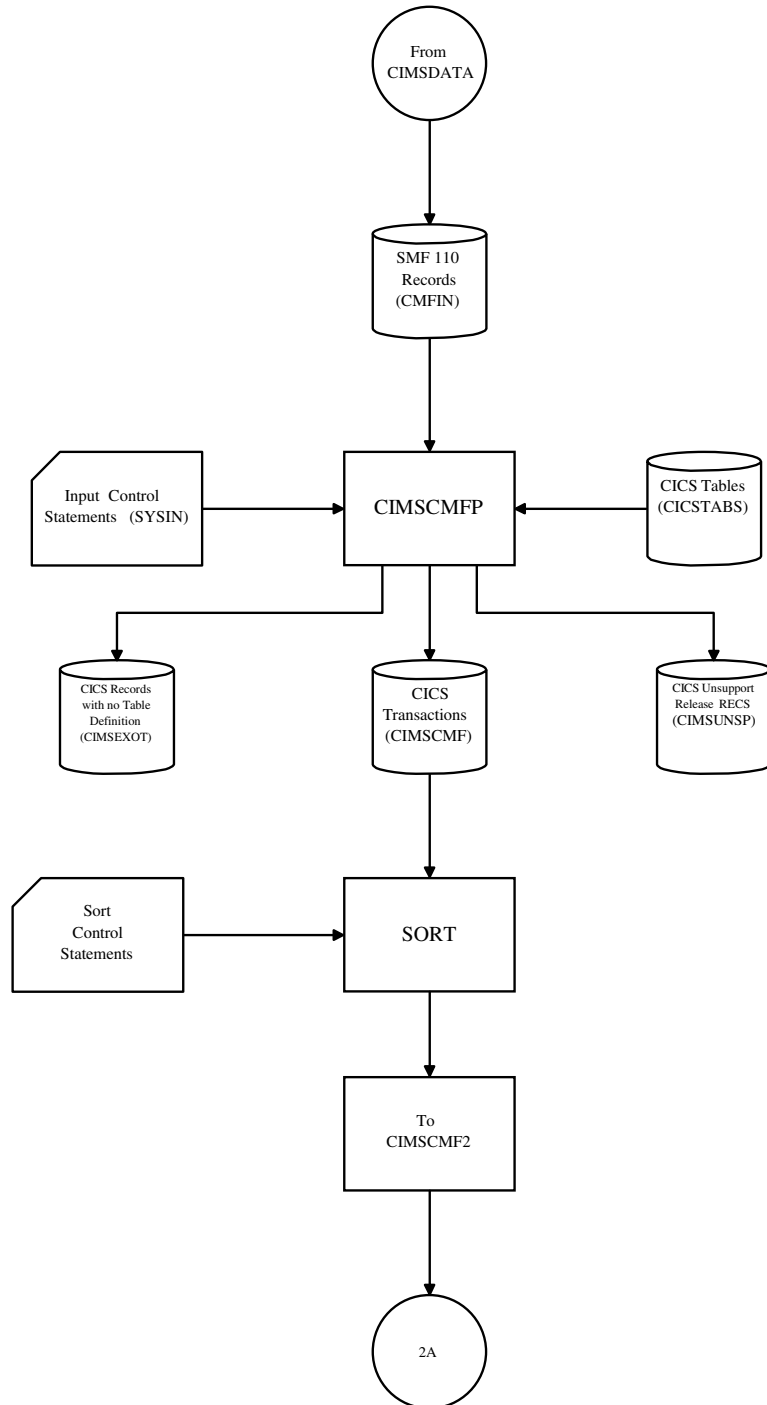
Note • Values in Parentheses represents `DDNAMES`.

CIMSCICS Flow Chart–Continued
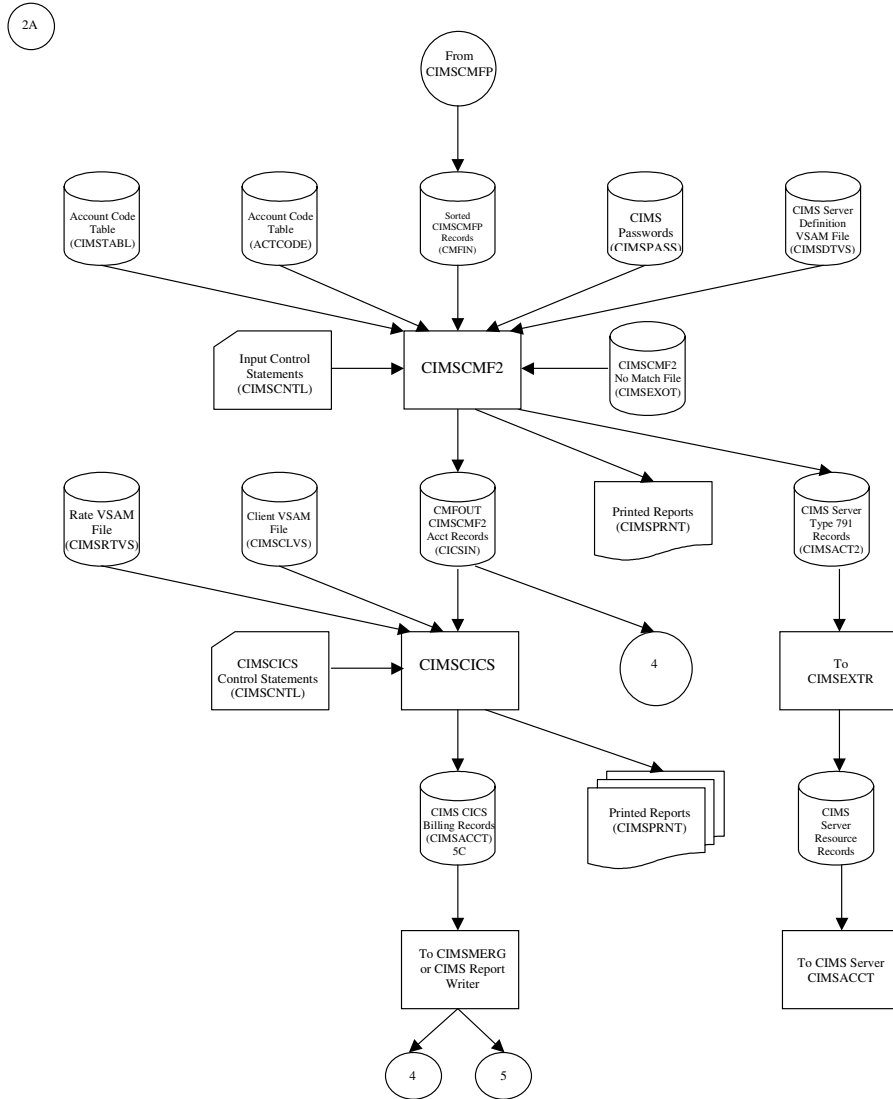
Note • Values in Parentheses represents `DDNAMES`.

CIMSDB2

CIMS DB2 Chargeback

`CIMSDB2` processes `SMF` record type 101.

These records were extracted by program `CIMSDATA` and were written to `DDNAME CIMSDB2`. See the `CIMSDATA` flow chart on page 4-6.

`CIMSDB2` produces `CIMS` DB2 Accounting data.

Job Control to execute `CIMSDB2` is in `CIMS.DATAFILE` as member `CIMSDB2`. Example job control is provided in the *DB2 Transaction Accounting Program—CIMSDB2* chapter of the *CIMS Chargeback for OS/390 User Guide*.

`CIMSDB2` performs the following tasks:

■ Processes `SMF` record type 101 records

■ Processes the `CIMS DB2` Account Code Table

■ Reads `CIMS` password file

■ Processes `CIMS DB2` Exception records

■ Produces `CIMS DB2` Accounting data

■ Writes `CIMS DB2` Exception records

■ Prints a report showing:

  • Input parameters

  • Number of records read and written

  • Records not matched via the Account Code Table

`DB2` Accounting data is passed to `CIMSMERG` and the `CIMS` Report Writer.

Connectors

[4]   Refers to the `CIMS` Report Writer flow chart on page 4-30.

[5D]   Refers to the `CIMSMERG` data set in the flow chart on page 4-32.

[6]   Refers to the `CIMSBILL` flow chart on page page 4-34.

CIMSDB2 Flow Chart

CIMS DB2 Chargeback
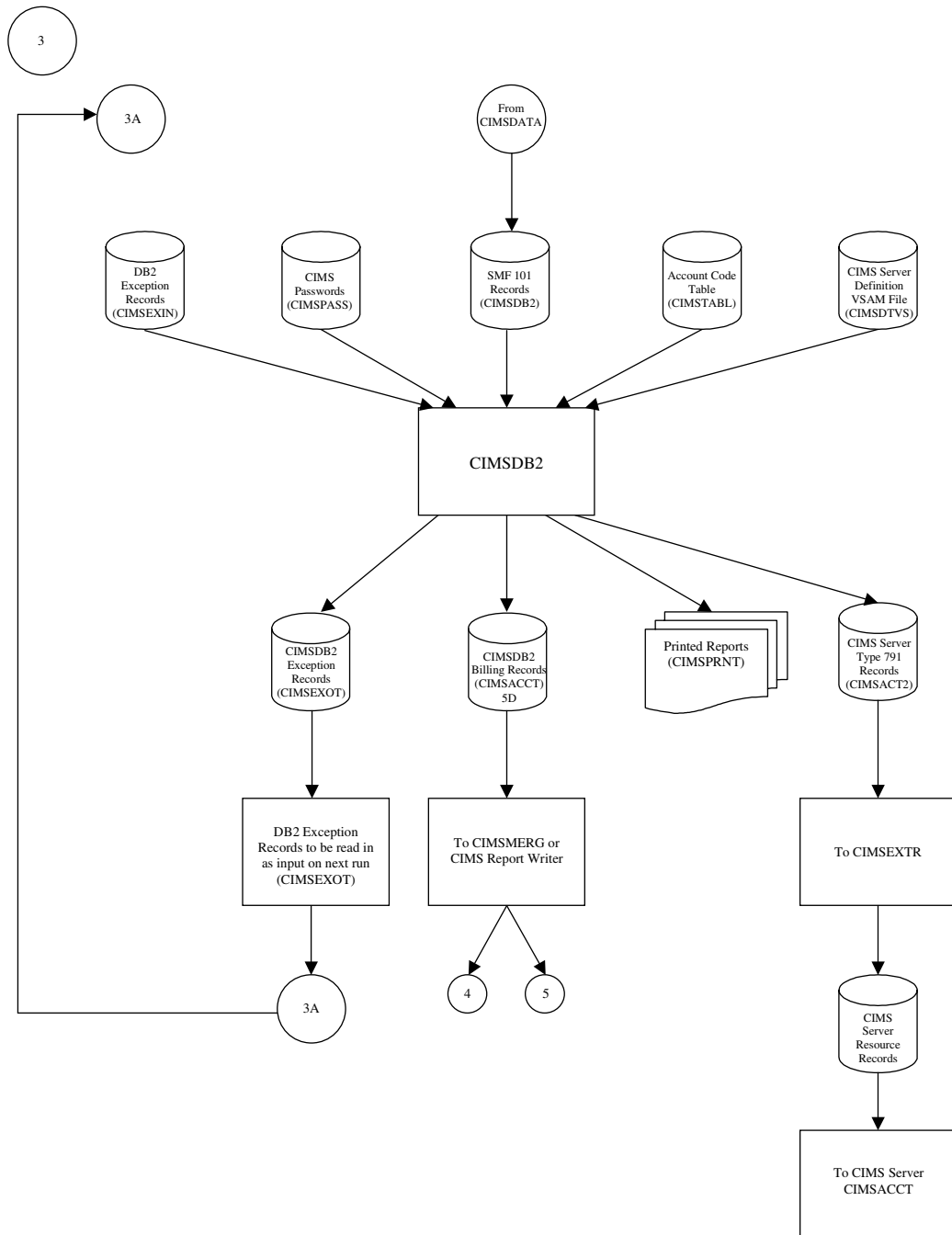
Note • Values in Parentheses represents `DDNAMES`.

CIMS Report Writer

CIMS General Purpose Report Writer

`CIMS` Report Writer is a general purpose reporting system.

Job Control to execute the Report Writer is in `CIMS.DATAFILE` as member `CIMSJOB4` and is printed on page .

The `CIMS` Report Writer performs the following tasks:

■ Processes files created by `CIMS`

■ Processes `VSAM` files created by `CIMS`

■ Processes user-defined sequentially organized files

■ Processes user-defined keyed `VSAM` files

■ Accepts Control Statements

■ Prints control statements

■ Prints the `CIMS` Standard Reports

■ Writes mainframe files

■ Writes personal computer files

`CIMS` Report Writer is documented in a separate manual.

A list of standard reports is contained in Member `AALEGEND` of `CIMS.REPTLIB`.

CIMS Report Writer Flow Chart

CIMS General Purpose Report Writer

```
                    ( 4 )


  CIMS Client &    From            User          CIMS
  Rate VSAM        CIMSACCT,       Defined       Chargeback
  Files            CIMSCICS,       Files         Files
                   CIMSBILL,
                   etc.


  CIMS Report Writer          CIMS
  Control Statements   →      Report
  (SYSIN)                     Writer


  MVS      CICS, DB2, Disk,   User      Personal    Mainframe
  Batch    Tape, CIMSUNIV     Defined   Computer    Files
  Reports  & Other            Reports   Files
           Reports
```
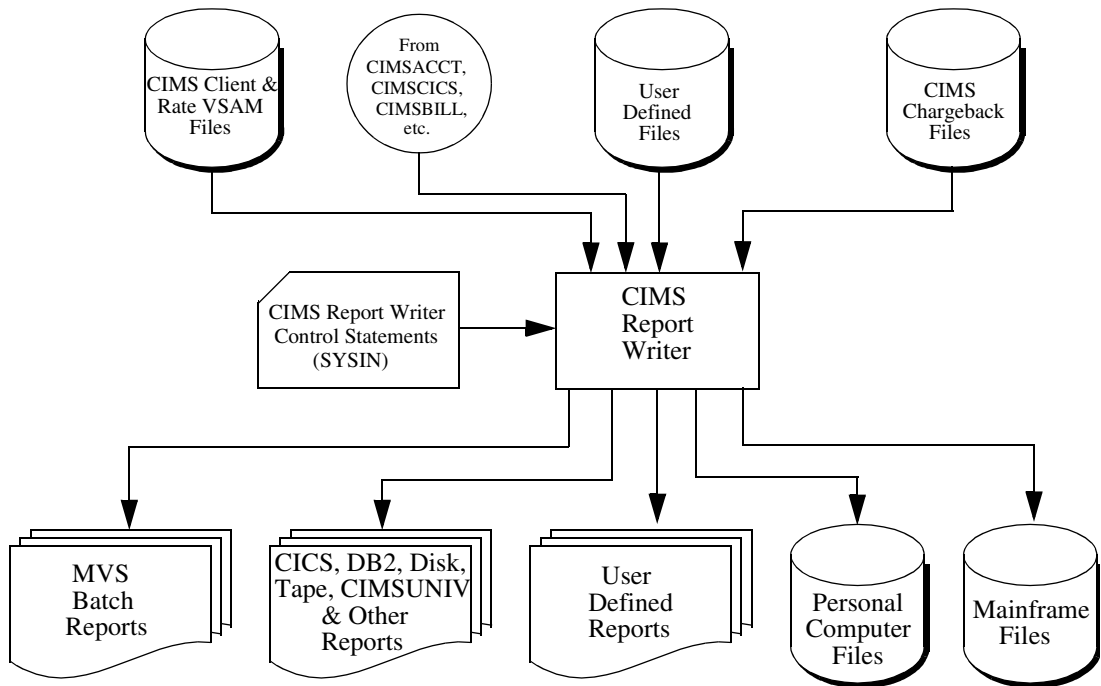
Note • **Values in Parentheses represents** `DDNAMES`.

CIMSMERG

CIMS Account File Merge Procedure

CIMSMERG performs three functions:

■ Sorts the CIMS Accounting Records

■ Merges Daily, Month-to-Date, CICS Miscellaneous, CICS Recurring, CA/DISPATCH and Rejected accounting records.

■ Creates Month-to-Date accounting records

Job Control for CIMSMERG is in CIMS.DATAFILE as member CIMSMERG. Month-to-Date accounting records are passed to CIMSBILL and the CIMS Report Writer.

Connectors

[4]   Refers to the CIMS Report Writer flow chart on page 4-30.

[5A]   Refers to the CIMSACCT (SMF) flow chart on page 4-8.

[5B]   Refers to the CIMSACCT (External) flow chart on page 4-10.

[5C]   Refers to the CIMS CICS flow chart on page 4-26.

[5D]   Refers to the CIMS DB2 flow chart on page 4-28.

[5X]   Refers to any additional files coming from other sub-systems.

[5Y]   Refers to the CIMSEDIT flow chart on page 4-37.

[6]   Refers to the CIMSBILL flow chart on page 4-34.

[7]   Refers to the CIMSEDIT flow chart on page 4-37.

CIMSMERG Flow Chart

CIMS Account File Merge Procedure
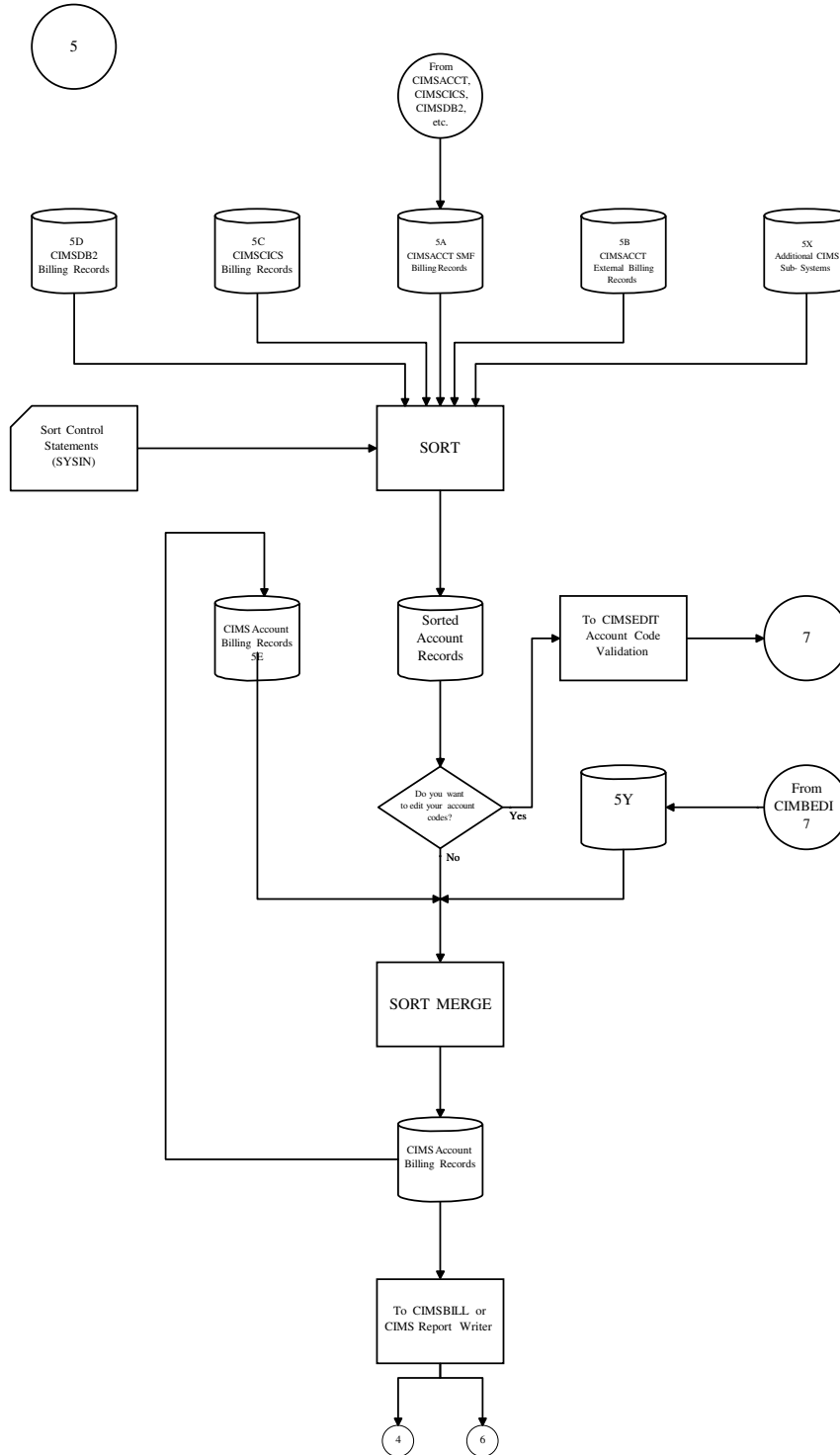
Note • Values in Parentheses represents `DDNAMES`.

CIMSBILL

CIMS Billing & Chargeback Program

`CIMSBILL` processes the accounting records created by `CIMSMERG` and produces:

■ Billing Reports

■ `CIMS` Year to Date File

■ `CIMS` Summary File

■ `CIMS` Resource File

Job Control for `CIMSBILL` is in `CIMS.DATAFILE` as member `CIMSJOB3`. Example job control is provided in the *Computer Center Chargeback Program—CIMSBILL* chapter of the *CIMS Chargeback for OS/390 User Guide* and page 2-31 of this manual.

`CIMSBILL` performs the following tasks:

■ Processes Sorted Month to Date Accounting Records

■ Reads the `CIMS` Client `VSAM` file

■ Reads the `CIMS` Rate `VSAM` file

■ Accepts Control statements

■ Writes Year to Date File

■ Writes Summary File

■ Writes Resource File

■ Prints Invoice, Zero Cost, Job Cost, Detail & Summary Reports

■ Creates a File of Selected Records

Year to Date, Summary, and Resource files are passed to the `CIMS` Report Writer.

Connectors

[4]   Refers to the `CIMS` Report Writer flow chart on page 4-30.

CIMSBILL Flow Chart

CIMS Billing & Chargeback Program
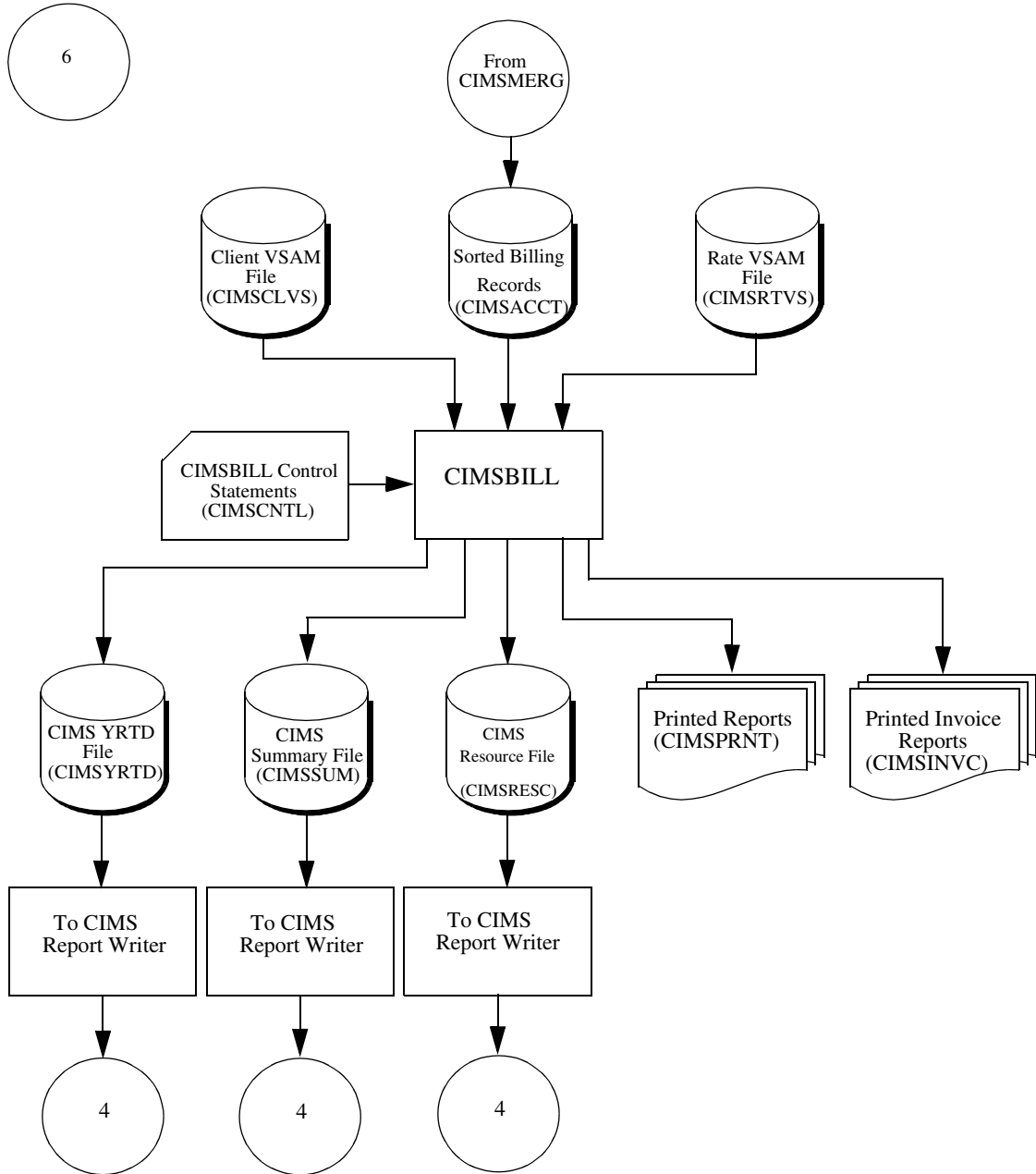
Note • Values in Parentheses represents `DDNAMES`.

CIMSEDIT–Account Code Validation

CIMS Account Code Validation Procedure

`CIMSEDIT` validates Account Codes against the `CIMS` Client File and produces validated Accounting records. Job Control for `CIMSEDIT` is in `CIMS.DATAFILE` as member `CIMSEXT6`. Example job control is provided in the *CIMS Data Entry Screens* chapter of the *CIMS Chargeback for OS/390 User Guide*.

This `JCL` executes the following programs:

- `CIMSBREN`   Extracts rejected transactions
- `SORT`   Sorts daily account records and rejected transactions
- `CIMSEDIT`   Validates account codes

- Job Control for program `CIMSBREN` performs the following tasks:
  - Processes rejected transactions from the `CIMS CICS` database
  - Writes rejected transactions

- Job Control for program `SORT` performs the following tasks:
  - Processes Rejected transactions
  - Processes `CIMSACCT` external transactions
  - Processes `CIMS` Daily Accounting records
  - Accepts sort control statements
  - Writes sorted `CIMS` Accounting File

- Job Control for program `CIMSEDIT` performs the following tasks:
  - Processes sorted Accounting Transactions
  - Reads Client `VSAM` file
  - Writes validated accounting records
  - Writes invalid account code reject transactions
  - Prints invalid account codes

The validated accounting file is passed to `CIMSMERG` and the `CIMS` Report Writer.

The invalid account code file is passed back to the Reject `CICS` screen for corrections and then recycled.

Connectors

[4]	Refers to the Report Writer flow chart on .
[5Y]	Refers to the `CIMSMERG` flow chart on .

CIMSEDIT—Account Code Validation Flow Chart

CIMS Account Code Validation Procedure
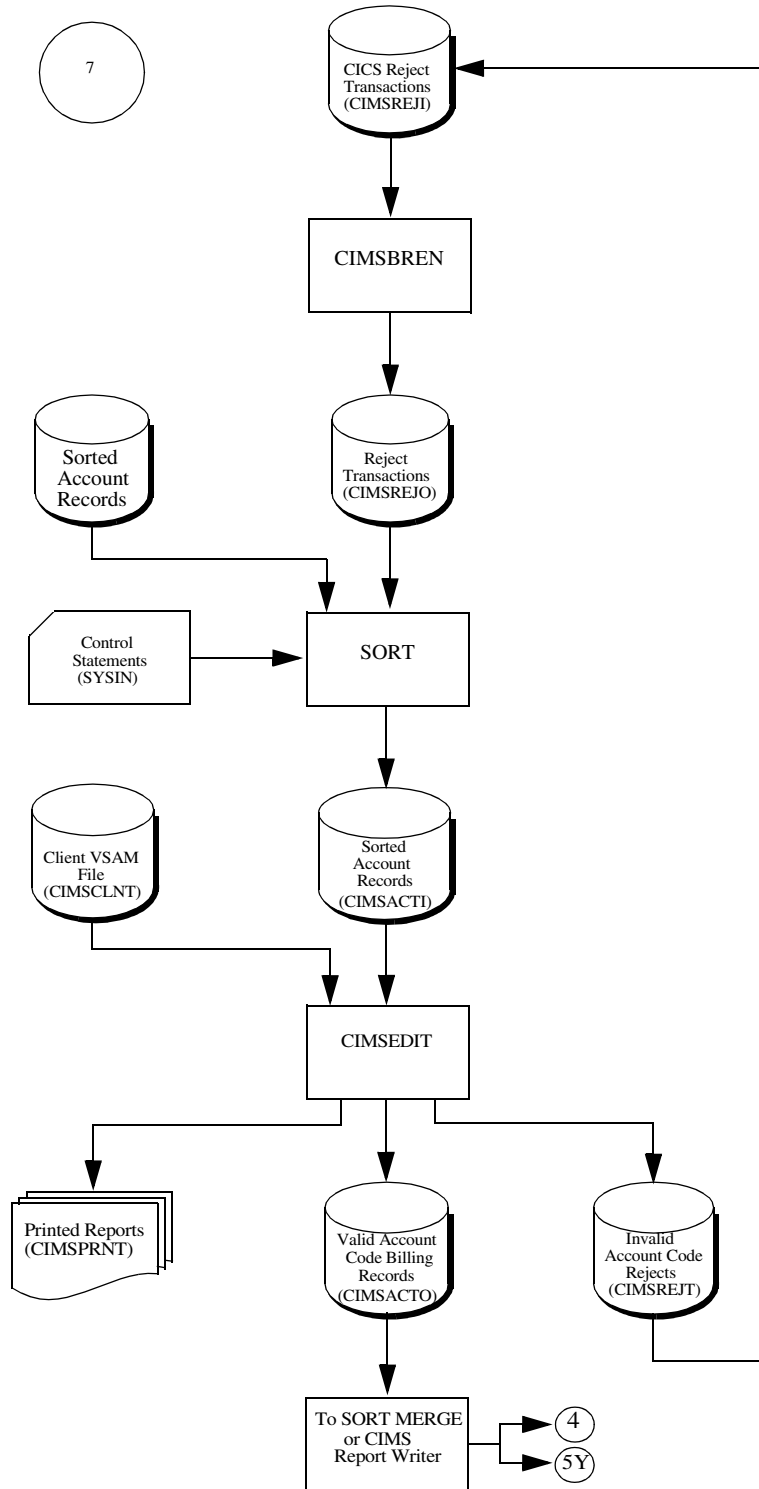
Note • Values in Parentheses represents `DDNAMES`.

■ 5

README File

Overview

This chapter is a copy of the `readme` file that contains the instructions to install *CIMS for OS/390* from a self-extracting executable that is downloadable from the CIMS Lab Web site, http://www.cimslab.com.

README File

CIMS OS/390, Version 11.6 April 9, 2003 Genlevel

Revision Date: April 9, 2003

This file contains installation instructions and information for *CIMS for OS/390*, version 11.6, genlevel 2003/04/09.

1.0 Installation Instructions

Please contact CIMS Lab technical support (see page viii) if you have any problems installing this downloaded version of *CIMS for OS/390*.

1.1 Supplied files

Run the Self-Extract, by executing `cimss390_20030409.exe`, to extract the following files from the archive. These files will require approximately 18 MB of space. There are a total of eleven (11) files included with the download.

Name	Description
CLIST_20030409.SEQ	A `TSO` Transmitted sequential dataset containing the `CLIST` library for *CIMS for OS/390*.
LOADLIB_20030409.SEQ	A `TSO` Transmitted sequential dataset containing some Load modules for *CIMS for OS/390*.
REPTLIB_20030409.SEQ	A `TSO` Transmitted sequential dataset containing the `REPORT` library for *CIMS for OS/390*.
DATAFILE_20030409.SEQ	A `TSO` Transmitted sequential dataset containing the `CONTROL` library for *CIMS for OS/390*.
MESSAGES_20030409.SEQ	A `TSO` Transmitted sequential dataset containing the `ISPF` message library for *CIMS for OS/390*.
PANELS_20030409.SEQ	A `TSO` Transmitted sequential dataset containing the `ISPF` panel library for *CIMS for OS/390*.
OBJECT_20030409.SEQ	A `TSO` Transmitted sequential dataset containing the *CIMS for OS/390* object code.
LINKJCL_20030409.SEQ	A `TSO` Transmitted sequential dataset containing the link `JCL` to build the *CIMS for OS/390* load modules from the object code.

Name	Description
README_20030409.RTF	This file contains the installation instructions.
ALLOC_20030409.JCL	A sample `JCL` member that allocates all the temporary install and permanent product libraries.
INSTJOB1_20030409.JCL	A sample `JCL` member that restores the datasets from the sequential files.

1.2 Installation

The following stages must be performed to install the product.

1 Transfer the files `INSTJOB1_20030409.JCL` and `ALLOC_20030409.JCL` to a `PDS` on `OS/390`.

Perform an `ASCII` transfer for the files:

- Convert the data from `ASCII` to `EBCDIC`

- Append `CRLF` (carriage return/line feed) sequences

The target dataset should have the following dataset attributes:

SPACE UNITS:	BLKS
BLKS:	5 (primary) 2 (secondary)
DIRBLKS:	1
RECFM:	FB
LRECL:	80
BLKSIZE:	6160
DSORG:	P0

2 Modify the `ALLOC JCL` on `OS/390`.

This `JCL` will allocate the temporary sequential datasets (to be used in step 4 of the install) and also the product libraries.

Edit the `JCL` and change the following to meet your installation requirements:

Edit the Jobcard
&HLQ = The high-level qualifier for your `CIMS` install
&UNIT = The disk unit name for your site
&VOL = The volume for the `CIMS` datasets to reside on

Edit the Jobcard	
`&DELETE`	= `"LT"` to delete the sequential datasets = `"LE"` to bypass allocation of libraries
`&ALLOC`	= `"LT"` to allocate the *CIMS for OS/390* install libraries = `"LE"` to bypass allocation of libraries

Notes:

- Set `&DELETE` to `"LE"` and `&ALLOC` to `"LT"` the first time you run the `ALLOC JCL`.

- All `CIMS` datasets must have the `CIMS` qualifier as the second to last qualifier (i.e., `hlq.CIMS.REPTLIB`, `hlq.CIMS.DATAFILE`, etc.). If you don't want a `HLQ` added to your dataset names, set the `HLQ` variable as follows: HQL=",

3 Submit the `ALLOC JCL`.

The job should complete with a return code zero. Investigate any non-zero return code.

4 Transfer the files to sequential datasets on `OS/390`. Follow the chart below:

Extracted Zip File	OS/390 Name Dataset
`CLIST_20030409.SEQ`	`hlq.CIMS.CLIST.SEQ`
`LOADLIB_20030409.SEQ`	`hlq.CIMS.LOADLIB.SEQ`
`DATAFILE_20030409.SEQ`	`hlq.CIMS.DATAFILE.SEQ`
`REPTLIB_20030409.SEQ`	`hlq.CIMS.REPTLIB.SEQ`
`LINKJCL_20030409.SEQ`	`hlq.CIMS.LINKJCL.SEQ`
`OBJECT_20030409.SEQ`	`hlq.CIMS.OBJECT.SEQ`
`MESSAGES_20030409.SEQ`	`hlq.CIMS.MESSAGES.SEQ`
`PANELS_20030409.SEQ`	`hlq.CIMS.PANELS.SEQ`

where `hlq` = Your `CIMS` high-level dataset qualifier.

Perform a binary transfer for the files:

- DO NOT convert the data from `ASCII` to `EBCDIC`

- DO NOT append `CRLF` (carriage return/line feed) sequences

The target dataset should have the following dataset attributes:
(These were built in step 3 by the `ALLOC JCL`).

Organization	PS
Record format	FB
Record length	80
Block size	3120
1st extent cylinders	1
Secondary cylinders	1

5 Modify the `INSTJOB1 JCL` on `OS/390`.

This `JCL` will restore the `TSO` Transmitted sequential datasets to partitioned datasets.

Edit the `JCL` and change the following to meet your installation requirements:

Edit the Jobcard	
&USER	= Your User ID
&HLQ	= The high-level qualifier for your `CIMS` install

6 Submit the `INSTJOB1 JCL`.

The job should complete with a return code zero. Investigate any non-zero return code.

Note • **The RECEIVE processing will create datasets that may need to be restructured to match installation standards. For example, the block size might not be optimal.**

7 Modify the `LINKPROC JCL` in the `hlq.CIMS.LINKJCL` Library.

This member is a PROCEDURE that will be used to link the `CIMS` object into the `CIMS OS/390` load modules. Edit the procedure and change the following to meet your installation requirements:

OBJECT	= The `CIMS V11.6` object library
SYSLIB3	= The library containing the Language Environment run-time routines (`SCEELKED`)
SYSLIB4	= The library containing the Language Environment run-time routines for `COBOL` under `CICS` (`SCEECICS`)

| CICSLIB | = The `CICS` Load Library (`SDFHLOAD` - used in `INSTJOB3`) |
| SYSLMOD | = The `CIMS V11.6` load library |

8 Modify the `INSTJOB2 JCL` in the `hlq.CIMS.LINKJCL` library.

This `JCL` member will create all of the `CIMS` load modules by linking the *CIMS for OS/ 390* object (using the preceding `LINKPROC` procedure).

Edit the `JCL` and change the following to meet your installation requirements:

Edit the Jobcard
&HLQ   = The high-level qualifier for your `CIMS` install

9 Submit the `INSTJOB2 JCL`.

The job should complete with a return code zero. Investigate any non-zero return code.

10 Modify the `INSTJOB3 JCL` in the `hlq.CIMS.LINKJCL` library (optional).

This `JCL` member will create all of the `CIMS CICS` Online load modules by linking the *CIMS for OS/390* object (using the `LINKPROC` procedure) for CICS release 5.2 and later.

Edit the `JCL` and change the following to meet your installation requirements:

Edit the Jobcard
&HLQ   = The high-level qualifier for your `CIMS` install

11 Submit the `INSTJOB3 JCL` (optional).

The job should complete with a return code zero. Investigate any non-zero return code.

12 Modify the `INSTJOB4 JCL` in the `hlq.CIMS.LINKJCL` library (optional).

This `JCL` member will check your `COBOL` run-time environment. If job ends with an `OC4`, then `COBOL II` run-time is link listed in front of the `COBOL LE` run-time. If the job ends with a zero return code, then the output in SYSOUT will show you the level of `LE` that you have link listed.

13 Submit the `INSTJOB4 JCL` (optional).

14 Modify the `INSTJOB5 JCL` in the `hlq.CIMS.LINKJCL` library (optional).

This `JCL` member will create all of the `CIMS CICS` Online load modules by linking the *CIMS for OS/390* object (using the `LINKPROC` procedure) for `CICS` releases 4.1 and 5.1.

Edit the `JCL` and change the following to meet your installation requirements:

Edit the Jobcard
`&HLQ`   = The high-level qualifier for your `CIMS` install

15 Submit the `INSTJOB5 JCL` (optional).

16 If you are performing a new installation, continue to *Step Two: Run CIMSINIT* on page 2-9. If you are performing an upgrade, continue to the appropriate upgrade section in *Chapter 3, Upgrade Instructions*.

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