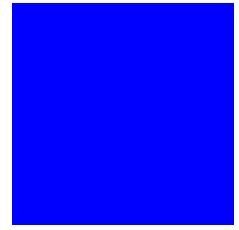


**CIMS Lab, Inc.**

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**CIMS Mainframe Data Collector  
and Chargeback System**

**Installation and Upgrade Guide**

Version 12.0

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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.

CIMS Chargeback is a comprehensive, flexible software solution that consolidates a wide variety of accounting data for 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

Founded in 1974, CIMS Lab 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.

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 CIMS Lab

To contact CIMS Lab with questions, comments or problems, please use one of the following methods:

For product assistance or information:

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

Mailing Address:

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

## About this Guide

This guide provides the installation and upgrade procedures for CIMS Mainframe Data Collector and Chargeback System.

Ch. No.	Chapter Name	Content Description
1	<i>Introduction</i>	Provides general information regarding installing and upgrading CIMS Mainframe Data Collector and Chargeback System. Review this chapter before continuing to the other chapters in this guide.
2	<i>New Installation Instructions</i>	Provides procedures for installing and implementing CIMS for a new installation.
3	<i>Upgrade Instructions</i>	Provides procedures for upgrading an already existing installation of CIMS.
4	<i>CIMSMONY Upgrade Instructions</i>	Provides procedures for upgrading from program CIMSBILL to program CIMSMONY.
5	<i>Installation Flow Charts</i>	Presents additional installation information and installation flow charts.
6	<i>README File</i>	Provides a copy of the readme file included with product download. Contains instructions for installation.
	<i>Index</i>	

---



## Conventions

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

Symbol or Type Style	Represents	Example
<b>Bold</b>	a new term	...called a <b>source object</b> .
<i>Alternate color</i>	(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 <i>Chapter 2, New Installation Instructions</i> .
<i>Italic</i>	words that are emphasized	...the entry <i>after</i> the current entry...
	the titles of other documents	<i>CIMS Mainframe Data Collector and Chargeback System User Guide</i>
	syntax variables	COPY <i>filename</i>
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 Mainframe Data Collector and Chargeback System User Guide*
- *CIMS Chargeback Report Writer User Guide*
- *CIMS Chargeback Report Writer Sample Reports*
- *CIMS CICS Data Collector User Guide*
- *CIMS Server Administrator's Guide*
- *CIMS Server Web Reporting User's Guide*

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# Introduction

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## Overview

The purpose of this guide is to describe the install process for CIMS Mainframe Data Collector and Chargeback System release 12.0 for both new and existing CIMS users. This guide 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 Mainframe Data Collector and Chargeback System in a timely manner after receiving the product, 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, complete the following steps.

### *To locate the latest genlevel:*

Go to the CIMS Lab Web site, <http://www.cimslab.com>, and do the following:

- 1 Click the **Customer Area** link.
- 2 Select **CIMS Mainframe** from the **Product/Category** pull down
- 3 Type your CIMS 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.DATFILE production library.
- 4 Click the **Product Downloads** link on the Customer Area page.
- 5 Click the **CIMS Mainframe** link.
- 6 Scroll through the CIMS Mainframe Product Downloads list and find the most recent product download.

### *To determine the genlevel of your existing installation:*

Customize the CIMS.DATFILE JCL member CIMSLEVL and submit it. The output in the CIMSPRNT DD contains the genlevel. The output is similar to the following:

```
V12.0.0                CIMS, The Enterprise ChargeBack System
                        _____
                        Program CIMSLEVL

CIMS Base Install Level = 2004/03/01
```

**To determine whether any product updates are available:**

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.DATFILE member will include a \$BLDUPDT member that lists all of the updates to the current genlevel.

To determine whether there are any product updates that are not included in your installation:

- 1 Click the **Product Updates** link on the Customer Area page.
- 2 Click the **CIMS Mainframe** link.
- 3 In the CIMS Mainframe Product Updates list, look for updates that have a date after the genlevel date shown in the CIMSPRNT DD output (see *To determine the genlevel of your existing installation:* on page 1-2).

These are updates that were added after the genlevel was created.

- 4 Refer to the a \$BLDUPDT member in the CIMS.DATFILE 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.

## Installation Sources

You can install or upgrade CIMS Mainframe Data Collector and Chargeback System 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 Mainframe Data Collector and Chargeback System release—see *If you are upgrading from one genlevel to another of the same CIMS release (for example, one genlevel of 12.0 to another 12.0 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 one of the following self-extracting executable files.

---

**Note** • To ensure that you always have access to the current genlevel of CIMS Mainframe Data Collector and Chargeback System, CIMS Lab recommends that you install or upgrade from the CIMS Lab Web site.

---

***If you are installing CIMS Mainframe Data Collector and Chargeback System for the first time or are upgrading to a new release (for example, from 11.6 to 12.0):***

Download the self-extracting file `cimsmdcc_<genleveldate>.exe` and follow the instructions in the `readme` file.

If you are installing from the CIMS Product CD, the `cimsmdcc_<genleveldate>.exe` file is in the `Mainframe` folder.

If you are installing from the CIMS Lab Web site, this file is on the Product Downloads page. See the steps in *To locate the latest genlevel*: on page 1-2 to navigate to this page.

***If you are upgrading from one genlevel to another of the same CIMS release (for example, one genlevel of 12.0 to another 12.0 genlevel):***

Download the self-extracting file `mdccupdt_<genleveldate>.exe` and follow the instructions in the `readme` file. The `mdccupdt_<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 `Mainframe` folder.

If you are installing from the CIMS Lab Web site, this file is on the Product Updates page. See the steps in *To determine whether any product updates are available*: on page 1-3 to navigate to this page.

The Product Updates page 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 a `$BLDUPDT` 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 Mainframe Data Collector and Chargeback System for the first time, refer to the following chapters:

- **Chapter 6, README File.** This chapter provides a copy of the `readme` file contained in the self-extracting `cimsmdcc_<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 2-10.

If you are installing from the CIMS Product Tape, you do not need to review Chapter 6. Review *Step One: Install the Partitioned Data Sets from the CIMS Product Tape, Product CD, or Web Site* on page 2-8.

- **Chapter 2, New Installation Instructions.** This chapter contains steps to install the base CIMS Mainframe Data Collector and Chargeback System 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 5, 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 Mainframe Data Collector and Chargeback System, refer to the following chapters:

- **Chapter 6, README File.** This chapter provides a copy of the `readme` file contained in the self-extracting `cimsmdcc_<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 6. Review *Step One: Install the Partitioned Data Sets from the CIMS Product Tape, Product CD, or Web Site* on page 2-8.

- **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 Mainframe Data Collector and Chargeback System release, perform the steps in the `readme` file contained in the self-extracting `mdccupdt_<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 *Enhancements/Updates to CIMS Data Collector for Mainframe Systems* document (see [page 1-6](#) for a description of this document).

For additional information regarding updates and enhancements to CIMS Mainframe Data Collector and Chargeback System, refer to the following documents. You can find these documents on the CIMS Product CD in the `Documentation\Mainframe` folder and the CIMS Lab Web site.

- *CIMS Mainframe Data Collector and Chargeback System Release Notes* (file name `mfdcrn<genleveldate>.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.
- *Enhancements/Updates to CIMS Data Collector for Mainframe Systems* (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.



---

# New Installation Instructions

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## 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 [page 2-6](#). *Chapter 5, 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 CIMSMONY 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 data set CIMS.CLIST and change the data set names to match the data set 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 data set CIMS.CLIST. Enter the appropriate high level nodes before the four CIMS data set names.
- 3 Execute member CIMS from data set 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 data set CIMS.CLIST.

- 4 Exit the PF KEY and ISPF PARMs screens and press PF13. The CIMS MAIN MENU appears.

```
-----CIMS Main Menu-----
OPTION  ===>

                CIMS

        THE INTEGRATED CHARGEBACK SYSTEM

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

                T  TUTORIAL - Help

Enter END command to EXIT.
```

Select the appropriate option and begin the CIMS chargeback process.

## Installation Data Sets

As discussed in *Installation Sources* on page 1-3, you can install CIMS 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 `cimsmdcc_<genleveldate>.exe` executable. The `cimsmdcc_<genleveldate>.exe` executable is located in both the `Mainframe` folder of the CIMS Product CD and the Product Downloads page of the CIMS Lab Web site.

## Tape Data Sets

The distribution tape contains ten standard label data sets as follows:

DATA SET	DESCRIPTION
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 Data Sets

The `cimsdcc_<genleveldate>.exe` executable contains the following files.

FILE NAME	DESCRIPTION
<code>CLIST_&lt;genleveldate&gt;.SEQ</code>	A TSO transmitted sequential data set containing the CLIST library for CIMS.
<code>LOADLIB_&lt;genleveldate&gt;.SEQ</code>	A TSO transmitted sequential data set containing some Load modules for CIMS.
<code>REPTLIB_&lt;genleveldate&gt;.SEQ</code>	A TSO transmitted sequential data set containing the REPORT library for CIMS.
<code>DATAFILE_&lt;genleveldate&gt;.SEQ</code>	A TSO transmitted sequential data set containing the CONTROL library for CIMS.
<code>MESSAGES_&lt;genleveldate&gt;.SEQ</code>	A TSO transmitted sequential data set containing the ISPF message library for CIMS.
<code>PANELS_&lt;genleveldate&gt;.SEQ</code>	A TSO transmitted sequential data set containing the ISPF panel library for CIMS.
<code>OBJECT_&lt;genleveldate&gt;.SEQ</code>	A TSO transmitted sequential data set containing the CIMS object code.
<code>LINKJCL_&lt;genleveldate&gt;.SEQ</code>	A TSO transmitted sequential data set containing the link JCL to build the CIMS load modules from the object code.
<code>README_&lt;genleveldate&gt;.RTF</code>	This file contains the installation instructions.
<code>ALLOC_&lt;genleveldate&gt;.JCL</code>	A sample JCL member that allocates all the temporary install and permanent product libraries.
<code>INSTJOB1_&lt;genleveldate&gt;.JCL</code>	A sample JCL member that restores the data sets from the sequential files.
<code>FtpCimsFiles.wsf</code>	A Windows Script file that automates the loading of the .seq files to the mainframe.
<code>FtpInstallFiles.wsf</code>	A Windows batch file that invokes the <code>FtpCimsFiles.wsf</code> script.

## CIMS INSTALLATION

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**Note** • To determine whether you have the latest release of CIMS, 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. These steps are discussed in detail in the following sections.

- 1 Install the partitioned data sets 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 data set name high level qualifiers
  - 3) Insert VOLSER numbers
  - 4) Insert DSCB model names

- 3 Check the level of COBOL LE.

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

- 4 Install passwords.

Update the CIMSNUMS member of the CIMS.DATASET data set with the passwords provided by CIMS Lab.

Update the SWOPTION member of the CIMS.REPTLIB data set with the password provided by CIMS Lab.

- 5 Process CIMSJOB1.

This job creates the CIMS Client, Rate, Dictionary, and Status and Statistics VSAM files.

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

- 6 Process CIMSJOB2. (CIMSDATA and CIMSACCT)

This job processes programs CIMSDATA and CIMSACCT. These programs interface with the z/OS-SMF data set and create the CIMS.CIMSACCT.DAILY batch chargeback file.

**7** Process CIMSJOB3. (CIMSMONY)

This job processes program CIMSMONY, which creates:

- Invoices
- Zero cost invoices (Rate Determination)

**8** Process CIMSJOB4. (CIMS Report Writer)

This job generates Chargeback and Resource Usage Reports.

**9** (Optional) Process CIMS Sub-systems.

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

**10** (Optional) Install CIMS CICS-Based online screens.

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

## 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, etc., edit and process the appropriate job control or access the appropriate menu.

Members names are CIMSCICS, CIMSDB2, CIMSDISK, etc.

For assistance in installing CIMS, contact CIMS Lab (see [page viii](#)).

## Step One: Install the Partitioned Data Sets from the CIMS Product Tape, Product CD, or Web Site

### To Install from the CIMS Product Tape

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

#### To unload data set 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 data set one, edit member CIMSLOAD. This member contains nine IEBCOPY executions that unload data sets two through ten. Submit the job control to load the remainder of the CIMS partition data sets.

---

**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 `cimsmdcc_<genleveldate>.exe` and follow the instructions in the `readme` file and then proceed to [Step Two: Run CIMSINIT](#) on page 2-10. The `readme` file explains the steps involved in installing the partitioned data sets from the zip file. A copy of the `readme` file is in [Chapter 6, README File](#).

If you are installing from the CIMS Product CD, the `cimsmdcc_<genleveldate>.exe` file is in the `Mainframe` folder. If you are installing from the CIMS Lab Web site, this file is on the `Product Downloads` page. See the steps in [To locate the latest genlevel:](#) on page 1-2 to navigate to this page.



## CIMS Partitioned Data Sets

When the partitioned data sets are successfully installed, the following data sets 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 CLISTs 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 data sets, 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. The 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 '/' in 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>insert 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 data set 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>insert, 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...
262 Files
0 Exceptions
JobCard   : 129 Replacements
HLQ       : 2642 Inserts
Volume    : 55 Replacements
ModelDSCB: 226 Replacements
NORMAL CIMS HLQ 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.DATFILE. 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 0C4, 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 four permanent files and four GDGs. These files are required.

■ CIMS.CLIENT.VSAM	Client File
■ CIMS.CIMSRATE.VSAM	Rate Table
■ CIMS.DCTN.VSAM	Dictionary File
■ CIMS.SUSPENSE	GDG for CIMSACCT Processing
■ CIMS.CIMSSTAT.VSAM	VSAM History File
■ CIMS.SORTAGR	CIMSEXTR Recovery File
■ CIMS.SORTSUM	CIMSEXTR Recovery File
■ CIMS.SORTOUT	CIMSEXTR Recovery File

The CIMS Client, Rate, and Dictionary files are created using the sample clients and rates provided.

Member CLIENT contains sample client records. Client Records are documented in the *Client Identification and Budget Reporting—CIMSCLNT and CIMSBDGT* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

Members CIMSRATE, CIMSRT01, CIMSRT02 contain sample Rate records. Rate records are documented in the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

Members DCTNxxxx contain the default record definitions for the CIMS Dictionary. For more information about the CIMS Dictionary, refer to the *CIMS Dictionary—CIMSDTV* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

### CIMSJOB1 Job Control

Refer to member CIMSJOB1 in CIMS.DATAFILE for the job control.

## Step Five: Process CIMSJOB2

The next step is to process CIMSJOB2.

CIMSJOB2 is a member in CIMS.DATAFILE.

This job interfaces with the z/OS-SMF data set and creates the CIMS accounting file.

- JOB STEP 2A executes program CIMSDATA (refer to the *SMF Interface Program—CIMSDATA* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*).
- JOB STEP 2B executes program CIMSACCT (refer to the *Accounting File Creation Program—CIMSACCT* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*).

---

**Note** • It is not necessary to read the CIMSDATA and CIMSACCT chapters in the *CIMS Mainframe Data Collector and Chargeback System User Guide* now. However, CIMS Lab strongly recommends that you refer to these chapters before you start changing the default control statements.

---

A flow chart for each program is contained in *Chapter 5, Installation Flow Charts*.

---

**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 data set is unloaded to disk or tape. When CIMSJOB2 completes, data set CIMS.CIMSACCT.DAILY contains z/OS batch and TSO accounting records, and data set 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 data set 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 data set to 32K (BLKSIZE = 32760).

### CIMS Merge

A sample SORT/MERGE set of job control that creates a sorted history data set of CIMS accounting records can be found in data set 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 data sets on tape. Leave the daily files on disk for daily reports and set up generation data sets to tape for the history file.

## CIMSJOB2 Explanation—Program CIMSDATA

### CIMS2A

This job step executes program CIMSDATA. The data set created by the SMF Dump Facility is read and 4 CIMS data sets are created.

INPUT	DDNAME SMFIN	This is the SMF DUMP data set.
INPUT	DDNAME CIMSCNTL	Data set CIMS.DATAFILE (DATAINPT) Contains input control statements. See the Control Statement Table in the <i>SMF Interface Program—CIMSDATA</i> chapter of the <i>CIMS Mainframe Data Collector and Chargeback System User Guide</i> for further information.
OUTPUT	DDNAME CIMSSMF	CIMS reformatted SMF data set. Contains each SMF record from the input data set unless limited by a records statement.  This data set is designed as a backup data set of reformatted SMF Records. This data set can be input to the CIMS Report Writer.  Depending on installation requirements, you might choose to DD DUMMY this data set, or to COMMENT the statement.
OUTPUT	DDNAME CIMSACCT	This data set contains selected SMF chargeback records (6, 30, 101, 110).  This data set is used as input in step CIMS2B.
OUTPUT	DDNAME CIMSCICS	This data set contains CICS records (SMF Type 110) This record is used by the CIMS CICS interface programs.
OUTPUT	DDNAME CIMSDB2	This data set 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 data set created by program CIMSDATA (DDNAME CIMSACCT) and generates the CIMS batch chargeback data set.

INPUT	DDNAME CIMSDATA	<p>Reformatted SMF records.</p> <p>These records are created by DDNAME CIMSACCT in program CIMSDATA.</p> <p>CIMS Suspense file.</p> <p>The CIMS Suspense file for unmatched job step and print records is appended to DDNAME CIMSDATA.</p>
INPUT	DDNAME CIMSCNTL	<p>Control statements.</p> <p>Member ACCTINPT contains CIMS default control statements for CIMSACCT.</p>
INPUT	DDNAME CIMSPASS	<p>CIMS product passwords.</p> <p>Passwords are supplied with CIMS.</p> <p>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.</p>
INPUT	DDNAME CIMSTABL	<p>Optional user-supplied table to convert job names and/or job card account codes to a new format. Refer to the <i>Accounting File Creation Program—CIMSACCT</i> chapter of the <i>CIMS Mainframe Data Collector and Chargeback System User Guide</i> for further information.</p>
INPUT	DDNAME CIMSDTVS	<p>CIMS Dictionary VSAM file.</p>
INPUT	DDNAME CIMSPDS	<p>Control statements.</p> <p>This data set is used by CIMSACCT when PROCESS CIMS SERVER RESOURCE RECORDS control statement is specified. A member, ALIASACC, in this data set contains the control members for the different records.</p>
OUTPUT	DDNAME CIMSACCT	<p>CIMS batch chargeback file containing the CIMS 6 and 30 accounting records.</p> <p>This data set is used by CIMS Billing Program CIMSBILL and CIMS Report Writer.</p>

---



OUTPUT	DDNAME CIMSACT2	CIMS batch chargeback file containing the CIMS 79x accounting records.  This data set is used by CIMSEXTR and CIMSMONY and by CIMS Report Writer.
OUTPUT	DDNAME CIMSUSPN	CIMS Suspense file.  This data set contains Step and Print records that have not been matched with a Job Start or Job Stop record.
OUTPUT	DDNAME CIMSEXP	This data set contains records that have <i>not</i> been matched with entries in the CIMSTABL data set.
OUTPUT	DDNAME CIMSPRNT	This data set contains the runtime parameters and the results of the run.
OUTPUT	DDNAME CIMSMMSG	This data set contains informational messages.
OUTPUT	DDNAME CIMSSSEL	CIMS accounting records.  This data set 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 data set contains all CIMS Server Resource Records that did not have a definition within CIMSDTV5.

### **CIMSJOB2 Job Control**

Refer to member CIMSJOB2 in CIMS.DATAFILE for the job control.

## 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 CIMSMONY.
- Billing control statements are contained in member MONYCTL1. 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 converts the CIMS 79x accounting records into CSR+ records. CIMSMONY supports CSR+ records only.

#### CIMS3B

This step sorts the data set created by step CIMS3A into account code, job name, and job log number sequence.

#### CIMS3C

This is the Computer Center Billing System—CIMSMONY.

INPUT	DDNAME CIMSACCT	Integrated chargeback data set.
INPUT	DDNAME CIMSCLVS	Client records.
INPUT	DDNAME CIMSCNTL	Control statements.
INPUT	DDNAME CIMSRTVS	Billing rates.
INPUT	DDNAME CIMSCLDR	CIMS calendar file.
INPUT	DDNAME CIMSNCPU	CPU normalization statements.
INPUT	DDNAME CIMSSCPU	CPU job class and priority surcharge statements.
OUTPUT	DDNAME SYSOUT	Messages
OUTPUT	DDNAME CIMSPRNT	Processing results.
OUTPUT	DDNAME CIMSINVC	Invoices.
OUTPUT	DDNAME CIMSMSG	Informational messages.
OUTPUT	DDNAME CIMSSUM	Summary records by account. One record per account and billable item—(Rate Code).
OUTPUT	DDNAME CIMSDIST	This data set contains summary data. This data can be file transferred to the CIMS Desktop System.

OUTPUT	DDNAME CIMSIDNT	Identifier data that can be loaded into a CIMS Server database. This file is produced by CIMSMONY in Server mode.
OUTPUT	DDNAME CIMSDETL	Detail data that can be loaded into a CIMS Server database. This file is produced by CIMSMONY in Server mode.
OUTPUT	DDNAME CIMSUMRY	Summary data that can be loaded into a CIMS Server database. This file is produced by CIMSMONY in Server mode.

See the *Accounting File Record Descriptions* appendix of the *CIMS Mainframe Data Collector and Chargeback System User Guide* and CIMS.REPTLIB for record descriptions.

### CIMSJOB3 Job Control

Refer to member CIMSJOB3 in CIMS.DATAFILE for the job control.

## 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 document *CIMS Chargeback Report Writer Sample Reports* for report examples.
- Request reports by changing the member name in DDNAME SYSIN.

Member AALEGEND in CIMS.REPTLIB contains the current list of CIMS Report Writer sample reports. CIMS Report Writer is documented in the *CIMS Chargeback Report Writer User Guide* and *CIMS Chargeback Report Writer Sample Reports*.

### 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

Refer to member CIMSJOB4 in CIMS.DATAFILE for the job control.

## 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 z/OS 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 CIMSMONY. (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, etc.

## 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 data set `CIMS.DATASET` 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.

## Member Lists

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

- CIMS.CICS.LOADMDS
- CIMS.DATAFILE
- CIMS.REPTLIB

---

**Note** • Members might be added to these data sets between genlevel releases. In this situation, the following member lists might not be complete. If needed, refer to the data set for the members.

---

### Contents of CIMS.CICS.LOADMDS

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
CIMMDR		Mail Drop CICS Screen Map
CIMMMEN		Menu CICS Screen Map
CIMMMIS		Miscellaneous Transaction CICS Screen Map
CIMMRAT		Rate CICS Screen Map
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 earlier programs (CIMOCLN, CIMOMDR, CIMOMEN, CIMOMIS, CIMORAT, CIMORCU, CIMOREJ), submit job INSTJOB5 from the CIMS.LINKJCL library.

### **Contents of CIMS.DATAFILE**

Refer to member AAAALIST for a complete listing and description of each member in CIMS.DATAFILE.

### **Contents of CIMS.REPTLIB**

Refer to member AALEGEND for a complete listing and description of each member in CIMS.REPTLIB.





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# Upgrade Instructions

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# Upgrading from CIMS Releases 11.2–11.6

## Overview

This chapter describes the upgrade process from CIMS 11.2–11.6 to release 12.0. If you are performing a new CIMS installation, please refer to [Chapter 2, New Installation Instructions](#).

Your current release of CIMS 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.DATFILE and CIMS.REPTLIB members without loss of previous customization.

The number of changes required to upgrade to CIMS 12.0 is dependent on the chargeback program that you plan to use: CIMSBILL or the new chargeback program, CIMSMONY. You should review the section [Upgrade Options](#) beginning on [page 3-3](#) before you continue to the rest of the sections in this chapter.

The following are the changes that have been made in each CIMS release.

### Release 11.3

- CIMS is compiled using COBOL for OS/390 and uses the COBOL LE runtime. The COBOL LE runtime must be accessible to the CIMS programs.

### Release 11.4

- The account code conversion process was updated and standardized. There might be some changes needed in your control members as described below.
- CIMSMMSG DD processing was added to more CIMS programs. This change requires that you update the JCL to add a CIMSMMSG DD statement.
- An updated version of the CIMS Report Writer was added. This version supports HTML generation.
- New programs CIMSIMS1, CIMSIMS2, and CIMSCMFP were added.

### Release 11.5

- Support for the new CIMS 79x accounting records was added.
  - New programs CIMSEXTR and CIMSDTLD were added.
  - CIMSACT2 DD, CIMSACT3 DD, and CIMSDTVS DD were added to some of the CIMS programs, which entails updating the JCL to add these DD statements.
- The CIMS 6 and 30 accounting records were updated.

## Release 11.6

- The CIMS 79x accounting records were changed.
- The CIMSUNIV 001 record was expanded to include stop date/time values and a 128-byte account code area.
- The CIMS 6 accounting record was expanded to provide better support for the Enhanced Sysout Section.
- The CIMSEXTR program was updated to ensure accurate start and stop dates/times during the aggregation process.

## Release 12.0

- Full support for a 128-byte account code field in the CIMS 79x accounting records was added.
- A new chargeback program, CIMSMONY, was added. This program supports the CIMS 79x accounting records. The 79x records are processed by CIMSEXTR, which creates the CIMS Server Resource Plus (CSR+) file that is processed by CIMSMONY. For more information about CIMSMONY, refer to [Chapter 4, CIMSMONY Upgrade Instructions](#).
- The ability to produce CIMS Server Ident, Detail, and Summary files was added. These files are produced by CIMSMONY and can be loaded into the CIMS Server database for reporting.
- The Status and Statistics VSAM file was added to support a restart of program CIMSEXTR. This file is required only if you are using CIMSEXTR. CIMSSTAT DD was added to all job steps that execute CIMSEXTR.

## Upgrade Options

You have the following options when upgrading to CIMS 12.0. Each of these options has different implications as explained in this section.

- **You can upgrade and continue to use CIMSBILL as your chargeback program.**
- **You can upgrade and use CIMSMONY in Invoice mode as your chargeback program.** In Invoice mode, CIMSMONY is similar to CIMSBILL with the exception that CIMSMONY supports CIMS 79x accounting records (which are first processed and reformatted by CIMSEXTR) rather than the CIMS 6, 30, and 991–999 accounting records. The Invoice mode is intended for those users who want to process data and produce an invoice on the mainframe.
- **You can upgrade and run CIMSMONY in Server mode as your chargeback program.** CIMSMONY in Server mode is intended for those users who want to process data on the mainframe and feed the processed data to CIMS Server for reporting.

### **About Upgrading to CIMSMONY**

You can run CIMSMONY in Server or Invoice mode. The mode that you use depends on your processing and reporting requirements. To determine whether you should upgrade to CIMSMONY in Invoice or Server mode, review the following.

#### ***You should upgrade to CIMSMONY in Invoice mode if...***

You are upgrading from releases 11.2–11.6, are not creating 79x records for processing by CIMSEXTR, and do not want to interface with CIMS Server. For more information about upgrading to CIMSMONY in Invoice mode, see [Upgrading and Using CIMSMONY in Invoice Mode](#) on page 3-7.

#### ***You should upgrade to CIMSMONY in Server mode if...***

You are upgrading from release 11.5 to 11.6 and are currently creating CIMS Server Resource (CSR) files for output to CIMS Server (i.e., creating 79x records that are processed by CIMSEXTR). For more information about upgrading to CIMSMONY in Server mode, see [Upgrading and Using CIMSMONY in Server Mode and CIMS Server](#) on page 3-9.

### **Upgrade Changes**

The following changes have been made in CIMS 12.0.

#### **New Account Code Length**

CIMS supports the full 128-byte account code in the CIMS 79x accounting records.

#### **CIMS Interface Program Updates**

The CIMSACCT, CIMSCMF2, CIMSDB2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02 interface programs have been updated to write the 79x accounting records to the CIMSACT2 DD and the 6, 30, 991-999 records to the CIMSACCT DD. There are control statements to turn off either type of accounting record.

#### **New GDGs**

There are now three GDG allocation members—CIMSGDG (for common GDG), CIMSGDG1 (for CIMSMONY in Invoice mode), and CIMSGDG2 (for CIMSBILL).

#### **New File**

The Status and Statistics VSAM file has been added to support a restart of program CIMSEXTR. This file is required only if you are using CIMSEXTR.

#### **New Program**

A new chargeback program, CIMSMONY has been added. This program supports the 79x accounting records, which are first processed and reformatted by CIMSEXTR.

CIMSMONY in Server mode produces CIMS Server Ident, Detail, and Summary files, which can be loaded into the CIMS Server database for Web reporting. CIMSMONY in Invoice mode produces a paper invoice on the mainframe.

## Upgrading and Using CIMSBILL

The following provides upgrade information and requirements by release if you are upgrading to CIMS 12.0 and will continue to use CIMSBILL.

### Releases 11.2–11.4

- Some LRECLS and BLKSIZEs have changed. These changes are provided in the *CIMS.DATFILE Updates/Additions* section for each release (see [page 3-27](#) for 11.2, [page 3-49](#) for 11.3, and [page 3-66](#) for 11.4).
- You must do one of the following:
  - Add both CIMSACT2 DD and CIMSDTVS DD as a DD DUMMY to all job steps that execute CIMSACCT, CIMSDISK, CIMSDB2, CIMSCMF2, CIMSTAPE, CIMSUNIV, and CIMSUN02.
- Or
  - Add the appropriate WRITE 791 OFF control statement (for CIMSDISK, CIMSDB2, CIMSCMF2, CIMSTAPE, CIMSUNIV, and CIMSUN02) or WRITE 79X OFF control statement (for CIMSACCT) to the interface program control members. By adding the WRITE 791/X OFF statement the CIMSACT2 DD will not be referenced and will not be needed.
- Run ACNVJCL1 in CIMS.DATFILE to upgrade the CIMS Rate file. For more information, see [CIMS Rate VSAM File Conversion](#) on page 3-12.
- Run ACNVJCL2 in CIMS.DATFILE to upgrade the CIMS Client file. For more information, see [CIMS Client VSAM File Conversion](#) on page 3-13.
- If you are upgrading from a release prior to 11.4, the CIMS IMS processing has changed. Programs CIMSIMS1 and CIMSIMS2 replace CIMSIMSP and CIMSIMS. Refer to the CIMSIMS JCL in the CIMS.DATFILE.
- Program CIMSCMFP was added in a maintenance release of 11.2. It replaces CIMSCMF1. Refer to the CIMSCICS JCL in the CIMS.DATFILE.
- Shift processing was enhanced for CIMSACCT, CIMSCMF2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02. The old control statements are obsolete. Refer to the *CIMS Mainframe Data Collector and Chargeback System User Guide* for more information about shift processing for these programs.
- There are other program enhancements that might affect your installation. Refer to one of the following sections that addresses the CIMS release that you are upgrading from:
  - [Upgrading from 11.2](#) on page 3-18
  - [Upgrading from 11.3](#) on page 3-40
  - [Upgrading from 11.4](#) on page 3-61

### Release 11.5

- Some LRECLS and BLKSIZES have changed. These changes are provided in *CIMS.DATFILE Updates/Additions* on page 3-83.
- Run ACNVJCL1 in CIMS.DATFILE to upgrade the CIMS Rate file. For more information, see *CIMS Rate VSAM File Conversion* on page 3-12.
- Run ACNVJCL2 in CIMS.DATFILE to upgrade the CIMS Client file. For more information, see *CIMS Client VSAM File Conversion* on page 3-13.
- Because release 11.5 required that you add the CIMSACT2 DD as a DD DUMMY for each job step that executed CIMSACCT, CIMSCMF2, CIMSDB2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02, you do not have to add the WRITE 791 OFF or WRITE 79X OFF (for CIMSACCT) control statement.
- Shift processing was enhanced for CIMSACCT, CIMSCMF2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02. The old control statements are obsolete. Refer to the *CIMS Mainframe Data Collector and Chargeback System User Guide* for more information about shift processing for these programs.
- There are other program enhancements that might affect your installation. Refer to *Upgrading from 11.5* on page 3-75.

### Release 11.6

- Run ACNVJCL1 in CIMS.DATFILE to upgrade the CIMS Rate file. For more information, see *CIMS Rate VSAM File Conversion* on page 3-12.
- Run ACNVJCL2 in CIMS.DATFILE to upgrade the CIMS Client file. For more information, see *CIMS Client VSAM File Conversion* on page 3-13.
- Because release 11.5 required that you add the CIMSACT2 DD as a DD DUMMY for each job step that executed the CIMSACCT, CIMSCMF2, CIMSDB2, CIMSDISK, CIMSTAPE, CIMSUNIV and CIMSUN02, you do not have to add the WRITE 791 OFF or WRITE 79X OFF (for CIMSACCT) control statement.
- There are other program enhancements that might affect your installation. Refer to *Upgrading from 11.6* on page 3-93.

## Upgrading and Using CIMSMONY in Invoice Mode

CIMSMONY in Invoice mode is similar to CIMSBILL. However, CIMSMONY supports CIMS 79x accounting records (which are first processed and reformatted by CIMSEXTR) rather than CIMS 6, 30, and 991–999 accounting records. For the steps required to migrate from CIMSBILL to CIMSMONY, refer to [Chapter 4, CIMSMONY Upgrade Instructions](#).

To use CIMSMONY, the CIMS interface programs must produce 79x accounting records, CIMSEXTR must be implemented, and the CIMS Dictionary and Status and Statistics VSAM files must be allocated.

The following provides upgrade information and requirements for all releases if you are upgrading to CIMS 12.0 and will be using CIMSMONY in Invoice mode.

### Releases 11.2–11.6

- Run member CIMSGDG1 in CIMS.DATFILE to create the necessary GDGs for CIMSMONY.
- Run ACNVJCL1 in CIMS.DATFILE to upgrade the CIMS Rate file. For more information, see [CIMS Rate VSAM File Conversion](#) on page 3-12.
- Run ACNVJCL2 in CIMS.DATFILE to upgrade the CIMS Client file. For more information, see [CIMS Client VSAM File Conversion](#) on page 3-13.
- Run CIMSDTC and CIMSDTLD in CIMS.DATFILE to create and load the CIMS Dictionary VSAM file for releases prior to 11.5 or if you did not implement the CIMS Dictionary in release 11.5 or 11.6.
- Release 11.5/11.6—If you implemented the CIMS Dictionary, see [CIMS Dictionary VSAM File Conversion](#) on page 3-13 for the steps required to convert the dictionary.
- Run CIMSSTC in CIMS.DATFILE to create the Status and Statistics VSAM file.
- If you are upgrading from a release prior to 11.6, some LRECLS and BLKSIZES have changed. These changes are provided in the *CIMS.DATFILE Updates/Additions* section for each release (see [page 3-27](#) for 11.2, [page 3-49](#) for 11.3, [page 3-66](#) for 11.4, and [page 3-83](#) for 11.5).
- You must add the CIMSACT2 DD and CIMSDTVS DD to all job steps that execute CIMSACCT, CIMSDISK, CIMSDB2, CIMSCMF2, CIMSTAPE, CIMSUNIV, and CIMSUN02. You can optionally add the WRITE 991|994 OFF control statements or WRITE 79X RECORDS ONLY control statement (as applicable) to turn off the CIMSACCT DD.

The CIMSACT2 DD and CIMSDTVS DD were required for releases 11.5 and 11.6, but if you set them as DD DUMMY, you must re-define them.

## ■ Upgrade Instructions

### Upgrading from CIMS Releases 11.2–11.6

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- Any feeds that are produced by CIMS Report Writer reports that build 991 records must be either:
  - Followed by a CIMSACCT step to convert the 991 records into 791 records. If you run CIMSMONY in Invoice mode, this is the preferred option.

Or

- Rewritten to produce 791 records.
- You no longer run the SORT summarization steps after the CIMSDISK, CIMSTAPE, CIMSUNIV, CIMSUN02, and CIMSDB2 process. You will run CIMSEXTR to aggregate and summarize the records. Refer to the CIMSDB2, CIMSTAPE, CIMSUNIV, or appropriate JCL in the CIMS.DATFILE. This should be added as a step to the JCL for each CIMS interface.
- You must edit your CIMSMERG (sort fields changed) and CIMSEOMJCL (DDs and control options have changed). Refer to the CIMSMERG and CIMSEOMJCL in the CIMS.DATFILE.
- The CIMSJOB3 JCL has changed—refer to the CIMSJOB3 JCL in the CIMS.DATFILE. CIMSJOB3 JCL executes CIMSMONY rather than CIMSBILL.
- If you are upgrading from a release prior to 11.5, shift processing was enhanced for CIMSACCT, CIMSCMF2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02. The old shift control statements are obsolete. Refer to the *CIMS Mainframe Data Collector and Chargeback System User Guide* for more information about shift processing for these programs.
- CIMSCICS is not used with CIMSMONY. CIMSCMF2 produces the CIMS CICS 791 accounting records.
- If you are upgrading from a release prior to 11.4, the CIMS IMS processing has changed. Programs CIMSIMS1 and CIMSIMS2 replace CIMSIMSP and CIMSIMS. Refer to the CIMSIMS JCL in the CIMS.DATFILE.
- CIMSCMS, CIMSMVSE, and CIMSIMS2 do not produce CIMS 791 accounting records. The output records from these programs must be run through CIMSACCT to convert them to 791 records.
- Program CIMSCMFP was added in a maintenance release of 11.2. It replaces CIMSCMF1. Refer to the CIMSCICS JCL in the CIMS.DATFILE.
- There are other program enhancements that might affect your installation. Refer to one of the sections that addresses the CIMS release that you are upgrading from:
  - *Upgrading from 11.2* on page 3-18
  - *Upgrading from 11.3* on page 3-40
  - *Upgrading from 11.4* on page 3-61
  - *Upgrading from 11.5* on page 3-75
  - *Upgrading from 11.6* on page 3-93



## Upgrading and Using CIMSMONY in Server Mode and CIMS Server

The upgrade path to CIMSMONY in Server mode requires the most changes. For the steps required to migrate from CIMS BILL to CIMSMONY, refer to [Chapter 4, CIMSMONY Upgrade Instructions](#).

When you run CIMSMONY in Server mode, CIMS Lab recommends that you run each feed through the entire processing system daily. For example, to process DB2 data, you would:

- 1 Run CIMSDATA to strip out the DB2 SMF records.
- 2 Run CIMSDB2 to process the data.
- 3 Run CIMSEXTR to aggregate the CIMS 79x accounting records and produce CSR+ records
- 4 Run CIMSMONY to produce the CIMS Server Ident, Detail and Summary Files.
- 5 Load the files into the CIMS Server database.

This is a departure from the prior way of running CIMSDB2 daily, merging the daily file into the monthly file, and running CIMS BILL (or CIMSMONY in Invoice mode) at the end of the month. Therefore, the JCL and the daily job set for the CIMS process has changed.

The following provides upgrade information and requirements for all releases if you are upgrading to CIMS 12.0 and will be using CIMSMONY in Server mode.

### Releases 11.2–11.6

- Run member CIMSGDG1 in CIMS.DATFILE to create the necessary GDGs for CIMSMONY.
- Run ACNVJCL1 in CIMS.DATFILE to upgrade the CIMS Rate file. For more information, see [CIMS Rate VSAM File Conversion](#) on page 3-12.
- Run ACNVJCL2 in CIMS.DATFILE to upgrade the CIMS Client file. For more information, see [CIMS Client VSAM File Conversion](#) on page 3-13.
- Run CIMSDTC and CIMSDTLD in CIMS.DATFILE to create and load the CIMS Dictionary VSAM file for releases prior to 11.5 or if you did not implement the CIMS Dictionary in release 11.5 or 11.6.
- Release 11.5/11.6—If you implemented the CIMS Dictionary, see [CIMS Dictionary VSAM File Conversion](#) on page 3-13 for the steps required to convert the dictionary.
- Run CIMSSTC in CIMS.DATFILE to create the Status and Statistics VSAM file.
- If you are upgrading from a release prior to 11.6, some LRECLS and BLKSIZES have changed. These changes are provided in the *CIMS.DATFILE Updates/Additions* section for each release (see [page 3-27](#) for 11.2, [page 3-49](#) for 11.3, [page 3-66](#) for 11.4, and [page 3-83](#) for 11.5).

## ■ Upgrade Instructions

### Upgrading from CIMS Releases 11.2–11.6

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- You must add the CIMSACT2 DD and CIMSDTV5 DD to all job steps that execute CIMSACCT, CIMSDISK, CIMSDB2, CIMSCMF2, CIMSTAPE, CIMSUNIV, and CIMSUN02. You can optionally add the WRITE 991|994 OFF control statements or WRITE 79X RECORDS ONLY control statement (as applicable) to turn off the CIMSACCT DD.

The CIMSACT2 DD and CIMSDTV5 DD were required for releases 11.5 and 11.6, but if you set them as DD DUMMY, you must re-define them.

- Any feeds that are produced by CIMS Report Writer reports that build 991 records must be either:

- Followed by a CIMSACCT step to convert the 991 records into 791 records.

Or

- Rewritten to produce 791 records. To run CIMSMONY in Server mode, this is the preferred option. Rewriting the reports ensure that the full power of CIMS Server is supported through these feeds.

- You no longer run the SORT summarization steps after the CIMSDISK, CIMSTAPE, CIMSUNIV, CIMSUN02, and CIMSDB2 process. You will run CIMSEXTR to aggregate and summarize the records. Refer to the CIMSDB2, CIMSTAPE, CIMSUNIV, or appropriate JCL in the CIMS.DATFILE. This should be added as a step to the JCL for each CIMS interface program.

- You will run CIMSMONY after each CIMSEXTR summarization job step to produce the CIMS Server Ident, Detail, and Summary files (refer to the JCL for the interface programs in CIMS.DATFILE for sample steps). This should be added as a step to the JCL for each CIMS interface program.

CIMS Server Detail and Summary files contain accounting dates, which are very important for processing. For more information about accounting dates, refer to the Computer Center Chargeback Program—CIMSMONY chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

- You need to FTP the CIMS Server Ident, Detail, and Summary files to the appropriate server to be loaded into the CIMS Server database. Refer to the interface program JCL in CIMS.DATFILE for sample steps.
- You no longer need CIMSEOM because you no longer need to perform period processing on the mainframe. The period is determined by the reporting in CIMS Server and by accounting dates set in CIMSMONY.
- You no longer need CIMSMERG. Every feed should be processed directly through CIMSMONY and the output loaded directly into the CIMS Server database.
- You no longer need CIMSJOB3. The execution of CIMSMONY has been added as a job step to the JCL for each CIMS interface program.
- If you are upgrading from a release prior to 11.5, shift processing was enhanced for CIMSACCT, CIMSCMF2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02. The old control statements are obsolete. Refer to the *CIMS Mainframe Data Collector and Chargeback System User Guide* for more information about shift processing for these programs.

- CIMSCICS is not used with CIMSMONY. CIMSCMF2 produces the CIMS CICS 791 accounting records.
- If you are upgrading from a release prior to 11.4, the CIMS IMS processing has changed. Programs CIMSIMS1 and CIMSIMS2 replace CIMSIMSP and CIMSIMS. Refer to the CIMSIMS JCL in the CIMS.DATFILE.
- CIMSCMS, CIMSMVSE, and CIMSIMS2 do not produce CIMS 791 accounting records. The output records from these programs must be run through CIMSACCT to convert them to 791 records.
- Program CIMSCMFP was added in a maintenance release of 11.2. It replaces CIMSCMF1. Refer to the CIMSCICS JCL in the CIMS.DATFILE.
- There are other program enhancements that might affect your installation. Refer to one of the following sections that addresses the CIMS release that you are upgrading from:
  - *Upgrading from 11.2* on page 3-18
  - *Upgrading from 11.3* on page 3-40
  - *Upgrading from 11.4* on page 3-61
  - *Upgrading from 11.5* on page 3-75
  - *Upgrading from 11.6* on page 3-93

## Data Conversion

### CIMS Rate VSAM File Conversion

The CIMS Rate file has been changed to include a new rate flag for CPU normalization, nine shift codes, a comments field, and a termination and effective date. The termination and effective date are for future use. You must convert your CIMS Rate file for 12.0.

Member ACNVJCL1 in CIMS.DATFILE contains sample JCL to convert the CIMS Rate file.

### CIMS Rate File Conversion for CIMSMONY

If you are going to use the new chargeback program, CIMSMONY, there are two additional steps that you might need to complete to fully convert the CIMS Rate file after running ACNVJCL1. *These steps are not needed if you are going to continue to use CIMSBILL.*

- 1 In CIMS releases prior to release 12.0, the rate codes Z009– Z013 could be used for different resources (SIOs or Service Units) depending on the CIMSBILL options specified.

In release 12.0, the Z009–Z013 rate codes are used only for SIOs. New rate codes SMF30SRV, SMF30CSU, SMF30SRB, SMF30IO, and SMF30MSO have been added for the Service Units.

If you were reporting on SIOs, then release 12.0 will correctly report them. If you were using Service Units, then you need to add the SMF30SRV, SMF30CSU, SMF30SRB, SMF30IO, and SMF30MSO rate codes to the CIMS Rate file. Refer to the CIMSRATE member in the CIMS.DATFILE for the rate code definitions.

- 2 With CIMSMONY, there is only one set of CICS rate codes. There is no longer a set of prime rate codes (ZCS\*) and non-prime rate codes (ZCX\*). The ZCS\* rate records have been pre-defined in the CIMSRATE member in CIMS.DATFILE to contain a rate value for shift 1 (prime) and a rate value for shift 2 (non-prime). For more information about using shifts for CIMSMONY, refer to the Computer Center Chargeback Program—CIMSMONY chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

If you were using non-prime CICS rate codes in a release prior to 12.0, then you will need to modify the rate records for the ZCS\* rate codes to include the non-prime rate.

For example, assume that you had the following CICS non-prime rates defined in a release prior to 12.0:

```
RATE,420,ZCX1,00.120,CICS Transaction Minutes (Non-Prime),,1,,2,,
RATE,422,ZCX2,25.000,CICS Cpu Minutes (Non-Prime),,1,,2,,

RATE,424,ZCX3,00.012,CICS Transactions (Non-Prime),F,,,0,,
RATE,426,ZCX4,00.012,CICS Input Messages (Non-Prime),F,,,0,,

RATE,428,ZCX5,00.012,CICS Output Messages (Non-Prime),F,,,0,,
RATE,430,ZCX6,00.012,CICS Messages (Non-Prime),F,,,0,,

RATE,432,ZCX7,00.600,CICS File Access Count (Non-Prime),,M,,,0,,
```

You need to make the following changes to the ZCS\* CICS rates:

```
RATE,400,ZCS1,00.180:00.120,CICS Transaction Minutes,,1,,2,,1
RATE,402,ZCS2,30.000:25.000,CICS Cpu Minutes,,1,,2,,1
```

```
RATE,404,ZCS3,00.015:00.012,CICS Transactions,F,,,0,,,1
RATE,406,ZCS4,00.015:00.012,CICS Input Messages,F,,,0,,,1
```

```
RATE,408,ZCS5,00.015:00.012,CICS Output Messages,F,,,0,,,1
RATE,410,ZCS6,00.015:00.012,CICS Messages,F,,,0,,,1
```

```
RATE,412,ZCS7,00.750:00.600,CICS File Access Count,,M,,,0,,,1
```

The second shift rate value contains the non-prime rate.

### **CIMS Client VSAM File Conversion**

The CIMS Client file has been changed to support the 128-byte account code and to store the current close date and load ID in the configuration record. The current close date and load ID are used by CIMSMONY. You must convert your CIMS Client file for 12.0.

Member ACNVJCL2 in CIMS.DATAFILE contains sample JCL to convert the CIMS Client file.

### **CIMS Dictionary VSAM File Conversion**

There are changes to the CIMS Dictionary VSAM file (CIMSDTV), which was introduced in release 11.5.

If you are upgrading from 11.5, you need to upgrade the dictionary as follows:

- If you have a standard CIMS Dictionary (no user modifications), run the CIMSDTLDJCL in CIMS.DATAFILE to add version 01 to the dictionary records.
- If you made updates to the CIMS Dictionary, run the CIMSDTUL JCL in CIMS.DATAFILE.

If you are upgrading from 11.6, run the CIMS DV12 JCL in CIMS.DATAFILE to upgrade the dictionary.

### **Exception Record Format Change**

The exception record format for the CIMSDISK, CIMSTAPE, CIMSDB2, CIMSUNIV, and CIMSUN02 programs was changed in release 11.6. You cannot use 12.0 to process exception files from previous releases 11.2–11.5.

## Aggregation Points

CIMSEXTR aggregates, sorts, and summarizes input records. The selection of aggregation points in these records affects the amount and quality of the data produced by CIMSEXTR.

The following table shows the aggregation points as defined in the default CIMS Dictionary. Default aggregation points that have been added for CIMS release 12.0 are indicated by bold type.

If you currently execute CIMSEXTR to create CSR files for CIMS Server, you need to compare the new default aggregation points with your use of the AGGREGATE and DEFAULT AGGREGATION OFF control statements to incorporate these new aggregation points as needed.

For more information about defining and using aggregation points, refer to the Extract and Aggregation Program—CIMSEXTR chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

Record Type	Default Aggregation Points
791 – CICS	<ol style="list-style-type: none"> <li>1. CIMSACCT=Account code</li> <li>2. CIMSSDT=Start date</li> <li>3. CIMSSHFT=Shift code</li> <li>4. CICSUSER=User ID</li> <li>5. <b>CIMSSUBS=Application ID</b></li> <li>6. <b>CIMSSID=System ID</b></li> <li>7. <b>CICSTRNS=Transaction ID</b></li> </ol>
791 – DASD	<ol style="list-style-type: none"> <li>1. CIMSACCT=Account code</li> <li>2. CIMSSDT=Start Date</li> <li>3. DASDACT1=DSN Node 1</li> <li>4. DASDACT2=DSN Node 2</li> <li>5. <b>CIMSSID=System ID</b></li> </ol>
791 – DB2	<ol style="list-style-type: none"> <li>1. CIMSACCT=Account code</li> <li>2. CIMSSDT=Start date</li> <li>3. CIMSSHFT=Shift code</li> <li>4. DB2PLAN=Plan name</li> <li>5. DB2AUTH=Authorization ID</li> <li>6. CIMSSUBS=DB2 System ID</li> <li>7. <b>CIMSSID=System ID</b></li> </ol>
791 – TAPE	<ol style="list-style-type: none"> <li>1. CIMSACCT=Account code</li> <li>2. CIMSSDT=Start Date</li> <li>3. TAPEACT1=DSN Node 1</li> <li>4. TAPEACT2=DSN Node 2</li> <li>5. <b>CIMSSUBS=Work ID</b></li> <li>6. <b>CIMSSID=System ID</b></li> </ol>

Record Type	Default Aggregation Points
791 – Others	<ol style="list-style-type: none"> <li>1. CIMSACCT= Account code</li> <li>2. CIMSSDT= Date</li> <li>3. CIMSSHFT= Shift</li> <li>4. CIMSSUBS= Subsystem name</li> <li>5. CIMSSID=System ID</li> </ol>
792	<ol style="list-style-type: none"> <li>1. CIMSACCT= Account Code</li> <li>2. CIMSSDT= Job start date</li> <li>3. CIMSSHFT= Shift code</li> <li>4. CIMSJBNM= Jobname</li> <li>5. CIMSSUBS= Work ID</li> <li>6. CIMSSID=System ID</li> <li>7. R792JBPR=Job Priority</li> <li>8. R792JBCL=Job Class</li> </ol>
793	<ol style="list-style-type: none"> <li>1. CIMSACCT= Account Code</li> <li>2. CIMSSDT= Writer start date</li> <li>3. CIMSJBNM= Jobname</li> <li>4. R793FORM=Form ID</li> <li>5. R793RTEC=Route Code (L=Local, R=Remote)</li> <li>6. CIMSSUBS=Subsystem ID</li> <li>7. CIMSSID=System ID</li> </ol>
799	<ol style="list-style-type: none"> <li>1. CIMSACCT= Account Code</li> <li>2. CIMSSDT= Start date</li> <li>3. CIMSSHFT= Shift code</li> <li>4. CIMS RATE= Rate code</li> <li>5. CIMSSUBS=Subsystem ID</li> <li>6. CIMSSID=System ID</li> </ol>

## CIMS Historical Data

### *Should you convert CIMS data from older releases to the CIMS 12.0 format?*

If you are going to implement CIMSMONY, you need to convert your historical data to the CIMS 79x accounting record format. You need to run CIMSACCT with the CONVERT TO CIMS SERVER control statement. Member CONVERTA in CIMS.DATFILE contains sample JCL for converting your data.

There have been no changes to the CIMS accounting records since release 11.6. There were minor changes in earlier releases. All CIMS programs handle record changes “on the fly” during processing.

### Upgrade Checklist

- Determine the release that is currently in production and follow those upgrade instructions.
- Install the new release in 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 CIMS Report Writer updates.
- Run ACNVJCL1 in CIMS.DATAFILE to upgrade the CIMS Rate file. For more information, see *CIMS Rate VSAM File Conversion* on page 3-12.
- Run ACNVJCL2 in CIMS.DATAFILE to upgrade the CIMS Client file. For more information, see *CIMS Client VSAM File Conversion* on page 3-13.
- If you are upgrading from release 11.5 or 11.6, upgrade your CIMS Dictionary VSAM file (see *CIMS Dictionary VSAM File Conversion* on page 3-13).
- If you are upgrading from release 11.2–11.4 or you are upgrading from release 11.5 or 11.6 and did not allocate the CIMS Dictionary VSAM file, you need to run the following members in CIMS.DATAFILE:
  - CIMSRTC to create the dictionary.
  - CIMSRTLD to load the dictionary.
- Run CIMSSTC in CIMS.DATAFILE to create the Status and Statistics VSAM file.
- Install passwords. If you are upgrading from release 11.2 or 11.3, 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 CIMS Lab (see [page viii](#)).
- Update the CICS online programs.
- Reapply user exits.



## Install the New Release in a Test Area

Install the new release of CIMS 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, see *Step One: Install the Partitioned Data Sets from the CIMS Product Tape, Product CD, or Web Site* on page 2-8.

### Installing from the CIMS Product CD

To install from the CIMS Product CD, download the self-extracting file `cimsmdcc_<genleveldate>.exe` from the Mainframe folder. This file contains the files needed to install CIMS and a readme file. Follow the instructions in the readme file to perform the installation. A copy of the readme file is in *Chapter 6, README File*.

### 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.
- 2 Select **CIMS Mainframe** from the **Product/Category** pull down.
- 3 Type your CIMS 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.DATFILE production library.
- 4 Click the **Product Downloads** link on the Customer Area page.
- 5 Click the **CIMS Mainframe** link.
- 6 Scroll through the CIMS Mainframe Product Downloads list and download the self-extracting file `cimsmdcc_<genleveldate>.exe`. This file contains the files needed to install CIMS and a readme file. Follow the instructions in the readme file to perform the installation. A copy of the readme file is in *Chapter 6, README File*.

### Upgrade Documentation

Information regarding updates and enhancements to CIMS is available in the documentation discussed in *Upgrades* on page 1-5.

## Upgrading from 11.2

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

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### Install the New Release into a Test Area

See *Install the New Release in a Test Area* on page 3-17,.

### Program Updates/Changes/Additions

#### 1 COBOL LE Runtime

Since the release of CIMS 11.3, 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 OC4, 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 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
```

- As of release 12.0, the 8 byte maximum length restriction on the DEFINE FIELD and DEFINE MOVEFLD statements has been changed to 128 bytes.
- Support for a 128-byte account code in the CIMS 79x accounting records has been added.

- 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.DATFILE` 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

Programs `CIMSCMF2`, `CIMSDISK`, `CIMTAPE`, `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.DATFILE` 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. 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 Mainframe Data Collector and Chargeback System User Guide* for more information on the new IMS processing. Refer to `CIMS.DATFILE` 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`, `CIMSDDB2`, `CIMSDISK`, `CIMSEDT`, `CIMSIMS`, `CIMSIMS2`, `CIMSMULT`, `CIMSMVSE`, `CIMSRTL`, `CIMTAPE`, `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.

### 6 CIMS 79x Accounting Records

The CIMS interface programs (CIMSACCT, CIMSCMF2, CIMSDB2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02) have been updated to build both the 79x records and the 6, 30, and 991–999 records by default. New control statements have been added to suppress the output of either the 79x or the 6, 30, and 991–999 records.

The 79x record is further processed by CIMSEXTR. Both the Web-based reporting system, CIMS Server and the new chargeback program CIMSMONY process output records created by CIMSEXTR.

### 7 New Chargeback Program

A new chargeback program, CIMSMONY, has been built to support the CIMS 79x accounting records. CIMSMONY can create a mainframe invoice as CIMSBILL does, or it can produce output that can be loaded directly into the CIMS Server database so that you can create Web-based invoices and other reports.

### 8 Individual program updates that could cause some processing changes:

- CIMSACCT
  - Creates CIMS 79x accounting records and CIMS 6 and 30 accounting records. You can use the `WRITE` control statement to turn off either output. `CIMSACT2 DD` and `CIMSDTVS DD` were added.
  - The CIMS 6 and 30 accounting records were updated to include the latest OS/390 updates and to prevent data conversion problems.
  - Shift code determination was enhanced. Up to nine shifts can be specified for each day of the week.
  - The `NON-PRIME SHIFT CODE =` control statement has been added. This statement enables you to change the default non-prime shift, which is set to 4.
  - Calls the new account code conversion routine.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
    - All identifiers are available in account code conversion when 79x records are processed using the `PROCESS CIMS MAINTENANCE` control statement.
  - Two new control statements have been added: `PARSE ACCOUNT CODE FIELD` and `SMF USER DATA IS SECURITY ID`.
  - Support for up to 128 bytes from the z/OS job account code has been added.
  - 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 6, 30, 991-999 accounting records to CIMS 791, 792, 793, and 799 accounting records.
- The ability to reprocess the CIMS 79x accounting records.
- When processing CIMS records, all records that fail date selection can be optionally written to a separate file—CIMSEL DD.
- Updated 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 6 accounting record.
- 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 a separate file—CIMSUNSP DD.
- CIMSBILL
  - Support for the updated formats of the CIMS 6 and 30 accounting records.
  - 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 CIMS 791 accounting records has been added. Refer to the *CIMS Mainframe Data Collector and Chargeback System User Guide* for more information.
  - CIMSCICS is no longer required if you are using the CIMS 79x accounting records and are using CIMSMONY or CIMS Server to produce invoices.
- CIMSCMF2
  - Creates the CIMS 791 accounting record and the CIMS 804 accounting record. You can use the WRITE control statement to turn off either output. CIMSACT2 DD and CIMSDTVS DD were added.
  - Updated shift code processing—up to nine shifts can be specified for each day of the week.
  - With CIMSMONY, there is only one set of CICS rate codes. There is no longer a set of prime rate codes (ZCS\*) and non-prime rate codes (ZCX\*). The ZCS\* rate records have been pre-defined in the CIMSRATE member in CIMS.DATFILE to contain a rate value for shift 1 (prime) and a rate value for shift 2 (non-prime).

The following control statements have been added to support this change. For more information about these statements, refer to the CIMS CICS Account Code Creation Program—CIMSCMF2 chapter in the *CIMS CICS Data Collector User Guide*.

- NON-PRIME SHIFT CODE = n. This control statement enables you to change the non-prime shift from the default shift 2 to another shift.
- NON-PRIME DAY yyyyddd/yyyymmdd. The Julian or Gregorian Date specified by this control statement is considered a non-prime processing day. If the NON-PRIME SHIFT CODE control statement is not present, all work processed on this day is assigned to the default shift 2.
- CIMSMMSG DD was added.

- Calls the new account code conversion routine.
  - Support for the 128-byte account code in CIMS 79x accounting records has been added.
  - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
- 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 Mainframe Data Collector and Chargeback System User Guide* for more information. The `CIMS.DATFILE` member `CIMSCICS` contains the updated JCL needed to run this new program. The `CIMS.DATFILE` 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`
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output. `CIMSACT2 DD` and `CIMSOTVS 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.

## ■ Upgrade Instructions

### Upgrading from CIMS Releases 11.2–11.6

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- Calls the new account code conversion routine.
  - Support for the 128-byte account code in CIMS 79x accounting records has been added.
  - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
- 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.
- The `NON-PRIME SHIFT CODE =` control statement has been added. This statement enables you to change the default non-prime shift, which is set to 4.
- CIMS DISK
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output. `CIMSACT2 DD` and `CIMS DTVS 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.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - 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.
- CIMS DTLD
  - New Module - it supports the loading and updating of the CIMS Dictionary VSAM file.



- CIMSEXTR
  - New Module - it supports creation of the mainframe resource records that can be processed by CIMS Server and CIMSMONY.
- 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.
- CIMSLEVEL
  - This is a new program that will display the CIMS base release genlevel installed.
- CIMSMONY
  - This is a new chargeback program. CIMSMONY has to main purposes:
    - To provide a mainframe type invoice (like CIMSBILL).
    - To provide files that can be loaded into the CIMS Server database for Web reporting.
  - For more information about CIMSMONY, refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- CIMSTAPE
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output. CIMSACT2 DD and CIMSDTV5 DD were added.
  - Added TMS virtual tape support.
  - Supports CIMS Server - creation of record type 791 added. CIMSACT2 DD and CIMSDTV5 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.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- Calls the new account code conversion routine.
  - Support for the 128-byte account code in CIMS 79x accounting records has been added.
  - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
- 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
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output. `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.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - 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
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output. `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.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - 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`.
  - Entry points `CIMSACUA` and `CIMSUE16` were added to support `CIMSMONY`.

## 9 CIMS Report Writer - SPECTWTR

- New release of CIMS Report Writer 2.8 was released with CIMS 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`, `DISKCNLT`, `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`, `CIMSRTRP`, `CIMSTAPE`, `CIMSTL50`, `CIMSTL54`, `CIMSTMS`, `CIMSUNIV`, `CIMSWYLB`, `CIMSZARA`, `CLNTJCL1`, `CLNTJCL2`, `IDMSJCL1`, `IDMSJCL2`, `IDMSJCL3`, `M204JCL1`, `SUBAS402`, `SUBDATC1`, `SUBDATC2`

- 3** The following members were updated to add the CIMSACT2 DD (as the default output DD) and CIMSOTVS DD for support of the CIMS 79x accounting records.
  - ATMONJCL, ATM02JCL, CIMSADA1, CIMSCICS, CIMSCMS, CIMSDB2, CIMSDISK, CIMSEOM, CIMSFALC, CIMSJB2A, CIMSJB2B, CIMSJOB2, CIMSJRJE, CIMSRRM, CIMSROSC, CIMSRSKA, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS, SUBDATC1, SUBDATC2, SUBMAIN3, SUBMERG3, SUBMERG4, SUBEXTR, SUBMAIN1
- 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, CIMSJRJE, CIMSRRM, 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 CIMS 79x accounting records.
  - ACCTINPT, CMF2INPT, DATACIN1, DATACIN2, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTL, ZARAINPT, ZDCBCNTL, ZDCCNTL, ZFALCNTL, ZRJECNTL, ZROSCNTL, ZWYLCNTL
- 6** The following members were updated to add the new WRITE nnn OFF control statement. This statement turns off the writing of the CIMS 6, 30, 991-999 accounting records.
  - ACCTINPT, ACCTINP2, ACCTINP3, ACCTINP4, ACCTINP5, ACCTINP8, AS40INP1, AS40INP2, CICSOT06, CIMSJB2B, CMF2INPT, CONVERTA, DATACIN1, DATACIN2, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTL, ZARAINPT, ZDCBCNTL, ZDCCNTL, ZFALCNTL, ZRJECNTL, ZROSCNTL, ZWYLCNTL
- 7** The following members were updated to include sample steps that execute CIMSEXTR and optional steps that execute CIMSMONY and/or FTP data to CIMS Server.
  - CIMSCICS, CIMSDB2, CIMSDISK, CIMSRRM, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS2, SUBDATC1, SUBDATC2, SUBDB21
- 8** The following members have been updated to include a step to summarize/merge the CIMS 79x accounting records in addition to the step to summarize/merge the 6, 30, 991-999 accounting records:
  - CIMSEOM, CIMSMERG, SORTDB2, SORTDISK, SORTTAPE, SORTUNIV
- 9** The following members are new. They contain new control statements that support the new CIMSMONY program:
  - MONYCTL1, MONYCTL1, MONYCTL3, NORMCPU, SURCPU

**10** The following members are new. They contain examples of automating the process of sending mainframe files to CIMS Server via FTP.

- CIMSFTP, CIMSFTPG, FTP#READ, FTPBASE, FTPBASEG, FTPDATE, FTPDATEG, FTPDB2, FTPID, FTPUNIV

**11** The following members are new. They contain the default CIMS 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, DCTNR794, DCTNR799, DCTNSPMU, DCTNSPMW, DCTNST00, DCTNSTOU, DCTNSTOW, DCTNTAPE, DCTNTLMS, DCTNTMS, DCTNTSO, DCTNUNIV, DCTNV00, DCTNZARA, DCTNZZZZ

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

- CIMSOTC, CIMSOTD, CIMSOTLD, CIMSOTUL, CIMSEXTR, EXTRINPT

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

CIMSADA1, CIMSDB2, CIMS\_DISK, CIMS\_FALC, CIMS\_SIMS, CIMS\_JOB3, CIMS\_RJE, CIMS\_RMM, CIMS\_ROSC, CIMS\_TAPE, CIMS\_STL50, CIMS\_STL54, CIMS\_TMS, CIMS\_UNIV, CIMS\_WYLB, CIMS\_ZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBBILL2

**14** Individual CIMS.DATFILE 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`.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- 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.
- ATMONJCL
  - **Changed the default output of the CIMSCMF2 step from the CIMS 804 accounting records in DD CIMSOUT to the CIMS 791 accounting records in DD CIMSACT2. CIMSACT2 DD was added.**
- ATM02JCL
  - **Changed the default output of the CIMSCMF2 step from the CIMS 804 accounting records in DD CIMSOUT to the CIMS 791 accounting records in DD CIMSACT2. CIMSACT2 DD was added.**
- CALENDAR
  - **The Calendar file was updated to contain the new format, which includes the accounting year. Up to 1,000 records are now allowed in the file.**
- CALNDR13
  - **The Calendar file was updated to contain the new format, which includes the accounting year. Up to 1,000 records are now allowed in the file.**
- CICSASML
  - **The LINKEDIT options have been updated to include AMODE and RMODE.**
- CICSVSAM
  - **The record lengths of the CIMS Rate and Client files have changed.**
- CIMRCT54, CIMRECTL
  - **New members that contain the CA-DYNAM/TLMS record layouts.**
- CIMREC02
  - **The layout for the CIMS Client file has been updated.**
- CIMREC03
  - **The layout for the CIMS Rate file has been updated.**

- CIMREC14
  - Updated format of CIMSUNIV 001 input record.
- CIMREC16
  - The layout for the Rate record has been updated.
- CIMREC30
  - Updated format of the CIMS 30 accounting record.
  - 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.
  - The LINKEDIT options have been updated to include AMODE and RMODE.
- CIMSDDB2
  - 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.
- CIMSDIST
  - The DIST-RELEASE-ID was updated.
- 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.
  - Steps to support the CIMS 79x accounting records were added.
- CIMSGDG
  - Allocations for the CIMSMONY history data sets were added.
- CIMSIMS
  - Totally updated JCL. This JCL now calls CIMSIMS1 and CIMSIMS2.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- CIMSIMSP, CIMSIMSL, CIMSIMSR, CIMSIMSS
  - These are obsolete. Use the updated CIMSIMS JCL and programs CIMSIMS1 and CIMSIMS2.
- CIMSJOB1
  - The record lengths of the CIMS Rate and Client files have changed.
  - The allocation and initialization of the CIMS Dictionary have been added.
- CIMSJOB2
  - DD statement CIMSSSEL was added. All records that fail date selection will be written to the DD statement CIMSSSEL if the CIMSACCT control card: NO-SELECT FILE PROCESSING ON is specified.
- CIMSJOB3
  - The JCL has been totally rewritten. The default chargeback program is now CIMSMONY.
- CIMSJOB5
  - This is a new JCL member that contains the old version of CIMSJOB3 that executes program CIMSBILL.
- CIMSLEVL
  - New member added to support the CIMSLEVL program. This program will display the base genlevel of CIMS installed.
- CIMSMERG
  - New steps have been added to merge the CIMS 79x accounting records.
- CIMSMULT
  - New steps have been added to support the new chargeback program CIMSMONY.
- 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 OS/390 to z/OS.
  - All rate records have been updated for the new rate fields.
- CIMSRTCN
  - The record length for the CIMS Rate file has been updated.



- CIMSRTLD
  - The record size for the CIMS Rate file has been updated.
- CIMSRTUL
  - This is a new member that dumps the CIMS Rate file to a flat file.
- CIMSSTC
  - This is a new member that allocates the optional VSAM History file. This file is used when CIMSEXTR is restarted.
- CIMSSTD
  - This is a new member that deletes the optional VSAM History file.
- CIMSUSER
  - The user exit source entry point CIMSACU7 was updated for DB2 6.1 support.
  - Entry points CIMSACUA and CIMSUE16 were added to support CIMSMONY.
- CLNTJCL1
  - The record length of the CIMS Client file has changed.
- 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.
- SUBCLNT2
  - The record length of the CIMS Client file has changed.
- 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 6 and 30 accounting records:

- CIMRC006, CIMRC030, 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 CIMS 79x accounting records and also the CIMS Dictionary records.

- CIMRCDCT, CIMRC791, CIMRC792, CIMRC793, CNVT11D5, RC791V00, RC792V00, RC793V00, SPWRPCN0, SPWRPCN1, SPWRPH02, SPWRPH03, SPWRP001, SPWRP002, SPWRP003, SPWRP004, SPWRP005, SPWRP006, SPWRP007, SPWRP008, SPWRP009, SPWRP010, SPWRP013, SPWRP015, SPWRP017, SPWRP018, SPWRP020, SPWRP021, SPWRP022, SPWRP023, SPWRP050, SPWRP051, SPWRP052, SPWRP053, SPWRP054, SPWRP055, SPWRP060, SPWRP062, SPWRP064, SPWRP070, SPWRP072, SPWRP080, SPWRP081, SPWRP083, SPWRP084, SPWRP085, SPWRP086, SPWRP087, SPWRP088, SPWRP089, SPWRP093, SPWRP095, SPWRP096, SPWRP110, SPWRP111, SPWRP112, SPWRP113, SPWRP120, SPWRP121, SPWRP130, SPWRP140, SPWRP143, SPWRP145, SPWRP150, SPWRP151, SPWRP152, SPWRP181, SPWRP510, SPWRP560, SPWRP754, SPWRP761, SPWRP806, SPWRP807, SPWRP900, SPWRP901, SPWRP902, SPWRP905, SPWRP906, SPWRP907, SPWRP930, SPWRP940, SPWRP941, SPWRP942, SPWRP943, SPWRP945, SPWTR011, SPWTR056, SPWTR065, SPWTR146, 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.

- SPWTRH01, SPWTR031, SPWTR095, SPWTR201, SPWTR203, SPWTR205, SPWTR710, SPWTR712, SPWTR722, SPWTR723, SPWTR771, SPWTR900, SPWTR901, SPWTR907

**4** Individual CIMS.REPTLIB member updates:

- APCCJCL
  - The SWOPTION DCB information was changed to LRECL=1400, BLKSIZE=6400.
- 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.
  - Updated record format - new fields and re-formatted fields.
- CIMRC030
  - Updated record format - new fields and re-formatted fields.
- CIMRC994
  - The DB2 resource fields were updated to contain 6 digits of precision. The CIMSDB2 program was changed in a maintenance release of 11.6 to carry 6 digits of precision.
- CIMSCLNT
  - This member was updated to contain the new CIMS Client file record layout.
- 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.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- 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.
- CIMSRATE
  - This member was updated to contain the new CIMS Rate file record layout.
- CIMSRT01
  - This is a new member that contains the pre 12.0 CIMS Rate file record layout.
- 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.

- SPWTRCN1
  - This member was updated to process the 12.0 layout of the CIMS Rate file.
- SPWTRCR1
  - This member was added to upgrade an 11.2–11.6 CIMS Rate file to the 12.0 layout.
- 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 30 accounting record.
  - 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.
- SPWTR140, SPWTR141, SPWTR144
  - SPWTR141 report was updated to reflect the new DB2RECS2 field names (to support DB2 release 6.1).
  - All three members were updated to support the 6 digits of precision for the CIMS DB2 994 accounting records.
- 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
  - Added multiple aliases.
- 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.

### **Update the CIMS Rate and Client Files**

There are changes to the CIMS Rate and Client files. You need to upgrade these files as described *CIMS Rate VSAM File Conversion* on page 3-12 and *CIMS Client VSAM File Conversion* on page 3-13.

### **Install Passwords**

CIMS releases 11.2 through 12.0 use the same passwords. **Do not use the new CIMS.DATFILE 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.

New exit points have been added to support the new chargeback program `CIMSMONY`. Refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide* for information about the new user exits.

You must re-compile the user exit pointing to the new `CIMS.DATFILE` where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the `CIMS.DATFILE` JCL member `CIMSCMPL` to compile and link these programs.

## Upgrading from 11.3

While looking over the program CIMS.DATFILE 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 was that 11.3 was compiled using COBOL for OS/390.

### Install the New Release into a Test Area

See *Install the New Release in a Test Area* on page 3-17.

### Program Updates/Changes/Additions

#### 1 Account Code Conversion

Since release 11.4, CIMS 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
```

- As of release 12.0, the 8 byte maximum length restriction on the DEFINE FIELD and DEFINE MOVEFLD statements has been changed to 128 bytes.
- Support for a 128-byte account code in the CIMS 79x accounting records has been added.
- 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.DATFILE 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 CIMSCEF2, 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.DATFILE 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. 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 Mainframe Data Collector and Chargeback System User Guide* for more information on the new IMS processing. Refer to the CIMS.DATFILE 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, CIMSEDT, 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 CIMS 79x Accounting Records

The CIMS interface programs (CIMSACCT, CIMSCMF2, CIMSDB2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02) have been updated to build both the 79x records and the 6, 30, and 991–999 records by default. New control statements have been added to suppress the output of either the 79x or the 6, 30, and 991–999 records.

The 79x record is further processed by CIMSEXTR. Both the Web-based reporting system, CIMS Server and the new chargeback program CIMSMONY process output records created by CIMSEXTR.

### 6 New Chargeback Program

A new chargeback program, CIMSMONY, has been built to support the CIMS 79x accounting records. CIMSMONY can create a mainframe invoice as CIMSBILL does, or it can produce output that can be loaded directly into the CIMS Server database so that you can create Web-based invoices and other reports.

### 7 Individual program updates that could cause some processing changes:

- CIMSACCT
  - Creates CIMS 79x accounting records and CIMS 6 and 30 accounting records. You can use the `WRITE` control statement to turn off either output. `CIMSACT2 DD` and `CIMS DTVS DD` were added.
  - The CIMS 6 and 30 accounting 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 `NON-PRIME SHIFT CODE =` control statement has been added. This statement enables you to change the default non-prime shift, which is set to 4.
  - Calls the new account code conversion routine.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
    - All identifiers are available in account code conversion when 79x records are processed using the `PROCESS CIMS MAINTENANCE` control statement.
  - Two new control statements have been added: `PARSE ACCOUNT CODE FIELD` and `SMF USER DATA IS SECURITY ID`.
  - Support for up to 128 bytes from the z/OS job account code has been added.
  - 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 6, 30, 991-999 accounting records to CIMS 791, 792, 793, and 799 accounting records.
  - The ability to reprocess the CIMS 79x accounting records.
  - When processing CIMS records, all records that fail date selection can be optionally written to a separate file—`CIMSSEL DD`.

- Updated 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 a separate file—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 CIMS 791 accounting records has been added. Refer to the *CIMS Mainframe Data Collector and Chargeback System User Guide* for more information.
  - CIMSCICS is no longer required if you are using the CIMS 79x accounting records and are using CIMSMONY or CIMS Server to produce invoices.
- CIMSCMF2
  - Creates the CIMS 791 accounting record and the CIMS 804 accounting record. You can use the `WRITE` control statement to turn off either output. `CIMSACT2 DD` and `CIMSDTV5 DD` were added.
  - Updated shift code processing—up to nine shifts can be specified for each day of the week.
  - With CIMSMONY, there is only one set of CICS rate codes. There is no longer a set of prime rate codes (`ZCS*`) and non-prime rate codes (`ZCX*`). The `ZCS*` rate records have been pre-defined in the `CIMSRATE` member in `CIMS.DATFILE` to contain a rate value for shift 1 (prime) and a rate value for shift 2 (non-prime).

The following control statements have been added to support this change. For more information about these statements, refer to the CIMS CICS Account Code Creation Program—CIMSCMF2 chapter in the *CIMS CICS Data Collector User Guide*.

- `NON-PRIME SHIFT CODE = n`. This control statement enables you to change the non-prime shift from the default shift 2 to another shift.
- `NON-PRIME DAY yyyyddd/yyyymdd`. The Julian or Gregorian Date specified by this control statement is considered a non-prime processing day. If the `NON-PRIME SHIFT CODE` control statement is not present, all work processed on this day is assigned to the default shift 2.
- `CIMSM5G DD` was added.
- Calls the new account code conversion routine.
  - Support for the 128-byte account code in CIMS 79x accounting records has been added.
  - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
- 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
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output. `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 the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - 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 ccccccc PLAN pppppppp` (where `ccccccc`=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.
  - The `NON-PRIME SHIFT CODE =` control statement has been added. This statement enables you to change the default non-prime shift, which is set to 4.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- CIMS\_DISK
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output. CIMSACT2 DD and CIMS\_DTVS 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.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the DEFINE FIELD and DEFINE MOVEFLD control statements is now 128 bytes.
  - 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.
- CIMS\_DTLTD
  - New Module - it supports the loading and updating of the new CIMS Dictionary VSAM file.
- CIMS\_EXTR
  - New Module - it supports creation of the mainframe resource records that can be processed by CIMS Server and CIMS\_MONY.
- CIMS\_SIMS1
  - New program. Replaces CIMS\_SIMSP.
- CIMS\_SIMS2
  - New program. Replaces CIMS\_SIMS.
  - 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.
- CIMS\_LEVC
  - This is a new program that checks for the version of LE installed.

- CIMSLEVL
  - This is a new program that will display the CIMS base release genlevel installed.
- CIMSMONY
  - This is a new chargeback program. CIMSMONY has two main purposes:
    - To provide a mainframe type invoice (like CIMSBILL).
    - To provide files that can be loaded into the CIMS Server database for Web reporting.
  - For more information about CIMSMONY, refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- CIMSTAPE
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output. CIMSACT2 DD and CIMSDTVS DD were added.
  - Added TMS virtual tape support.
  - Shift code determination was enhanced. Up to 9 shifts can be specified for each day of the week.
  - CIMSMMSG DD was added.
  - Calls the new account code conversion routine.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the DEFINE FIELD and DEFINE MOVEFLD control statements is now 128 bytes.
  - 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
    - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output. 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.
      - Support for the 128-byte account code in CIMS 79x accounting records has been added.
      - The maximum length for the DEFINE FIELD and DEFINE MOVEFLD control statements is now 128 bytes.
    - 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.DATFILE library member: CIMSUSER.
    - Entry points CIMSACUA and CIMSUE16 were added to support CIMSMONY.
- 8** CIMS Report Writer - SPECTWTR
- New release of CIMS Report Writer 2.8 was released with CIMS 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, CIMSJRJE, CIMSRRMM, CIMSROSC, CIMSRSRCA, CIMSRRTRP, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, CLNTJCL1, CLNTJCL2, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS402, SUBDATC1, SUBDATC2
- 3 The following members were updated to add the CIMSACT2 DD (as the default output DD) and CIMSDTV5 DD for support of the CIMS 79x accounting records.
  - ATMONJCL, ATM02JCL, CIMSADA1, CIMSCICS, CIMSCMS, CIMSDB2, CIMSDISK, CIMSEOM, CIMSFALC, CIMSJB2A, CIMSJB2B, CIMSJOB2, CIMSJRJE, CIMSRRMM, CIMSROSC, CIMSRSRCA, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS, SUBDATC1, SUBDATC2, SUBMAIN3, SUBMERG3, SUBMERG4, SUBEXTR, SUBMAIN1
- 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, CIMSJRJE, CIMSRRMM, 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 CIMS 79x accounting records.
  - ACCTINPT, CMF2INPT, DATACIN1, DATACIN2, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTL, ZARAINPT, ZCBCNTL, ZDCCNTL, ZFALCNTL, ZRJECNTL, ZROSCNTL, ZWYLCNTL
- 6 The following members were updated to add the new WRITE nnn OFF control statement. This statement turns off the writing of the CIMS 6, 30, 991-999 accounting records.
  - ACCTINPT, ACCTINP2, ACCTINP3, ACCTINP4, ACCTINP5, ACCTINP8, AS40INP1, AS40INP2, CICSOT06, CIMSJB2B, CMF2INPT, CONVERTA, DATACIN1, DATACIN2, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTL, ZARAINPT, ZCBCNTL, ZDCCNTL, ZFALCNTL, ZRJECNTL, ZROSCNTL, ZWYLCNTL

- 7** The following members were updated to include sample steps that execute CIMSEXTR and optional steps that execute CIMSMONY and/or FTP data to CIMS Server.
  - CIMSCICS, CIMSDB2, CIMS\_DISK, CIMSRMM, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS2, SUBDATC1, SUBDATC2, SUBDB21
- 8** The following members have been updated to include a step to summarize/merge the CIMS 79x accounting records in addition to the step to summarize/merge the 6, 30, 991-999 accounting records:
  - CIMSEOM, CIMSMERG, SORTDB2, SORTDISK, SORTTAPE, SORTUNIV
- 9** The following members are new. They contain new control statements that support the new CIMSMONY program:
  - MONYCTL1, MONYCTL2, MONYCTL3, NORMCPU, SURCPU
- 10** The following members are new. They contain examples of automating the process of sending mainframe files to CIMS Server via FTP.
  - CIMSFTP, CIMSFTPG, FTP#READ, FTPBASE, FTPBASEG, FTPDATE, FTPDATEG, FTPDB2, FTPID, FTPUNIV
- 11** The following members are new. They contain the default CIMS 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, DCTNR799, DCTNR999, DCTNSPMU, DCTNSPMW, DCTNST00, DCTNSTOU, DCTNSTOW, DCTNTAPE, DCTNTLMS, DCTNTMS, DCTNTSO, DCTNUNIV, DCTNV00, DCTNZARA, DCTNZZZZ
- 12** The following members are new. They contain the CIMS Dictionary and Extract control JCL and input parameters.
  - CIMS\_DTC, CIMS\_DTD, CIMS\_DTL, CIMS\_DUTL, CIMSEXTR, EXTRINPT
- 13** The following members were updated to change the BLKSIZE values to ½ track blocking (27998):  
CIMSADA1, CIMSDB2, CIMS\_DISK, CIMS\_FALC, CIMSIMS, CIMSJOB3, CIMSJRJE, CIMSRMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSWYLB, CIMSZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBBILL2

**14** 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`.
- ATMONJCL
  - Changed the default output of the `CIMSCMF2` step from the CIMS 804 accounting records in DD `CIMSOUT` to the CIMS 791 accounting records in DD `CIMSACT2`. `CIMSACT2` DD was added.
- ATM02JCL
  - Changed the default output of the `CIMSCMF2` step from the CIMS 804 accounting records in DD `CIMSOUT` to the CIMS 791 accounting records in DD `CIMSACT2`. `CIMSACT2` DD was added.
- CALENDAR
  - The Calendar file was updated to contain the new format, which includes the accounting year. Up to 1,000 records are now allowed in the file.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- CALNDR13
  - The Calendar file was updated to contain the new format, which includes the accounting year. Up to 1,000 records are now allowed in the file.
- CICSASML
  - The LINKEDIT options have been updated to include AMODE and RMODE.
- CICSVSAM
  - The record lengths of the CIMS Rate and Client files have changed.
- CIMRCT54, CIMRECTL
  - New members that contain the CA-DYNAM/TLMS record layouts.
- CIMREC02
  - The layout for the CIMS Client file has been updated.
- CIMREC03
  - The layout for the CIMS Rate file has been updated.
- CIMREC14
  - Updated format of the CIMSUNIV 001 input record.
- CIMREC16
  - The layout for the Rate record has been updated.
- 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.
  - The LINKEDIT options have been updated to include AMODE and RMODE.
- 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.

- CIMS DIST
  - The DIST-RELEASE-ID was updated.
- CIMSEOM
  - DD statement CIMSEL was added. All records that fail date selection will be written to the DD statement CIMSEL if the CIMSACCT control card: NO-SELECT FILE PROCESSING ON is specified.
  - Steps to support the CIMS 79x accounting records were added.
- CIMSGDG
  - Allocations for the CIMSMONY history data sets were added.
- CIMSIMS
  - New JCL. This JCL now calls CIMSIMS1 and CIMSIMS2.
- CIMSIMP, CIMSIMSL, CIMSIMSR, CIMSIMSS
  - Obsolete. Use the updated CIMSIMS JCL and programs CIMSIMS1 and CIMSIMS2.
- CIMSJOB1
  - The record lengths of the CIMS Rate and Client files have changed.
  - The allocation and initialization of the CIMS Dictionary have been added.
- CIMSJOB2
  - DD statement CIMSEL was added. All records that fail date selection will be written to the DD statement CIMSEL if the CIMSACCT control card: NO-SELECT FILE PROCESSING ON is specified.
- CIMSJOB3
  - The JCL has been totally rewritten. The default chargeback program is now CIMSMONY.
- CIMSJOB5
  - This is a new JCL member that contains the old version of CIMSJOB3 that executes program CIMSBILL.
- CIMSLEVEL
  - New member added to support the CIMSLEVEL program. This program will display the base genlevel of CIMS installed.
- CIMSMERG
  - New steps have been added to merge the CIMS 79x accounting records.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- CIMSULT
  - New steps have been added to support the new chargeback program CIMSMONY.
- CIMSRAE, CIMSRT, CIMSRT02
  - All rate descriptions were changed from OS/390 to z/OS.
  - All rate records have been updated for the new rate fields.
- CIMSRTCN
  - The record length for the CIMS Rate file has been updated.
- CIMSRTL0
  - The record size for the CIMS Rate file has been updated.
- CIMSRTL1
  - This is a new member that dumps the CIMS Rate file to a flat file.
- CIMSSTC
  - This is a new member that allocates the optional VSAM History file. This file is used when CIMSEXTR is restarted.
- CIMSSTD
  - This is a new member that deletes the optional VSAM History file.
- CIMSUSER
  - The user exit source entry point CIMSACU7 was updated for DB2 6.1 support.
  - Entry points CIMSACUA and CIMSUE16 were added to support CIMSMONY.
- CLNTJCL1
  - The record length of the CIMS Client file has changed.
- 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.
- SUBCLNT2
  - The record length of the CIMS Client file has changed.
- 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 6 and 30 accounting records:
  - CIMRC006, CIMRC030, 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 79x accounting records and also the CIMS Dictionary records.
  - CIMRCDC, CIMRC791, CIMRC792, CIMRC793, CNVT11D5, RC791V00, RC792V00, RC793V00, SPWRPCN0, SPWRPCN1, SPWRPH02, SPWRPH03, SPWRP001, SPWRP002, SPWRP003, SPWRP004, SPWRP005, SPWRP006, SPWRP007, SPWRP008, SPWRP009, SPWRP010, SPWRP013, SPWRP015, SPWRP017, SPWRP018, SPWRP020, SPWRP021, SPWRP022, SPWRP023, SPWRP050, SPWRP051, SPWRP052, SPWRP053, SPWRP054, SPWRP055, SPWRP060, SPWRP062, SPWRP064, SPWRP070, SPWRP072, SPWRP080, SPWRP081, SPWRP083, SPWRP084, SPWRP085, SPWRP086, SPWRP087, SPWRP088, SPWRP089, SPWRP093, SPWRP095, SPWRP096, SPWRP110, SPWRP111, SPWRP112, SPWRP113, SPWRP120, SPWRP121, SPWRP130, SPWRP140, SPWRP143, SPWRP145, SPWRP150, SPWRP151, SPWRP152, SPWRP181, SPWRP510, SPWRP560, SPWRP754, SPWRP761, SPWRP806, SPWRP807, SPWRP900, SPWRP901, SPWRP902, SPWRP905, SPWRP906, SPWRP907, SPWRP930, SPWRP940, SPWRP941, SPWRP942, SPWRP943, SPWRP945, SPWTR011, SPWTR056, SPWTR065, SPWTR146, 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.
  - SPWTRH01, SPWTR031, SPWTR095, SPWTR201, SPWTR203, SPWTR205, SPWTR710, SPWTR712, SPWTR722, SPWTR723, SPWTR771, SPWTR900, SPWTR901, SPWTR907
  
- 4** Individual CIMS.REPTLIB member updates:
  - APCCJCL
    - The SWOPTION DCB information was changed to LRECL=1400, BLKSIZE=6400.
  - 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.
  - Updated record format - new fields and re-formatted fields.
- CIMRC030
  - Updated record format - new fields and re-formatted fields.
- CIMRC994
  - The DB2 resource fields were updated to contain 6 digits of precision. The CIMSDDB2 program was changed in a maintenance release of 11.6 to carry 6 digits of precision.
- CIMSCCLNT
  - This member was updated to contain the new CIMS Client file record layout.
- 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.
- CIMSRATE
  - This member was updated to contain the new CIMS Rate file record layout.
- CIMSRT01
  - This is a new member that contains the pre 12.0 CIMS Rate file record layout.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- 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.
- SPWTRCN1
  - This member was updated to process the 12.0 layout of the CIMS Rate file.
- SPWTRCR1
  - This member was added to upgrade an 11.2–11.6 CIMS Rate file to the 12.0 layout.
- 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.
- SPWTR140, SPWTR141, SPWTR144
  - SPWTR141 report was updated to reflect the new DB2RECS2 field names (to support DB2 release 6.1).
  - All three members were updated to support the 6 digits of precision for the CIMS DB2 994 accounting records.
- 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
  - Added multiple aliases.
- 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.

### Update the CIMS Rate and Client Files

There are changes to the CIMS Rate and Client files. You need to upgrade these files as described *CIMS Rate VSAM File Conversion* on page 3-12 and *CIMS Client VSAM File Conversion* on page 3-13.

### Install Passwords

CIMS releases 11.2 through 12.0 use the same passwords. **Do not use the new CIMS.DATFILE 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.

New exit points have been added to support the new chargeback program CIMSMONY. Refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide* for information about the new user exits.

You must re-compile the user exit pointing to the new CIMS.DATFILE where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the CIMS.DATFILE 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 in a Test Area* on page 3-17.

### Program Updates/Changes/Additions

#### 1 Account Code Conversion

- As of release 12.0, the 8 byte maximum length restriction on the `DEFINE FIELD` and `DEFINE MOVEFLD` statements has been changed to 128 bytes.
- Support for a 128-byte account code in the CIMS 79x accounting records has been added.
- 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 CIMS 79x Accounting Records

The CIMS interface programs (`CIMSACCT`, `CIMSCMF2`, `CIMSDB2`, `CIMSDISK`, `CIMSTAPE`, `CIMSUNIV`, and `CIMSUN02`) have been updated to build both the 79x records and the 6, 30, and 991–999 records by default. New control statements have been added to suppress the output of either the 79x or the 6, 30, and 991–999 records.

The 79x record is further processed by `CIMSEXTR`. Both the Web-based reporting system, CIMS Server and the new chargeback program `CIMSMONY` process output records created by `CIMSEXTR`.

#### 3 New Chargeback Program

A new chargeback program, `CIMSMONY`, has been built to support the CIMS 79x accounting records. `CIMSMONY` can create a mainframe invoice as `CIMSBILL` does, or it can produce output that can be loaded directly into the CIMS Server database so that you can create Web-based invoices and other reports.

### 4 Individual program updates that could cause some processing changes:

- CIMSACCT
  - Creates CIMS 79x accounting records and CIMS 6 and 30 accounting records. You can use the `WRITE` control statement to turn off either output. `CIMSACT2 DD` and `CIMSDTVS DD` were added.
  - The CIMS 6 and 30 accounting 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 `NON-PRIME SHIFT CODE =` control statement has been added. This statement enables you to change the default non-prime shift, which is set to 4.
  - Calls the new account code conversion routine.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
    - All identifiers are available in account code conversion when 79x records are processed using the `PROCESS CIMS MAINTENANCE` control statement.
  - Two new control statements have been added: `PARSE ACCOUNT CODE FIELD` and `SMF USER DATA IS SECURITY ID`.
  - Support for up to 128 bytes from the z/OS job account code has been added.
  - The optional conversion of the current CIMS 6, 30, 991-999 accounting records to CIMS 791, 792, 793, and 799 accounting records.
  - The ability to reprocess the CIMS 79x accounting records.
  - When processing CIMS records, all records that fail date selection can be optionally written to a separate file—`CIMSSEL DD`.
  - Updated 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 a separate file—`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).
  - 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 CIMS 791 accounting records has been added. Refer to the *CIMS Mainframe Data Collector and Chargeback System User Guide* for more information.
  - CIMSCICS is no longer required if you are using the CIMS 79x accounting records and are using `CIMSMONY` or CIMS Server to produce invoices.
- CIMSCMF2
  - Updated shift code processing—up to nine shifts can be specified for each day of the week.
  - With `CIMSMONY`, there is only one set of CICS rate codes. There is no longer a set of prime rate codes (`ZCS*`) and non-prime rate codes (`ZCX*`). The `ZCS*` rate records have been pre-defined in the `CIMSRATE` member in `CIMS.DATFILE` to contain a rate value for shift 1 (prime) and a rate value for shift 2 (non-prime).

The following control statements have been added to support this change. For more information about these statements, refer to the CIMS CICS Account Code Creation Program—`CIMSCMF2` chapter in the *CIMS CICS Data Collector User Guide*.

- `NON-PRIME SHIFT CODE = n`. This control statement enables you to change the non-prime shift from the default shift 2 to another shift.

## ■ Upgrade Instructions

### Upgrading from CIMS Releases 11.2–11.6

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- NON-PRIME DAY yyyyddd/yyyymddd. The Julian or Gregorian Date specified by this control statement is considered a non-prime processing day. If the NON-PRIME SHIFT CODE control statement is not present, all work processed on this day is assigned to the default shift 2.
- 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
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output. 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 pppppppp (where ccccccc=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.
  - The NON-PRIME SHIFT CODE = control statement has been added. This statement enables you to change the default non-prime shift, which is set to 4.
- CIMSDISK
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output. 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 Dictionary VSAM file.
- CIMSEXTR
  - New Module - it supports creation of the mainframe resource records that can be processed by CIMS Server and CIMSMONY.
- 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.
- CIMSMONY
  - This is a new chargeback program. CIMSMONY has two main purposes:
    - To provide a mainframe type invoice (like CIMSBILL).
    - To provide files that can be loaded into the CIMS Server database for Web reporting.
  - For more information about CIMSMONY, refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- CIMSTAPE
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output. CIMSACT2 DD and CIMSDTV5 DD were added.
  - Added TMS virtual tape support.
  - 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 CIMSDTV5 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 DD (as the default output DD) and CIMSDTVS DD for support of the CIMS 79x accounting records.

- ATMONJCL, ATM02JCL, CIMSADA1, CIMSCICS, CIMSCMS, CIMSDB2, CIMS\_DISK, CIMSEOM, CIMS\_FALC, CIMSJB2A, CIMSJB2B, CIMSJOB2, CIMSJRJE, CIMS\_RMM, CIMSROSC, CIMS\_RSCA, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMS\_WYLB, CIMS\_ZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS, SUBDATC1, SUBDATC2, SUBMAIN3, SUBMERG3, SUBMERG4, SUBEXTR, SUBMAIN1

**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, CIMS\_DISK, CIMS\_FALC, CIMSJRJE, CIMS\_RMM, CIMSROSC, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMS\_WYLB, CIMS\_ZARA, 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 CIMS 79x accounting records.

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

**4** The following members were updated to add the new WRITE nnn OFF control statement. This statement turns off the writing of the CIMS 6, 30, 991-999 accounting records.

- ACCTINPT, ACCTINP2, ACCTINP3, ACCTINP4, ACCTINP5, ACCTINP8, AS40INP1, AS40INP2, CICS\_DTO6, CIMSJB2B, CMF2INPT, CONVERTA, DATACIN1, DATACIN2, DB2INPT, DISKCNTL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTL, ZARAINPT, ZDCBCNTL, ZDCCCNTL, ZFALCNTL, ZRJECNTL, ZROSCNTL, ZWYLCNTL

**5** The following members were updated to include sample steps that execute CIMSEXTR and optional steps that execute CIMSMONY and/or FTP data to CIMS Server.

- CIMSCICS, CIMSDB2, CIMS\_DISK, CIMS\_RMM, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMS\_ZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBAS401, SUBAS402, SUBCICS2, SUBDATC1, SUBDATC2, SUBDB21

- 6** The following members have been updated to include a step to summarize/merge the CIMS 79x accounting records in addition to the step to summarize/merge the 6, 30, 991-999 accounting records:
- CIMSEOM, CIMSMERG, SORTDB2, SORTDISK, SORTTAPE, SORTUNIV
- 7** The following members are new. They contain new control statements that support the new CIMSMONY program:
- MONYCTL1, MONYCTL2, MONYCTL3, NORMCPU, SURCPU
- 8** The following members are new. They contain examples of automating the process of sending mainframe files to CIMS Server via FTP.
- CIMSFTP, CIMSFTPG, FTP#READ, FTPBASE, FTPBASEG, FTPDATE, FTPDATEG, FTPDB2, FTPID, FTPUNIV
- 9** The following members are new. They contain the default CIMS 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, DCTNR799, DCTNR999, DCTNSPMU, DCTNSPMW, DCTNST00, DCTNSTOU, DCTNSTOW, DCTNTAPE, DCTNTLMS, DCTNTMS, DCTNTSO, DCTNUNIV, DCTNV00, DCTNZARA, DCTNZZZZ
- 10** The following members are new. They contain the CIMS Dictionary and Extract control JCL and input parameters.
- CIMSOTC, CIMSOTD, CIMSOTLD, CIMSOTUL, CIMSEXTR, EXTRINPT
- 11** The following members were updated to change the BLKSIZE values to ½ track blocking (27998):
- CIMSADA1, CIMSDB2, CIMS\_DISK, CIMS\_FALC, CIMS\_SIMS, CIMS\_JOB3, CIMS\_RJE, CIMS\_RMM, CIMS\_ROSC, CIMS\_TAPE, CIMS\_STL50, CIMS\_STL54, CIMS\_TMS, CIMS\_UNIV, CIMS\_WYLB, CIMS\_ZARA, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SUBBILL2
- 12** 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.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- 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`.
- ATMONJCL
  - Changed the default output of the `CIMSCMF2` step from the CIMS 804 accounting records in DD `CIMSOUT` to the CIMS 791 accounting records in DD `CIMSACT2`. `CIMSACT2` DD was added.
- ATM02JCL
  - Changed the default output of the `CIMSCMF2` step from the CIMS 804 accounting records in DD `CIMSOUT` to the CIMS 791 accounting records in DD `CIMSACT2`. `CIMSACT2` DD was added.
- CALENDAR
  - The Calendar file was updated to contain the new format, which includes the accounting year. Up to 1,000 records are now allowed in the file.
- CALNDR13
  - The Calendar file was updated to contain the new format, which includes the accounting year. Up to 1,000 records are now allowed in the file.
- CICSASML
  - The `LINKEDIT` options have been updated to include `AMODE` and `RMODE`.
- CICSVSAM
  - The record lengths of the CIMS Rate and Client files have changed.

- CIMRCT54, CIMRECTL
  - New members that contain the CA-DYNAM/TLMS record layouts.
- CIMREC02
  - The layout for the CIMS Client file has been updated.
- CIMREC03
  - The layout for the CIMS Rate file has been updated.
- CIMREC14
  - Updated format of CIMSUNIV 001 input record.
- CIMREC16
  - The layout for the rate record has been updated.
- 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.
- CIMSDIST
  - The DIST-RELEASE-ID was updated.
- 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.
  - Steps to support the CIMS 79x accounting records were added.
- CIMSGDG
  - Allocations for the CIMSMONY history data sets were added.
- CIMSIMS
  - A summarization step was added to the end of the job.
- CIMSJOB1
  - The record lengths of the CIMS Rate and Client files have changed.
  - The allocation and initialization of the CIMS Dictionary have been added.

## ■ Upgrade Instructions

### *Upgrading from CIMS Releases 11.2–11.6*

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- 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.
- CIMSJOB3
  - The JCL has been totally rewritten. The default chargeback program is now CIMSMONY.
- CIMSJOB5
  - This is a new JCL member that contains the old version of CIMSJOB3 that executes program CIMSBILL.
- CIMSMERG
  - New steps have been added to merge the CIMS 79x accounting records.
- CIMSMULT
  - New steps have been added to support the new chargeback program CIMSMONY.
- CIMSRATE, CIMSRT, CIMSRT02
  - All rate descriptions were changed from OS/390 to z/OS.
  - All rate records have been updated for the new rate fields.
- CIMSRTCN
  - The record length for the CIMS Rate file has been updated.
- CIMSRTL02
  - The record size for the CIMS Rate file has been updated.
- CIMSRTUL
  - This is a new member that dumps the CIMS Rate file to a flat file.
- CIMSSTC
  - This is a new member that allocates the optional VSAM History file. This file is used when CIMSEXTR is restarted.
- CIMSSTD
  - This is a new member that deletes the optional VSAM History file.
- CIMSUSER
  - Entry points CIMSACUA and CIMSUE16 were added to support CIMSMONY.
- CLNTJCL1
  - The record length of the CIMS Client file has changed.

- 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.
- SUBCLNT2
  - The record length of the CIMS Client file has changed.
- 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:

- CIMRC006, CIMRC030, 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 CIMS 79x accounting records and also the CIMS Dictionary records.

- CIMRCDC, CIMRC791, CIMRC792, CIMRC793, CNVT11D5, RC791V00, RC792V00, RC793V00, SPWRPCN0, SPWRPCN1, SPWRPH02, SPWRPH03, SPWRP001, SPWRP002, SPWRP003, SPWRP004, SPWRP005, SPWRP006, SPWRP007, SPWRP008, SPWRP009, SPWRP010, SPWRP013, SPWRP015, SPWRP017, SPWRP018, SPWRP020, SPWRP021, SPWRP022, SPWRP023, SPWRP050, SPWRP051, SPWRP052, SPWRP053, SPWRP054, SPWRP055, SPWRP060, SPWRP062, SPWRP064, SPWRP070, SPWRP072, SPWRP080, SPWRP081, SPWRP083, SPWRP084, SPWRP085, SPWRP086, SPWRP087, SPWRP088, SPWRP089, SPWRP093, SPWRP095, SPWRP096, SPWRP110, SPWRP111, SPWRP112, SPWRP113, SPWRP120, SPWRP121, SPWRP130, SPWRP140, SPWRP143, SPWRP145, SPWRP150, SPWRP151, SPWRP152, SPWRP181, SPWRP510, SPWRP560, SPWRP754, SPWRP761, SPWRP806, SPWRP807, SPWRP900, SPWRP901, SPWRP902, SPWRP905, SPWRP906, SPWRP907, SPWRP930, SPWRP940, SPWRP941, SPWRP942, SPWRP943, SPWRP945, SPWTR011, SPWTR056, SPWTR065, SPWTR146, 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.

- SPWTRH01, SPWTR031, SPWTR095, SPWTR201, SPWTR203, SPWTR205, SPWTR710, SPWTR712, SPWTR722, SPWTR723, SPWTR771, SPWTR900, SPWTR901, SPWTR907

**4** Individual CIMS.REPTLIB member updates:

- CIMRC006
  - A fixed format option was added for the Enhanced Sysout Section
  - Updated record format - new fields and re-formatted fields.
- CIMRC030
  - Updated record format - new fields and re-formatted fields.
- CIMRC994
  - The DB2 resource fields were updated to contain 6 digits of precision. The CIMSDB2 program was changed in a maintenance release of 11.6 to carry 6 digits of precision.
- CIMSCLNT
  - This member was updated to contain the new CIMS Client file record layout.



- 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.
- CIMSRATE
  - This member was updated to contain the new CIMS Rate file record layout.
- CIMSRT01
  - This is a new member that contains the pre 12.0 CIMS Rate file record layout.
- CIMSZLM3
  - Added support for TMON 2.2.
- RMSEXOT
  - 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.
- SPWTRCN1
  - This member was updated to process the 12.0 layout of the CIMS Rate file.
- SPWTRCR1
  - This member was added to upgrade an 11.2–11.6 CIMS Rate file to the 12.0 layout.
- SPWTR140, SPWTR141, SPWTR144
  - All three members were updated to support the 6 digits of precision for the CIMS DB2 994 accounting records.
- SPWTR751
  - TMS reports updated to support 3490s and 3590s.
- SWALIAS
  - Added multiple aliases.

- 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.

### Update the CIMS Rate and Client Files

There are changes to the CIMS Rate and Client files. You need to upgrade these files as described *CIMS Rate VSAM File Conversion* on page 3-12 and *CIMS Client VSAM File Conversion* on page 3-13.

### Install Passwords

CIMS releases 11.2 through 12.0 use the same passwords. **Do not use the new CIMS.DATFILE member during your testing.**

The release of the CIMS Report Writer is 2.8. This is the same release that was included with CIMS 11.3. 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.

New exit points have been added to support the new chargeback program CIMSMONY. Refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide* for information about the new user exits.

You must re-compile the user exit pointing to the new CIMS.DATFILE where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the CIMS.DATFILE 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 in a Test Area* on page 3-17.

### Program Updates/Changes/Additions

#### 1 Account Code Conversion

- As of release 12.0, the 8 byte maximum length restriction on the `DEFINE FIELD` and `DEFINE MOVEFLD` statements has been changed to 128 bytes.
- Support for a 128-byte account code in the CIMS 79x accounting records has been added.
- 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 CIMS 79x Accounting Record Change

The CIMS 79x accounting 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. 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 CIMS Dictionary and CIMS Report Writer definitions have 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 statement `CIMSACT2`. 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.

### 3 CIMS 79x Accounting Records

The CIMS interface programs (CIMSACCT, CIMSCMF2, CIMSDB2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02) have been updated to build both the 79x records and the 6, 30, and 991–999 records by default. New control statements have been added to suppress the output of either the 79x or the 6, 30, and 991–999 records.

The 79x record is further processed by CIMSEXTR. Both the Web-based reporting system, CIMS Server and the new chargeback program CIMSMONY process output records created by CIMSEXTR.

### 4 New Chargeback Program

A new chargeback program, CIMSMONY, has been built to support the CIMS 79x accounting records. CIMSMONY can create a mainframe invoice as CIMSBILL does, or it can produce output that can be loaded directly into the CIMS Server database so that you can create Web-based invoices and other reports.

### 5 CIMSUNIV 001 Records Expanded

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 CIMSUN02 use a new record format. All existing exception files must be processed before implementing these new programs.

### 6 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.

### 7 CIMSEXTR can ensure accurate Start and Stop dates/times during the aggregation process.

**8** Individual program updates that could cause some processing changes:

- CIMSACCT
  - Creates CIMS 79x accounting records and CIMS 6 and 30 accounting records. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
    - All identifiers are available in account code conversion when 79x records are processed using the `PROCESS CIMS MAINTENANCE` control statement.
  - Two new control statements have been added: `PARSE ACCOUNT CODE FIELD` and `SMF USER DATA IS SECURITY ID`.
  - Support for up to 128 bytes from the z/OS job account code has been added.
  - New message format in `CIMSMSG DD`.
  - 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
  - Creates the CIMS 791 accounting record and the CIMS 804 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - 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.
  - With `CIMSMONY`, there is only one set of CICS rate codes. There is no longer a set of prime rate codes (`ZCS*`) and non-prime rate codes (`ZCX*`). The `ZCS*` rate records have been pre-defined in the `CIMSRATE` member in `CIMS.DATFILE` to contain a rate value for shift 1 (prime) and a rate value for shift 2 (non-prime).

The following control statements have been added to support this change. For more information about these statements, refer to the CIMS CICS Account Code Creation Program—`CIMSCMF2` chapter in the *CIMS CICS Data Collector User Guide*.

- `NON-PRIME SHIFT CODE = n`. This control statement enables you to change the non-prime shift from the default shift 2 to another shift.
- `NON-PRIME DAY yyyyddd/yyyymdd`. The Julian or Gregorian Date specified by this control statement is considered a non-prime processing day. If the `NON-PRIME SHIFT CODE` control statement is not present, all work processed on this day is assigned to the default shift 2.
- New message format in `CIMSMMSG DD`.
- CIMSCCLNT
  - Supports the new 128-byte account code.
  - Supports the `CurrentCloseDate` option in the configuration record.
  - Supports the database load ID in the configuration record.
- CIMSDATA
  - The Enhanced Sysout Section was moved to the end of the CIMS Record Type 6 record and increased to 400 bytes.

- CIMSDB2
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - The `NON-PRIME SHIFT CODE =` control statement has been added. This statement enables you to change the default non-prime shift, which is set to 4.
  - New message format in `CIMSMMSG DD`.
  - 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
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - New message format in `CIMSMMSG DD`.
  - 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
  - The new Status and Statistics VSAM file has been built to store statistics and to allow CIMSEXTR to be restarted from a valid checkpoint if the previous execution terminated abnormally.
  - Added the ability to produce two new optional outputs: CSR+ and aggregated 79x records. The CSR+ record is required by CIMSMONY.
  - New default aggregation points have been added for the 79x records (see [page 3-14](#)). The System ID (CIMSSID), has been added as a default aggregation point for all records.
  - 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 CIMS 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. For more information about the AGGREGATE DATE control statement, refer to the Extract and Aggregation Program—CIMSEXTR chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
  - The dictionary field name, CIMSSUBS, has been added to the default aggregation points for 791 records. CIMSSUBS contains the subsystem name.
  - Support for Box ID definitions for 999 records has been added.
  - Changes were added in CIMSDCTN to allow a Box ID definition to be used during the building of the SORT commands. Identifiers from a Box ID 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.
- CIMSMONY
  - This is a new chargeback program. CIMSMONY has two main purposes:
    - To provide a mainframe type invoice (like CIMSBILL).
    - To provide files that can be loaded into the CIMS Server database for Web reporting.
  - For more information about CIMSMONY, refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- CIMSMULT
  - Supports the new CIMSMONY summary record and the CIMSBILL summary record. CIMSMULT detects the record version and processes accordingly.
  - Produces CSR+ records. If CIMSMULT produces CSR+ records if it detects that it is processing summary records from CIMSMONY.
- CIMSTAPE
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.

- New message format in CIMSMSG DD.
- 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
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the DEFINE FIELD and DEFINE MOVEFLD control statements is now 128 bytes.
  - New message format in CIMSMSG DD.
  - 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.
- CIMSUN02
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the WRITE control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the DEFINE FIELD and DEFINE MOVEFLD control statements is now 128 bytes.

- New message format in CIMSMMSG DD.
- 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 CIMSUN02 that generated that file. **The new CIMSUN02 cannot process an older CIMSUN02 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, CIMSDDB2, 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 new WRITE nnn OFF, WRITE 79X RECORDS ONLY, and/or WRITE 79X RECORD OFF control statements.

- ACCTINPT, ACCTINP2, ACCTINP3, ACCTINP4, ACCTINP5, ACCTINP8, AS40INP1, AS40INP2, CICSDT06, CMF2INPT, DATACIN1, DATACIN2, DB2INPT, DISKCNTRL, DISKINPT, IDMSCNT2, IDMSCNT4, IDMSCNT6, M204CNT2, RMMINPT, TAPEINPT, TL50INPT, TL54INPT, TMSINPT, UNIVINPT, ZADACNTRL, ZARAINPT, ZDCBCNTRL, ZDCCCNTRL, ZFALCNTRL, ZRJECONTRL, ZROSCNTRL, ZWYLCNTRL

- 5 The following members were updated to make CIMSACT2 DD the default output (i.e., the CIMS 79x accounting records) instead of the CIMSACCT DD.

- ATMONJCL, ATM02JCL, CIMSADA1, CIMSADSM, CIMSCMS, CIMSFALC, CIMSJB2A, CIMSJB2B, CIMSJOB2, CIMSRJE, CIMSROSC, CIMSRSKA, CIMSWYLB, IDMSJCL1, IDMSJCL2, IDMSJCL3, M204JCL1, SORTDB2, SORTDISK, SORTTAPE, SORTUNIV, SUBAS401, SUBAS402, SUBDATC1, SUBDATC2, SUBEXTR1, SUBMAIN1, SUBMAIN3

- 6** The following members were updated to make CIMSACT2 DD the default output (i.e., the CIMS 79x accounting records) and to add sample steps for executing CIMSEXTR to aggregate the 79x records and optional steps that execute CIMSMONY and/or FTP data to CIMS Server.
  - CIMSCICS, CIMSDB2, CIMSDISK, CIMSRMM, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSZARA, SUBCICS2, SUBDB21
- 7** The CIMSMSG DD statement was added to the following members:
  - BUDJCL1, BUDJCL2, CIMSCLNT, CIMSBDGT, CIMSRTLD, CIMSRTRP, CLNTJCL2, CLNTJCL3
- 8** Individual CIMS.DATAFILE member updates:
  - ACNVJCL1
    - Updated to convert the 11.2–11.6 CIMS Rate file to the 12.0 layout.
  - ACNVJCL2
    - Updated to convert the 11.2–11.6 CIMS Client file to the 12.0 layout.
  - CALENDAR
    - Added the accounting year to each record. Also added more years.
  - CALNDR13
    - Added the accounting year to each record.
  - CICSASML, CIMSCMPL
    - Added AMODE=24 and RMODE=24 to linker options.
  - CICSVSAM
    - CIMS Client and Rate file record lengths were increased to 1200 and 505, respectively.
  - CIMRCT54, CIMRECTL
    - New members that contain the CA-DYNAM/TLMS record layouts.
  - CIMREC02
    - Updated format of CIMS Client file record.
  - CIMREC03
    - Updated format of CIMS Rate file record.
  - 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.
- CIMREC16
  - Updated format of CIMS Rate table.
- CIMRECMN
  - New member that contains the record passed to the new user exit, CIMSUE16. CIMSUE16 is called from CIMSMONY.
- CIMSDB2
  - The LRECL of the CIMSEXIN DD was changed from 200 to 248 and the block size from 27800 to 26536.
- CIMSDIST
  - The record release ID was changed from 199701 to 199807.
- CIMSDTLD
  - The following DCTNxxxx members were added to the CIMSCNTL DD statement: DCTNR794, DCTNR799, DCTNCTLD, DCTNCTLT, DCTNMQSR.
- CIMSDUTL
  - New JCL that will convert a CIMS 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.
- CIMSEOM
  - Steps to support the CIMS 79x accounting records were added.
- CIMSEXTR
  - Addition of the following DD statements to the JCL: CIMSCSR, CIMSCSRP, CIMS79X, CIMSSTAT, SORTSUM, and SORTAGR.
  - Added SORTSUM and SORTSGR DD statements to support new aggregation options.
- CIMSGDG
  - Added allocations for CIMSMONY GDG data sets.
- CIMSIMS
  - A summarization step was added to the end of the job.

## ■ Upgrade Instructions

### Upgrading from CIMS Releases 11.2–11.6

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- CIMSJOB1
  - CIMS Client and Rate file record lengths were increased to 1200 and 505, respectively.
  - Added allocation and initial loading of CIMS Dictionary.
- CIMSJOB2
  - Increased the CIMSACCT DD statement space allocation for the step executing CIMSDATA.
- CIMSJOB3
  - The JCL has been totally rewritten. The default chargeback program is now CIMSMONY.
- CIMSJOB5
  - This is a new JCL member that contains the old version of CIMSJOB3 that executes program CIMSBILL.
- CIMSMERG
  - New steps have been added to merge the CIMS 79x accounting records.
- CIMSMULT
  - New steps have been added to support proration from CIMSMONY.
- CIMSPRAT
  - New member that contains the JCL for the new proration program, CIMSPRAT. For more information about this program, refer to the *Multiple Account Chargeback System—CIMSMULT and CIMSPRAT* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- CIMSRATE, CIMSRT01, CIMSRT02
  - New CPU flag was added to each CPU rate.
  - Added rates Z032, Z033, SMF30CPT, Z034, Z035, and Z036.
- CIMSRTCN
  - Updated record size for the CIMS Rate file from 200 to 505.
- CIMSRTLDD
  - Updated record size for the CIMS Rate file from 200 to 505.
- CIMSSTC
  - New member that allocates the new VSAM Statistics file.
- CIMSSTD
  - New member that deletes the new VSAM Statistics file.

- CIMSUSER
  - Added entry points CIMSACUA and CIMSUE16 to support CIMSMONY.
- CLNTJCL1, SUBCLNT2
  - Updated record size for the CIMS Client file from 800 to 1200.
- CONVERTA
  - Updated to convert 11.2–11.6 history files into the CMS 79x accounting history file.
- CIMSFTP, CIMSFTPG, FTP#READ, FTPBASE, FTPBASEG, FTPDATE, FTPDATEG, FTPDB2, FTPID, FTPUNIV
  - New members that contain automated FTP JCL and REXX code. These members can be used as templates to build JCL that automates the FTP of data between CIMS Mainframe Data Collector and Chargeback System and CIMS Server.
- 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.
- EDITJCL
  - New member that contains JCL for the updated CIMSEEDIT program. This program supports the 128-byte account code.
- MONYCTL1, MONYCTL2, MONYCTL3
  - New members that contain the CIMSMONY control statements.
- NORMCPU, SURCPU
  - New members that contain sample CPU normalization and job class and priority surcharge statements. These statements are used by CIMSMONY only.
- CIMSDV12, DCTNV120
  - New members that upgrade the 11.6 CIMS Dictionary to 12.0

- PRATINPT, PRATPRTB
  - New members that contain the new CIMSPRAT program control statements.
- SUBMRG3, SUBMERG4
  - Added steps to merge CIMSMONY history files.

### **CIMS.REPTLIB Updates/Additions**

- 1** The following members were changed to support the new format of CIMS 79x accounting records.

CIMRCDC, CIMRC791, CIMRC792, CIMRC793, CNVT11D5, SPWRPCN1, SPWTR011, SPWTR056, SPWTR065, SPWTR146, SPWRP181, 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, SPWRP945

- 5** The following reports were updated to calculate the 128-byte account code for lookup in the CIMS Client file:

- SPWRP900, SPWRP901, SPWRP907, SPWTRH01, SPWTR031, SPWTR095, SPWTR900, SPWTR901, SPWTR907

- 6** Individual CIMS.REPTLIB member updates:

- ACCTCD04
  - Updated the length of CIMS-ACCOUNT-CODE to 128.
- APCLJCL
  - Increased LRECL of SWOUTPUT DD from 1200 to 1400.
- ARUNJCL4, ATMONJCL, ATM02JCL
  - Changed CIMSACT2 DD to be the default output (i.e., creates CIMS 79x accounting records). CIMSACCT DD is commented out.
- CIMDB2E5
  - New member that contains the CIMSDB2 11.5 exception file layout.



- 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.
- CIMRCSTA
  - New member that contains the record layout for the new Status and Statistics VSAM file.
- CIMRC791
  - Added generic resource and identifier sections.
- CIMRC994
  - Increased the digits of precision for the resources from 2 to 6.
- CIMSCCLNT
  - Updated for 12.0 CIMS Client file record layout.
- CIMSCCL01
  - New member that contains the 11.2–11.6 CIMS Client file record layout.
- 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.
- CIMSMSUM
  - New member that contains the CIMS summary record format from CIMSMONY.
- CIMSRATE
  - Updated for the 12.0 CIMS Rate file record layout.
- CIMSRTO1
  - New member that contains the 11.2–11.6 CIMS Rate file record layout.
- CIMSZLM3
  - Added support for TMON 2.2.

- RC791V00
  - This is the CIMS 11.5 791 record description. This can be used to process 791 records with a version number 00.
- RC792V00
  - This is the CIMS 11.5 792 record description. This can be used to process 792 records with a version number 00.
- RC793V00
  - This is the CIMS 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.
- SMFRC120
  - New member with the layout of the WebSphere SMF 120 record.
- SMFRC222
  - New member that contains the record layout for the Control-D SMF record.
- SPWRP140
  - An INCLUDEIF for record ID of CIMSDB2 was added.
- SPWRP143
  - Updated to support 128-byte account code.
- SPWRP150, SPWRP151, SPWRP152, SPWRP153
  - New members that report on the new Status and Statistics VSAM file.
- SPWRP806
  - Updated to support the 12.0 CIMS Client file.
- SPWRP807
  - Updated to support the 12.0 CIMS Rate file.
- SPWTRCN1
  - Updated to convert the 11.2–11.6 CIMS Rate file to the 12.0 layout.
- SPWTRCR1
  - New member that contains the upgrade of the CIMS Rate file from releases 11.2–11.6 to release 12.0.

- SPWTR140, SPWTR141, SPWTR142, SPWTR144
  - Updated display format for DB2 resources to include all 6 digits of precision.
- SPWTR815
  - Updated to build a generic CIMS 791 accounting record from a resource log. In releases 11.5 and 11.6, this report built a CIMSUNIV 791 record. CIMS Lab recommends that you build a generic 791 record for all new feeds.
- SWALIAS
  - Added aliases for the following records: CIMRCDCT-RECORD, CIMSRATE-OLD-RECORD, CIMRCDCT-RECORD, RC791V00-RECORD, RC792V00-RECORD, RC793V00-RECORD, SMF116-RECORD, SMF116-RECORD
- 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 Rate and Client Files

There are changes to the CIMS Rate and Client files. You need to upgrade these files as described *CIMS Rate VSAM File Conversion* on page 3-12 and *CIMS Client VSAM File Conversion* on page 3-13.

### Update the CIMS Dictionary VSAM File

There are changes to the CIMS Dictionary VSAM file, which was first introduced in release 11.5. You need to upgrade your CIMS Dictionary as described in *CIMS Dictionary VSAM File Conversion* on page 3-13.

### Install Passwords

CIMS releases 11.2 through 12.0 use the same passwords. Do not use the new CIMS.DATFILE member during your testing.

The release of CIMS Report Writer is 2.8. This is the same release that was included with CIMS 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 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.

New exit points have been added to support the new chargeback program `CIMSMONY`. Refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide* for information about the new user exits.

You must re-compile the user exit pointing to the new `CIMS.DATFILE` where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the `CIMS.DATFILE` JCL member `CIMSCMPL` to compile and link these programs.

## Upgrading from 11.6

### Install the New Release into a Test Area

See *Install the New Release in a Test Area* on page 3-17.

### Program Updates/Changes/Additions

#### 1 CIMS 79x Accounting Records

The CIMS interface programs (CIMSACCT, CIMSCMF2, CIMSDB2, CIMSDISK, CIMSTAPE, CIMSUNIV, and CIMSUN02) have been updated to build both the 79x records and the 6, 30, and 991–999 records by default. New control statements have been added to suppress the output of either the 79x or the 6, 30, and 991–999 records.

The 79x record is further processed by CIMSEXTR. Both the Web-based reporting system, CIMS Server and the new chargeback program CIMSMONY process output records created by CIMSEXTR.

#### 2 128-Byte Account Code Support

The CIMS 79x accounting records support 128-byte account codes. The `DEFINE FIELD` and `DEFINE MOVEFLD` control statement lengths have been increased from an 8 byte maximum to a 128 byte maximum. All identifiers in the 79x records are available for account code processing.

#### 3 New Chargeback Program

A new chargeback program, CIMSMONY, has been built to support the CIMS 79x accounting records. CIMSMONY can create a mainframe invoice as CIMSBILL does, or it can produce output that can be loaded directly into the CIMS Server database so that you can create Web-based invoices and other reports.

#### 4 Individual program updates that could cause some processing changes:

- CIMSACCT
  - Creates CIMS 79x accounting records and CIMS 6 and 30 accounting records. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
    - All identifiers are available in account code conversion when 79x records are processed using the `PROCESS CIMS MAINTENANCE` control statement.
  - Two new control statements have been added: `PARSE ACCOUNT CODE FIELD` and `SMF USER DATA IS SECURITY ID`.
  - Support for up to 128 bytes from the z/OS job account code has been added.
  - New message format in CIMSMSG DD.

- CIMSCMF2
  - Creates the CIMS 791 accounting record and the CIMS 804 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - With `CIMSMONY`, there is only one set of CICS rate codes. There is no longer a set of prime rate codes (`ZCS*`) and non-prime rate codes (`ZCX*`). The `ZCS*` rate records have been pre-defined in the `CIMSRATE` member in `CIMS.DATFILE` to contain a rate value for shift 1 (prime) and a rate value for shift 2 (non-prime).

The following control statements have been added to support this change. For more information about these statements, refer to the CIMS CICS Account Code Creation Program—CIMSCMF2 chapter in the *CIMS CICS Data Collector User Guide*.

- `NON-PRIME SHIFT CODE = n`. This control statement enables you to change the non-prime shift from the default shift 2 to another shift.
- `NON-PRIME DAY yyyyddd/yyyymdd`. The Julian or Gregorian Date specified by this control statement is considered a non-prime processing day. If the `NON-PRIME SHIFT CODE` control statement is not present, all work processed on this day is assigned to the default shift 2.
- New message format in `CIMSMMSG DD`.
- CIMSCCLNT
  - Supports the new 128-byte account code.
  - Supports the `CurrentCloseDate` option in the configuration record.
  - Supports the database load ID in the configuration record.
- CIMSDB2
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - The `NON-PRIME SHIFT CODE =` control statement has been added. This statement enables you to change the default non-prime shift, which is set to 4.
  - New message format in `CIMSMMSG DD`.

- CIMSDISK
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - New message format in `CIMSMMSG DD`.
- CIMSEXTR
  - The new Status and Statistics VSAM file has been built to store statistics and to allow CIMSEXTR to be restarted from a valid checkpoint if the previous execution terminated abnormally.
  - Added the ability to produce two new optional outputs: CSR+ and aggregated 79x records. The CSR+ record is required by CIMSMONY.
  - New default aggregation points have been added for the 79x records (see [page 3-14](#)). The System ID (CIMSSID), has been added as a default aggregation point for all records.
- CIMSMONY
  - This is a new chargeback program. CIMSMONY has two main purposes:
    - To provide a mainframe type invoice (like CIMSBILL).
    - To provide files that can be loaded into the CIMS Server database for Web reporting.
  - For more information about CIMSMONY, refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- CIMSMULT
  - Supports the new CIMSMONY summary record and the CIMSBILL summary record. CIMSMULT detects the record version and processes accordingly.
  - Produces CSR+ records. If CIMSMULT produces CSR+ records if it detects that it is processing summary records from CIMSMONY.
- CIMSTAPE
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.

- Support for the 128-byte account code in CIMS 79x accounting records has been added.
- The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
- New message format in `CIMSMMSG DD`.
- `CIMSUNIV`
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - New message format in `CIMSMMSG DD`.
- `CIMSUN02`
  - Creates the CIMS 791 accounting record and the CIMS 991 accounting record. You can use the `WRITE` control statement to turn off either output.
  - Account code conversion routine updated.
    - Support for the 128-byte account code in CIMS 79x accounting records has been added.
    - The maximum length for the `DEFINE FIELD` and `DEFINE MOVEFLD` control statements is now 128 bytes.
  - New message format in `CIMSMMSG DD`.

### **CIMS.DATAFILE Updates/Additions**

- 1 The following members were updated to add the new `WRITE nnn OFF`, `WRITE 79X RECORDS ONLY`, and/or `WRITE 79X RECORD OFF` control statements.
  - `ACCTINPT`, `ACCTINP2`, `ACCTINP3`, `ACCTINP4`, `ACCTINP5`, `ACCTINP8`, `AS40INP1`, `AS40INP2`, `CICSOT06`, `CMF2INPT`, `DATAICIN1`, `DATAICIN2`, `DB2INPT`, `DISKCNLT`, `DISKINPT`, `IDMSCNT2`, `IDMSCNT4`, `IDMSCNT6`, `M204CNT2`, `RMMINPT`, `TAPEINPT`, `TL50INPT`, `TL54INPT`, `TMSINPT`, `UNIVINPT`, `ZADACNLT`, `ZARAINPT`, `ZDCBCNLT`, `ZDCCCNLT`, `ZFALCNLT`, `ZRJECNLT`, `ZROSCNLT`, `ZWYLCNLT`
- 2 The following members were updated to make `CIMSACT2 DD` the default output (i.e., the CIMS 79x accounting records) instead of the `CIMSACCT DD`.
  - `ATMONJCL`, `ATM02JCL`, `CIMSADA1`, `CIMSADSM`, `CIMSCMS`, `CIMSFALC`, `CIMSJB2A`, `CIMSJB2B`, `CIMSJOB2`, `CIMSRJE`, `CIMSROSC`, `CIMSRSCA`, `CIMSWYLB`, `IDMSJCL1`, `IDMSJCL2`, `IDMSJCL3`, `M204JCL1`, `SORTDB2`, `SORTDISK`, `SORTTAPE`, `SORTUNIV`, `SUBAS401`, `SUBAS402`, `SUBDATC1`, `SUBDATC2`, `SUBEXTR1`, `SUBMAIN1`, `SUBMAIN3`



- 3** The following members were updated to make CIMSACT2 DD the default output (i.e., the CIMS 79x accounting records) and to add sample steps for executing CIMSEXTR to aggregate the 79x records and optional steps that execute CIMSMONY and/or FTP data to CIMS Server.
  - CIMSCICS, CIMSDB2, CIMSDISK, CIMSRRM, CIMSTAPE, CIMSTL50, CIMSTL54, CIMSTMS, CIMSUNIV, CIMSZARA, SUBCICS2, SUBDB21
- 4** The CIMSMSG DD statement was added to the following members:
  - BUDJCL1, BUDJCL2, CIMSCLNT, CIMSBDGT, CIMSRTLD, CIMSRTRP, CLNTJCL2, CLNTJCL3
- 5** Individual CIMS.DATFILE member updates:
  - ACNVJCL1
    - Updated to convert the 11.2–11.6 CIMS Rate file to the 12.0 layout.
  - ACNVJCL2
    - Updated to convert the 11.2–11.6 CIMS Client file to the 12.0 layout.
  - CALENDAR
    - Added the accounting year to each record. Also added more years.
  - CALNDR13
    - Added the accounting year to each record.
  - CICSASML, CIMSCMPL
    - Added AMODE=24 and RMODE=24 to linker options.
  - CICSVSAM
    - CIMS Client and Rate file record lengths were increased to 1200 and 800, respectively.
  - CIMREC02
    - Updated format of CIMS Client file record.
  - CIMREC03
    - Updated format of CIMS Rate file record.
  - CIMREC14
    - Updated format of CIMSUNIV 001 input record.
  - CIMREC16
    - Updated format of CIMS Rate table.
  - CIMRECMN
    - New member that contains the record passed to the new user exit, CIMSUE16. CIMSUE16 is called from CIMSMONY.

## ■ Upgrade Instructions

### Upgrading from CIMS Releases 11.2–11.6

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- CIMSDIST
  - The record release ID was changed from 199701 to 199807.
- CIMSDTLD
  - The following DCTNxxxx members were added to the CIMSCNTL DD statement: DCTNR794, DCTNR799, DCTNCTLD, DCTNCTLT, DCTNMQSR.
- CIMSEOM
  - Steps to support the CIMS 79x accounting records were added.
- CIMSEXTR
  - Addition of the following DD statements to the JCL: CIMSCSR, CIMSCSRP, CIMS79X, CIMSSTAT, SORTSUM, and SORTAGR.
  - Added SORTSUM and SORTSGR DD statements to support new aggregation options.
- CIMSGDG
  - Added allocations for CIMSMONY GDG data sets.
- CIMSJOB1
  - CIMS Client and Rate file record lengths were increased to 1200 and 505, respectively.
  - Added allocation and initial loading of CIMS Dictionary.
- CIMSJOB3
  - The JCL has been totally rewritten. The default chargeback program is now CIMSMONY.
- CIMSJOB5
  - This is a new JCL member that contains the old version of CIMSJOB3 that executes program CIMSBILL.
- CIMSMERG
  - New steps have been added to merge the CIMS 79x accounting records.
- CIMSMULT
  - New steps have been added to support proration from CIMSMONY.
- CIMSPRAT
  - New member that contains the JCL for the new proration program, CIMSPRAT. For more information about this program, refer to the *Multiple Account Chargeback System—CIMSMULT and CIMSPRAT* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

- CIMS RATE, CIMSRT01, CIMSRT02
  - New CPU flag was added to each CPU rate.
  - Added rates Z032, Z033, SMF30CPT, Z034, Z035, and Z036.
- CIMSRTC�
  - Updated record size for the CIMS Rate file from 200 to 505.
- CIMSRTLĐ
  - Updated record size for the CIMS Rate file from 200 to 505.
- CIMSSTC
  - New member that allocates the new VSAM Statistics file.
- CIMSSTD
  - New member that deletes the new VSAM Statistics file.
- CIMSUSER
  - Added entry points CIMSACUA and CIMSUE16 to support CIMSMONY.
- CLNTJCL1, SUBCLNT2
  - Updated record size for the CIMS Client file from 800 to 1200.
- CONVERTA
  - Updated to convert 11.2–11.6 history files into the CMS 79x accounting history file.
- CIMSFTP, CIMSFTPG, FTP#READ, FTPBASE, FTPBASEG, FTPDATE, FTPDATEG, FTPDB2, FTPID, FTPUNIV
  - New members that contain automated FTP JCL and REXX code. These members can be used as templates to build JCL that automates the FTP of data between CIMS Mainframe Data Collector and Chargeback System and CIMS Server.
- EDITJCL
  - New member that contains JCL for the updated CIMSEEDIT program. This program supports the 128-byte account code.
- MONYCTL1, MONYCTL2, MONYCTL3
  - New members that contain the CIMSMONY control statements.
- NORMCPU, SURCPU
  - New members that contain sample CPU normalization and job class and priority surcharge statements. These statements are used by CIMSMONY only.
- CIMSĐV12, DCTNV120
  - New members that upgrade the 11.6 CIMS Dictionary to 12.0

- PRATINPT, PRATPRTB
  - New members that contain the new CIMSPRAT program control statements.
- SUBMRG3, SUBMERG4
  - Added steps to merge CIMSMONY history files.

### **CIMS.REPTLIB Updates/Additions**

**1** The following reports were updated to calculate the 128-byte account code for lookup in the CIMS Client file:

- SPWRP900, SPWRP901, SPWRP907, SPWTRH01, SPWTR031, SPWTR095, SPWTR900, SPWTR901, SPWTR907

**2** Individual CIMS.REPTLIB member updates:

- ACCTCD04
  - Updated the length of CIMS-ACCOUNT-CODE to 128.
- APCLJCL
  - Increased LRECL of SWOUTPUT DD from 1200 to 1400.
- ARUNJCL4, ATMONJCL, ATM02JCL
  - Changed CIMSACT2 DD to be the default output (i.e., creates CIMS 79x accounting records). CIMSACCT DD is commented out.
- CIMDB2E5
  - New member that contains the CIMSDB2 11.5 exception file layout.
- CIMRCSTA
  - New member that contains the record layout for the new Status and Statistics VSAM file.
- CIMRC791
  - Added generic resource and identifier sections.
- CIMRC994
  - Increased the digits of precision for the resources from 2 to 6.
- CIMSCLNT
  - Updated for 12.0 CIMS Client file record layout.
- CIMSCL01
  - New member that contains the 11.2–11.6 CIMS Client file record layout.

- CIMSMSUM
  - New member that contains the CIMS summary record format from CIMSMONY.
- CIMSRATE
  - Updated for the 12.0 CIMS Rate file record layout.
- CIMSRT01
  - New member that contains the 11.2–11.6 CIMS Rate file record layout.
- SMFRC120
  - New member with the layout of the WebSphere SMF 120 record.
- SPWRP140
  - An INCLUDEIF for record ID of CIMSDB2 was added.
- SPWRP143
  - Updated to support the 128-byte account code.
- SPWRP150, SPWRP151, SPWRP152, SPWRP153
  - New members that report on the new Status and Statistics VSAM file.
- SPWRP806
  - Updated to support the 12.0 CIMS Client file.
- SPWRP807
  - Updated to support the 12.0 CIMS Rate file.
- SPWTRCN1
  - Updated to convert the 11.2–11.6 CIMS Rate file to the 12.0 layout.
- SPWTRCR1
  - New member that contains the upgrade of the CIMS Rate file from releases 11.2–11.6 to release 12.0.
- SPWTR140, SPWTR141, SPWTR142, SPWTR144
  - Updated display format for DB2 resources to include all 6 digits of precision.
- SPWTR815
  - Updated to build a generic CIMS 791 accounting record from a resource log. In releases 11.5 and 11.6, this report built a CIMSUNIV 791 record. CIMS Lab recommends that you build a generic 791 record for all new feeds.

- SWALIAS
- Added aliases for the following records: CIMRCDCT-RECORD, CIMSRATE-OLD-RECORD, CIMRCDCT-RECORD, RC791V00-RECORD, RC792V00-RECORD, RC793V00-RECORD, SMF116-RECORD, SMF116-RECORD

### Update the CIMS Rate and Client Files

- There are changes to the CIMS Rate and Client files. You need to upgrade these files as described *CIMS Rate VSAM File Conversion* on page 3-12 and *CIMS Client VSAM File Conversion* on page 3-13.

### Update the CIMS Dictionary VSAM File

There are changes to the CIMS Dictionary VSAM file, which was first introduced in release 11.5. You need to upgrade your CIMS Dictionary as described in *CIMS Dictionary VSAM File Conversion* on page 3-13.

### Install Passwords

CIMS releases 11.2 through 12.0 use the same passwords. Do not use the new CIMS.DATFILE member during your testing.

The release of CIMS Report Writer is 2.8. This is the same release that was included with CIMS 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.

New exit points have been added to support the new chargeback program CIMSMONY. Refer to the *Computer Center Chargeback Program—CIMSMONY* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide* for information about the new user exits.

You must re-compile the user exit pointing to the new CIMS.DATFILE where the most current record descriptions are stored. Re-link all of the programs that use your user-updated exit. Use the CIMS.DATFILE JCL member CIMSCMPL to compile and link these programs.

---

# CIMSMONY Upgrade Instructions

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## About this Chapter

This chapter guides you through the process of upgrading from CIMSBILL to CIMSMONY and includes the following information:

- The migration path from CIMSBILL to CIMSMONY.
- The input and output changes from CIMSBILL to CIMSMONY.
- The processing differences between CIMSBILL and CIMSMONY.
- The control statement differences between CIMSBILL and CIMSMONY.
- The changes to other CIMS programs and JCL to support CIMSMONY.

## About CIMSMONY

CIMSMONY differs from CIMSBILL in that CIMSMONY supports CIMS 79x accounting records (which are processed and reformatted by CIMSEXTR) rather than CIMS 6, 30, and 991–999 accounting records. In addition, you can run CIMSMONY in different modes, Invoice or Server, depending on the output that you want to produce.

The Invoice mode is intended for those users who want to process data and produce an invoice on the mainframe.

The Server mode is intended for those users who want to feed mainframe data to CIMS Server to produce Web-based invoices and other reports. CIMSMONY in Server mode produces the CIMS Server Ident, Detail, and Summary files that are loaded into CIMS Server.

The default mode is Invoice. To run CIMSMONY in Server mode, use the control statement `PROCESS SERVER MODE` (see [page 4-30](#)). You cannot run both modes at the same time.

## Migration Path

The migration path from CIMSBILL to CIMSMONY differs depending on whether you are migrating to CIMSMONY in Invoice mode or Server mode.

To migrate from CIMSBILL to CIMSMONY in Invoice mode, follow the steps in [Invoice Mode Migration Path](#) on page 4-4.

To migrate to CIMSMONY in Server mode, follow the steps in [Server Mode Migration Path](#) on page 4-6.

## Invoice Mode Migration Path

Running CIMSMONY in Invoice mode is similar to running CIMSBILL. You will continue to run all of the CIMS interface programs daily, produce a history file, and run the CIMSEOM process against the 79x records at the end of the period. (Refer to the new CIMSEOM JCL in CIMS.DATFILE.) At this point, you will do the following:

- Run the CIMS Report Writer report SPWRP200 to produce detail reports if needed. CIMSMONY does not produce job detail reports.
- Run CIMSEXTR to produce the CIMS Server Resource Plus (CSR+) file.
- Run CIMSMONY to produce an invoice.

### *To migrate to CIMSMONY in Invoice mode:*

- 1 Create the CIMS Dictionary and Status and Statistics VSAM files:
  - a Execute the JCL member CIMSRTC in CIMS.DATFILE to create the CIMS Dictionary file. CIMSRTC allocates the VSAM cluster.
  - b Execute the JCL member CIMSRTLD in CIMS.DATFILE to invoke the Dictionary Utility (also named CIMSRTLD). This utility builds the default dictionary.
  - c Execute the JCL member CIMSSTC in CIMS.DATFILE to create the Status and Statistics file.
- 2 Create the new 79x accounting records (and, optionally, the CIMS 6, 30, and 991–999 accounting records) using either of the following processes:
  - Modify your existing job streams by inserting the appropriate CIMSACT2 DD statements against the first pass of the source data (i.e., the first execution of CIMSACCT against SMF, the CIMSRTLD run against DCOLLECT records, the CIMSTAPE run against the tape system catalog, etc.).

With CIMS 12.0, the 79x records are produced as the default and the CIMSACT2 DD statements have been defined in the sample JCL. The CIMSACCT DD statement has been changed to DD DUMMY so that the 6, 30, and 991–999 records are not produced by default.

#### **Or**

- Execute your existing job streams that create the 6, 30, and 991–999 records. Pass all records through on final CIMSACCT step using the control statement CONVERT TO CIMS SERVER.
- 3 After all of the interface programs other than CIMSACCT (CIMSRTLD, CIMSCMF2, CIMSIMS2, CIMSTAPE, CIMSDB2, CIMSUNIV, and CIMSUN02), add another step to the jobs to summarize the 791 records using CIMSEXTR.
  - 4 Run the daily CIMSMERG job against the 79x records to add them to the history file. Use the new CIMSMERG JCL in CIMS.DATFILE.
  - 5 At the end of the period, run the CIMSEOM process against the 79x records. Use the new CIMSEOM JCL in CIMS.DATFILE.

- 6** If you want to replicate the detail reports produced by CIMSBILL, run the CIMS Report Writer report `SPWRP200` against the 79x history file created by the CIMSEOM process.
- 7** Execute CIMSEXTR against the 79x history file created by the CIMSEOM process. CIMSEXTR creates the CSR+ file.
- 8** Execute CIMSMONY using the CSR+ file as input. The records in the CSR+ file must be sorted in account code/start date/end date sequence before being processed by CIMSMONY. To sort the records, you can use an external sort after the records are created by CIMSEXTR or the CIMSMONY control statement `SORT`.



- 4** Execute CIMSMONY using the CSR+ file as input. The records in the CSR+ file must be sorted in account code/start date/end date sequence before being processed by CIMSMONY. To sort the records, you can use an external sort after the records are created by CIMSEXTR or the CIMSMONY control statement SORT.
- 5** FTP the CIMS Server Ident, Detail, and Summary files to CIMS Server and load the database. Refer to the CIMS interface program JCL members (CIMSDISK, CIMSTAPE, CIMSCICS, etc.) for sample steps that FTP output data to CIMS Server.
- 6** Log on to the CIMS Server Web Reporting Web site and an run reports against the data as described in the *CIMS Server Web Reporting User's Guide*.

## **Input/Output Changes**

### **Input Changes**

***The following input DD statements reference the same data in both CIMSMONY and CIMSBILL:***

- CIMSCNTL**      References the input control statements file. This file is used just as it is in CIMSBILL (the control statements must start in column 1, etc.). However, some CIMSBILL control statements are not supported in CIMSMONY and others have been added or have been changed. See [page 4-28](#) for control statement changes.
- CIMSRTVS**      References the CIMS Rate file. The format of the CIMS Rate file has changed in CIMS 12.0. You must run the upgrade job ACNVJCL1 to upgrade your file to the 12.0 format.
- CIMSCLVS**      References the CIMS Client file. The format of the CIMS Client file has changed in CIMS 12.0. You must run the upgrade job ACNVJCL2 to upgrade your file to the 12.0 format.

***The following input DD statements are new for CIMSMONY:***

- CIMSNCPU**      References the CPU normalization statements file. This file can contain up to 5,000 records.
- CIMSSCPU**      References the priority and class surcharge statements file. This file can contain up to 100 priority and 100 class records.

***The following input DD statements reference different data in CIMSMONY:***

- CIMSACCT**      References the accounting records to be processed. In CIMSBILL, these are CIMS 6, 30, and 991–999 accounting records. In CIMSMONY, these are CSR+ records created by CIMSEXTR. For more information about the CSR+ records, see [New Input Record](#) on page 4-9.
- CIMSCLDR**      References the CIMS Calendar file. The accounting year field has been added to the records in this file and the file can now contain up to 1,000 records. For more information, see [CIMS Calendar File Changes](#) on page 4-9.

## New Input Record

The input records for CIMS BILL are the CIMS 6, 30, and 991–999 accounting records. The input record for CIMSMONY is the CIMS Server Resource Plus (CSR+) record that is created by CIMSEXTR from CIMS 79x accounting records.

The CSR+ record is the same as the CIMS Server Resource (CSR) record, but has a fixed header so that CIMSMONY can sort records in account code/start date/end date order.

Unlike the records in the history file used for CIMS BILL, which are in correct sort order, the CSR+ records must be sorted after they are created by CIMSEXTR using an external sort or by CIMSMONY using the SORT control statement (see [page 4-31](#)). The SORT statement is turned off by default. CIMSMONY requires the records in account code/start date/end date order.

For more information about CIMSEXTR and the CSR+ record, refer to the Extract and Aggregation Program—CIMSEXTR chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

## CIMS Calendar File Changes

Prior to 12.0, the CIMS Calendar file records contained an accounting period, start date, and end date. With the implementation of accounting dates for CIMSMONY in Server mode (see [New Accounting Dates](#) on page 4-25), the accounting periods must be associated with a year. Therefore, a fourth field, accounting year, has been added to the records. In addition, the CIMS Calendar file can now contain up to 1,000 records.

The new record format is:

Accounting\_Period,Start\_Date,End\_Date,Accounting\_Year

For example:

```
01,20040101,20040131,2004
02,20040201,20040228,2004
03,20040301,20040331,2004
04,20040401,20040430,2004
05,20040501,20040531,2004
06,20040601,20040630,2004
07,20040701,20040731,2004
08,20040801,20040831,2004
09,20040901,20040930,2004
10,20041001,20041031,2004
11,20041101,20041130,2004
12,20041201,20041231,2004
```

Because the calendar file is used to calculate accounting dates, the CIMS Calendar file is very important when running CIMSMONY in Server mode.

## Output Changes

**The following output DD statements reference the same data in both CIMSMONY and CIMSBILL:**

- CIMSMMSG** References the processing and trace messages file. The format of the messages has changed slightly. All messages from CIMSMONY are prefixed with **\*\*I\*\*** (Information), **\*\*W\*\*** (Warning), or **\*\*E\*\*** (Error). For more information, see [Output Message Changes](#) on page 4-11.
- CIMSPRNT** References the processing results file. This file contains more processing messages for CIMSMONY than for CIMSBILL and the format has changed slightly. For more information, see [CIMSPRNT File Changes](#) on page 4-13.
- CIMSINVC** References the Invoice report. An invoice is produced only in Invoice mode. The format of the invoice has changed slightly to accommodate the 128-byte account code. For more information, see [Invoices Changes](#) on page 4-14.
- CIMSDIST** References the CIMS Desktop file. This file has not changed. It supports a 32-byte account code only. If the account code is longer than 32 bytes, the code is truncated. For the layout of this file, refer to CIMS Accounting File Record Descriptions appendix in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- CIMSSUM** References the CIMS Summary file. The format of this file has changed slightly to accommodate the 128-byte account code. For the layout of this file, refer to CIMS Accounting File Record Descriptions appendix in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

**The following output DD statements are no longer supported in CIMSMONY:**

- CIMSRESR** References the CIMS Resource file. This file is no longer needed.
- CIMSJOB** References the detail reports. CIMSMONY does not produce detail reports. To produce detail reports, use the CIMS Report Writer report SPWRP200. These reports run against the 79x records.



**The following output DD statements are new for CIMSMONY:**

- CIMSDETL**      References the CIMS Server Detail file. This file is produced in Server mode only. This file is loaded directly into the CIMS Server database. For the layout of this file, refer to CIMS Accounting File Record Descriptions appendix in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
  
- CIMSUMRY**      References the CIMS Server Summary file. This file is produced in Server mode only. This file is loaded directly into the CIMS Server database. For the layout of this file, refer to CIMS Accounting File Record Descriptions appendix in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
  
- CIMSIDENT**      References the CIMS Server Ident file. This file is produced in Server mode only. This file is loaded directly into the CIMS Server database. For the layout of this file, refer to CIMS Accounting File Record Descriptions appendix in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

**Output Message Changes**

The following changes have been made to many (but not all) of the message files produced by CIMS interface programs:

- A header has been added to the top of the message file to specify the program that produced the message.
- A prefix in the following format has been added to the message:

mmmmnnnt text\_of\_message

where: mmmm=routine that issued the message

nnn=a numeric value that identifies the message

t=the type of message (I=Information, W=Warning, E=Error)

For example:

MONY205I Server Mode On - Only one Sequence Level in Effect

- The messages are upper and lowercase for improved readability.

The following is an example of a CIMSMONY message file output using the control statement TEST P (for tracing the parsing information).

```
*****
Message Section for Program: CIMSMONY
*****
MONY205I Server Mode On - Only one Sequence Level in Effect

MN01200I CIMSMN01 Compile Date: 2004/08/22   Compile Time: 12:58:19

MONY211I Account Code Length: +007 Resource Record Length: +0470 CSR+ Record Length: +0504
MONY211I First 80 Bytes of Resource Rec: DiskDir,20040422,20040427,00:00:00,23:59:59,,10,"Account_
MONY212I Number of Identifiers: +0010 Number of Resources: +0001
MONY208I Job_Class Identifier Found: N Job_Priority Identifier Found: N
```

## ■ CIMSMONY Upgrade Instructions

### *Input/Output Changes*

---

MONY211I Account Code Length: +003 Resource Record Length: +0474 CSR+ Record Length: +0504  
MONY211I First 80 Bytes of Resource Rec:DiskDir,20040422,20040604,00:00:00,23:59:59,2,10,"Account\_  
MONY212I Number of Identifiers: +0010 Number of Resources: +0001  
MONY208I Job\_Class Identifier Found: N Job\_Priority Identifier Found: N  
MONY211I Account Code Length: +007 Resource Record Length: +0470 CSR+ Record Length: +0504  
MONY211I First 80 Bytes of Resource Rec:DiskDir,20040522,20040524,00:00:00,23:59:59,3,10,"Account\_  
MONY212I Number of Identifiers: +0010 Number of Resources: +0001  
MONY208I Job\_Class Identifier Found: N Job\_Priority Identifier Found: N  
MONY211I Account Code Length: +004 Resource Record Length: +0473 CSR+ Record Length: +0504  
MONY211I First 80 Bytes of Resource Rec: DiskDir,20040522,20040703,00:00:00,23:59:59,,10,"Account\_  
MONY212I Number of Identifiers: +0010 Number of Resources: +0001  
MONY208I Job\_Class Identifier Found: N Job\_Priority Identifier Found: N  
MONY211I Account Code Length: +022 Resource Record Length: +0455 CSR+ Record Length: +0504  
MONY211I First 80 Bytes of Resource Rec: DiskDir,20040524,20040525,00:00:00,23:59:59,,10,"Account\_  
MONY212I Number of Identifiers: +0010 Number of Resources: +0001  
MONY208I Job\_Class Identifier Found: N Job\_Priority Identifier Found: N  
MONY211I Account Code Length: +007 Resource Record Length: +0470 CSR+ Record Length: +0504  
MONY211I First 80 Bytes of Resource Rec: DiskDir,20040527,20040604,00:00:00,23:59:59,,10,"Account\_  
MONY212I Number of Identifiers: +0010 Number of Resources: +0001  
MONY208I Job\_Class Identifier Found: N Job\_Priority Identifier Found: N  
MN01104W Rate Value not defined for Table/Rate: STANDARD/Z003



### **Invoices Changes**

The following changes have been made to the Invoice:

- The account code has been moved to a separate line to accommodate the 128-byte account code.
- The shift code appears at the end of the rate description when the control statement USE SHIFT CODES (see [page 4-31](#)) is used.

Invoice Number 00000001

Client.: The Big Time Company

Account:  
Payroll

		Billing Period 2004/07/01 To 2004/07/31		
		Total	Rate	Charge
z/OS CPU Minutes	Shift 3	0.01	\$ 20.00	\$ 0.36
Batch charges				\$ 0.36
Amount-Due -----				\$ 0.36 -----

## Processing Differences Between CIMSBILL and CIMSMONY

CIMSMONY differs from CIMSBILL in that CIMSMONY supports CIMS 79x accounting records (which are processed and reformatted by CIMSEXTR) rather than CIMS 6, 30, and 991–999 accounting records. In addition, you can run CIMSMONY in different modes, Invoice or Server, depending on the output that you want to produce.

The two processing modes are needed so that CIMSMONY can perform more efficient processing. For example, in Server mode, you do not need to define break levels (DEFINE J2, J2, : SEQUENCE J2, J2) because CIMS Server creates break levels dynamically. Also, certain control statements have different implications depending on the mode used. For example, the control statement REPORT DATE has different implications in Invoice mode than in Server mode (see [page 4-34](#)).

The Invoice mode is intended for those users who want to process data and produce an invoice on the mainframe.

The Server mode is intended for those users who want to feed mainframe data to CIMS Server to produce Web-based invoices and other reports. CIMSMONY in Server mode produces the CIMS Server Ident, Detail, and Summary files that are loaded into the CIMS Server database.

The default mode is Invoice. To run CIMSMONY in Server mode, use the control statement PROCESS SERVER MODE (see [page 4-30](#)). You cannot run both modes at the same time.

### CIMSMONY Invoice Mode

If you are using CIMSMONY in Invoice mode, you need to determine the length of your data processing period (usually monthly) and run CIMSMONY once at the end of that period.

As with CIMSBILL, you will continue to run all of the CIMS interface programs daily, produce a history file, and run the CIMSEOM process against the 79x records at the end of the period. At this point, you will do the following:

- Run the CIMS Report Writer report SPWRP200 to produce detail reports if needed. CIMSMONY does not produce job detail reports.
- Run CIMSEXTR to produce the CSR+ file.
- Run CIMSMONY to produce an invoice.

## **Invoice Mode Supported Features**

The Invoice mode supports the following:

- Up to nine break levels in the account code. For example, account code ABBCCC might contain three levels where A is the organization code, BB is the division code, and CCC is the department code. This feature is discussed in *Expanded Break Levels* on page 4-20.
- As many rates as the address space can support. This feature is discussed in *Unlimited Number of Rates* on page 4-20.
- The creation of a paper invoice (CIMSINVC).
- The creation of an optional CIMS Desktop File (CIMSDDIST) for input into CIMS Desktop. Note that CIMS Desktop does not support an account code longer than 32 bytes. If the account code is longer than 32 bytes, the code is truncated.
- The creation of an optional CIMS Summary file (CIMSDDSUM), which supports a full 128-byte account code.
- New CPU normalization. This feature is discussed in *New CPU Normalization* on page 4-23.
- New priority and class surcharging. This feature is discussed in *New Priority/Class Surcharging* on page 4-24.
- New shift processing. This feature is discussed in *New Shift Processing* on page 4-25.
- CIMSACUA and CIMSUE16 user exits. These exits are discussed in *User Exits* on page 4-37.
- Discounts and minimum processing.

## Invoice Mode Unsupported Features

The Invoice mode *does not* support the following:

- The creation of the CIMS Server input files: CIMS Server Ident, Detail, and Summary.
- Detail reports that are produced by CIMSBILL. To generate detail reports, you need to run the CIMS Report Writer report SPWRP200.
- This billing equation as it is in CIMSBILL.
- The CIMSBILL control statements, which are controlled by CIMSEXTR:
  - ALL PRINT IS LOCAL/REMOTE
  - DISPATCH OFF
  - INTERVAL ACCOUNTING
  - PRINT CLASS
  - PRINT CLASS ? IS FORM ? FOR PRINTER ?
  - PRINTER ? IS LOCAL/REMOTE
  - PRINT LINES = LOCAL/REMOTE
  - PSF SUPPORT OFF
  - SAR EXPRESS DELIVERY OFF
  - SAR EXPRESS SPOOL OFF
- The following CIMSBILL control statements, which are no longer applicable:
  - Billing equation statements.
  - CPU TIME =
 

This is controlled by rate codes, see *New CPU Value Determination* on page 4-21.
  - FORM EIGHT OFF
  - SERVICE UNITS
 

This is not applicable because service units no longer share the Z009–Z013 rate codes with SIO fields. For more information, see *New Rate Codes for Service Units* on page 4-21.

### CIMSMONY Server Mode

CIMSMONY in Server mode produces the CIMS Server Ident, Detail, and Summary files that are loaded into the CIMS Server database.

If you are using CIMSMONY in Server mode, CIMS Lab recommends that you run the program daily for each data type that you want to feed to CIMS Server (SMF6, Disk, DB2, CICS, etc.). Because Server mode produces files that are loaded to the CIMS Server database, it is not necessary to run CIMSMONY at the end of a period. Running CIMSMONY daily provides the following advantages:

- **More efficient and faster processing due to smaller file size.** Because there are fewer records to run through CIMSEXTR, which aggregates the records based on user-defined criteria in the CIMS Dictionary, there are fewer records produced and less resources used to execute jobs.
- **Easier management of the data in the database.** When you run process feeds through CIMSMONY on a daily basis, each day is loaded to the CIMS Server database as a separate load. If you need to reprocess the daily feed, it is much easier to delete the daily load from the CIMS Server database than if you wait until the end of the month to load the data.
- **Up-to-date reports.** Daily loads enable you to produce up-to-date invoices and other reports in CIMS Server.

### Server Mode Supported Features

The Server mode supports the following:

- One break level in the account code. You do not need to define multiple break levels in the account code unless you are using the `CLIENT SEARCH ON` control statement. Account code levels are set in the CIMS Server Administrator program. For more information, refer to the *CIMS Server Administrator's Guide*.
- As many rates as the address space can support. This feature is discussed in *Unlimited Number of Rates* on page 4-20.
- New CPU normalization. This feature is discussed in *New CPU Normalization* on page 4-23.
- New priority and class surcharging. This feature is discussed in *New Priority/Class Surcharging* on page 4-24.
- New shift processing. This feature is discussed in *New Shift Processing* on page 4-25.
- CIMSACUA and CIMSUE16 user exits. These exits are discussed in *User Exits* on page 4-37.
- Discounts and minimum processing.



## Server Mode Unsupported Features

The Server mode *does not* support the following:

- The creation of a paper invoice (CIMSINVC).
- The creation of the CIMS Resource or CIMS Desktop file.
- Detail reports that are produced by CIMSBILL. To generate detail reports, you need to run the CIMS Report Writer report SPWRP200.
- This billing equation as it is in CIMSBILL.
- The following CIMSBILL control statements, which are controlled by CIMSEXTR:
  - ALL PRINT IS LOCAL/REMOTE
  - DISPATCH OFF
  - INTERVAL ACCOUNTING
  - PRINT CLASS
  - PRINT CLASS ? IS FORM ? FOR PRINTER ?
  - PRINTER ? IS LOCAL/REMOTE
  - PRINT LINES = LOCAL/REMOTE
  - PSF SUPPORT OFF
  - SAR EXPRESS DELIVERY OFF
  - SAR EXPRESS SPOOL OFF
- The following CIMSBILL control statements, which are no longer applicable:
  - Billing equation statements
  - CPU TIME =
 

This is controlled by rate codes, see *New CPU Value Determination* on page 4-21.
  - FORM EIGHT OFF
  - SERVICE UNITS
 

This is not applicable because service units no longer share the Z009–Z013 rate codes with SIO fields. For more information, see *New Rate Codes for Service Units* on page 4-21.

## New Features

The following features are new or expanded for CIMSMONY.

### Expanded Break Levels

---

**Note** • If you are running CIMSMONY in Server mode, you do not need to define multiple break levels unless you are using the `CLIENT SEARCH ON` control statement.

---

You can define up to nine account code break levels using the `DEFINE` control statement. Each level can consist of up to 128 bytes, but the overall account code length cannot exceed 128 bytes.

---

**Note** • The more account code levels that you define, the slower the processing time.

---

### Unlimited Number of Rates

You can define as many rate codes as the address space can hold.

### CICS Prime and Non-Prime Rate Codes Combined

There is only one set of CICS rate codes. There is no longer a set of prime rate codes (`ZCS*`) and non-prime rate codes (`ZCX*`). The `ZCS*` rate records have been pre-defined in the `CIMSRATE` member in `CIMS.DATFILE` to contain a rate value for shift 1 (prime) and a rate value for shift 2 (non-prime).

If you were using non-prime CICS rate codes in a release prior to 12.0, then you will need to modify the rate records for the `ZCS*` rate codes to include the non-prime rate as shown in the example on [page 3-12](#).

## New Rate Codes for Service Units

For CIMSMONY, service units no longer share the Z009–Z013 rate codes with SIO fields. You can now bill for SIO fields and/or service units in any combination.

The following are old and new rate codes for service units for CIMSMONY. Note that CIMSBILL does not support these new rate codes.

Old Rate Code	New Rate Code	Description
Z009	SMF30SRV	SERVICE UNITS - TOTAL
Z010	SMF30CSU	SERVICE UNITS - CPU
Z011	SMF30SRB	SERVICE UNITS - SRB
Z012	SMF30IO	SERVICE UNITS - I/O
Z013	SMF30MSO	SERVICE UNITS - MSO

## New CPU Value Determination

CIMSMONY does not support the CPU TIME= control statements. The value used to calculate mainframe CPU times is based on the following rate codes in the rate table.

CPU Calculation	Rate Code z/OS	Rate Code TSO	Description
Default (SRB + TCB)	Z003	Z020	By default, CIMS uses TCB and SRB CPU time when charging for CPU usage.
Total (Default + Initiators)	Z003 + Z032	Z020 + Z035	Includes the following values in the CPU calculation: <ul style="list-style-type: none"> <li>■ SMF30ICU. Initiator CPU time under TCB.</li> <li>■ SMF30ISB. Initiator CPU time under SRB.</li> <li>■ SMF30CPT. Step CPU time under TCB.</li> <li>■ SMF30CPS. Step CPU time under SRB.</li> </ul>

Table 4-1 • CPU Rate Codes

CPU Calculation	Rate Code z/OS	Rate Code TSO	Description
All	Z033	Z036	<p>Includes the following values in the CPU calculation:</p> <ul style="list-style-type: none"> <li>■ SMF30CPT. Step CPU time under TCB.</li> <li>■ SMF30CPS. Step CPU time under SRB.</li> <li>■ SMF30ICU. Initiator CPU time under TCB.</li> <li>■ SMF30ISB. Initiator CPU time under SRB.</li> <li>■ SMF30JVU. Step vector usage time.</li> <li>■ SMF30IVU. Initiator vector usage time.</li> <li>■ SMF30JVA. Step vector affinity time.</li> <li>■ SMF30IVA. Initiator vector affinity time.</li> <li>■ SMF30IIP. Processor time to process I/O interrupts.</li> <li>■ SMF30RCT. Processor time used by region control task.</li> <li>■ SMF30HPT. Processor time consumed for the step to support requests for data transfer between hyperspace and an address space.</li> </ul>
TCB	SMF30CPT	Z034	<p>Includes the following values in the CPU calculation:</p> <ul style="list-style-type: none"> <li>■ SMF30CPT. Step CPU time under TCB.</li> </ul>

**Table 4-1 • CPU Rate Codes (continued)**

## Example CPU Rate Code Usage

If you are using the control statement `CPU VALUES=ALL` in `CIMSBILL`, define rates for rate codes Z033 and Z036 for CIMSMONY. You can leave all other CPU rate codes undefined, or you can set the rate for the rate codes to zero so that the resource is reported on the invoice.

## New Flag for CPU Normalization and Priority/Class Surcharging

Rate flag 11 has been added to the rate record to enable CPU normalization and priority/class surcharging. When this flag is set to Y, it indicates that the rate code in the rate record is a CPU value. When you run the CIMS Rate file conversion JCL (`ACNVJCL1`), the following rate codes are automatically set as CPU values (i.e., rate flag 11 = Y).

- Z003
- ZMVSCPU
- Z004
- ZMVSRESC
- ZVSERESC
- Z020
- ZTSOCPU

## New CPU Normalization

CPU normalization in CIMSMONY is similar to normalization in CIMS Server. To perform normalization, you need to do the following:

- 1 Ensure that the `System_ID` identifier is included as an aggregation point when you process 79x records through `CIMSEXTR`. If you want to use a work ID in addition to the system ID for normalization, the `Work_ID` identifier must also be included as an aggregation point. By default, both of these identifiers are included as aggregation points. For more information about aggregation and aggregation points, refer to the *Extract and Aggregation Program—CIMSEXTR* chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- 2 Define each CPU rate code that requires normalization as a CPU value. To define a rate code as a CPU value, set rate flag 11 in the rate record to Y (see [New Flag for CPU Normalization and Priority/Class Surcharging](#) on page 4-23).
- 3 Add a member that is referenced by `DDNAME CIMSNCPU`. This member defines a set of CPU normalization statements for the CIMS system. These statements must be in the following format:

System ID,Work ID,Factor (example: AL90,JES2,.80)

For z/OS, the system ID is the four-character System Model ID. For UNIX and Windows, the system ID is the computer name.

The optional work ID (subsystem) is any other system value that further narrows normalization (i.e., the CICS region name, the DB2 plan name, the Oracle instance name, etc.).

The factor is the percentage by which you want to normalize the CPU rate code value(s). For CIMSMONY, the factor is in its real precision. For example, if one system runs 20 percent faster than another system, in CIMSBILL, you would add a statement to normalize the slower system by 80 percent as shown in the following example.

```
AL90, JES2, 80
```

CIMSBILL divides the factor by 100.

In CIMSMONY you would add a statement to normalize the slower system by a factor of .80 as shown in the following example:

```
AL90, JES2, .80
```

- 4** Add the `NORMALIZE CPU VALUES` control statement to the CIMSMONY input control statements (see [page 4-30](#)).

For more information about this feature, including an example, see [page 4-32](#).

## New Priority/Class Surcharging

CIMSMONY supports job priority and job class surcharging. Implementing priority and class surcharging is similar to implementing CPU normalization. However, CIMSMONY applies a surcharge to CPU resource values for a specified class and/or priority rather than normalizing the values.

To perform class or priority surcharging, you need to do the following:

- 1** Ensure that the identifier `R792JBPR` (job priority) and/or `R792JBCL` (job class) is included as an aggregation point when you process 79x records through CIMSEXTR. By default, both of these identifiers are included as aggregation points. For more information about aggregation and aggregation points, refer to the Extract and Aggregation Program—CIMSEXTR chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.
- 2** Define each rate code that requires a surcharge as a CPU rate. To define a resource as a CPU rate, set rate flag 11 in the rate record to `Y` (see [New Flag for CPU Normalization and Priority/Class Surcharging](#) on page 4-23).
- 3** Add a member that is referenced by DDNAME `CIMSSCPU`. This member defines a set of CPU normalization statements for the CIMS system. These statements must be in the following format:

```
CLASS|PRIORITY,Class_or_Priority,System ID,Work ID,Factor (example:  
CLASS,C,SYS1,JES2,.10)
```

The `CLASS` or `PRIORITY` indicator specifies whether you want to add a surcharge for a class or priority. It is followed by the class or priority (and optionally the system ID and work ID [subsystem]) that you want to surcharge.

The factor is the percentage by which you want to surcharge the CPU rate code value(s). For CIMSMONY, the factor is in its real precision. For example, if you want to surcharge class C by 10 percent, in CIMSBILL, you would add the following statement.

```
CLASS,C,10
```

CIMSBILL divides the factor by 100

In CIMSMONY you would add the following statement:

```
CLASS,C,,.10
```

- 4 Add the SUR-CHARGE CPU VALUES control statement to CIMSMONY (see [page 4-31](#)).

For more information about this feature, including an example, see [page 4-35](#).

## New Shift Processing

CIMSMONY supports up to nine shifts. In the Rate Values field of the rate record, enter the rate for each shift separated by a colon as shown in the following example:

```
RATE,001,Z001,2.50:2.00:1.50:1.00:0.50:0.25,z/OS JOBS STARTED
```

In this example, the six rates have been set for rate code Z001. Each rate reflects a rate shift as follows:

- Shift 1=2.50
- Shift 2=2.00
- Shift 3=1.50
- Shift 4=1.00
- Shift 5=0.50
- Shift 6=0.25

When the invoice is produced, the shift number is added to the end of the rate description as shown in the example invoice in [Invoices Changes](#) on page 4-14.

## New Accounting Dates

---

**Note** • If you are running CIMSMONY in Invoice mode, this section is not applicable.

---

When you run CIMSBILL or CIMSMONY in Invoice mode, all records processed are included in the invoice (unless exclude processing or date selection is on).

When you run CIMSMONY in Server mode, no invoice is created. Instead, the CIMS Server Ident, Detail, and Summary files are created for input to the CIMS Server database. CIMS Server reads these files and produces Web-based invoices and other reports.

To enable CIMS Server to accurately select records for reporting, CIMSMONY produces *accounting dates* in the CIMS Server Detail and Summary files. Accounting dates are the start and end dates that CIMS Server uses to select records for inclusion in reports.

CIMSMONY uses the following factors to determine the accounting dates. The combination of these factors determines the dates as described in *How Accounting Dates are Calculated* on page 4-27.

- The usage *end* date in the CSR+ records. The accounting start and end dates may be the same as or different than the usage end dates.
- The CIMSMONY run date.
- The periods in the CIMS Calendar file. The CIMS Calendar file must contain periods for all data being processed (see *CIMS Calendar File Changes* on page 4-9). The CIMS Calendar file must also contain the accounting year value.

---

**Note** • In CIMS releases prior to 12.0, the CIMS Calendar file did not contain the accounting year.

---

- The close date (optional). A close date is a user-defined close date for processing CSR+ files. By default, close date logic is turned off. The usage *end* dates in the CSR+ records are used as the accounting start and end dates in the CIMS Server Summary and Detail records. The control statement `BACKLOAD DATA` also sets the start and end accounting dates to the usage end date from the CSR+ record. Therefore, if CIMSMONY finds no `CurrentCloseDate` option in the CIMS Client file and there is no `DEFAULT CLOSE DAY` control statement, CIMSMONY uses the `BACKLOAD DATA` statement.

#### **To use the `CurrentCloseDate` option:**

The `CurrentCloseDate` option in the CIMS Client file sets a system-wide close date. The close date can be a specific date (e.g., February 15, 2004) or an integer value for a day of the month (for example 15 specifies a close date of the 15th of each month).

To set the `CurrentCloseDate` option, use the `CIMSCLNT` control statement `CHANGE-CurrentCloseDate yyyyymmdd`. For example, `CurrentCloseDate 20040131` changes the close date to January 31, 2004.

#### **To use the `DEFAULT CLOSE DAY` control statement:**

Use the `DEFAULT CLOSE DAY` control statement to specify an integer value for the close day in the month (see page 4-29). For example 10 specifies a close date of the 10th of each month. This value overrides the value in the `CurrentCloseDate` option in the CIMS Client file.



## How Accounting Dates are Calculated

**Note** • If you use the CIMSMONY control statement `REPORT DATE` (which CIMS Lab strongly recommends that you do not use with CIMSMONY in Server mode), the accounting start and end dates are set by the specified `REPORT DATE` keyword or date parameters.

The information in this section assumes that you are not using the `REPORT DATE` statement and are allowing CIMSMONY to calculate the accounting dates.

The accounting dates (both the start and end date) are always the *same* as the usage end date in the following situations:

- If no close date is set (either in the `CurrentCloseDate` option or by the `DEFAULT CLOSE DAY` statement).
- If the `BACKLOAD DATA` statement is used.
- If the CIMSMONY run date and the usage end date are in the same period (as set in the CIMS Calendar table), regardless of the close date.
- If the CIMSMONY run date is prior to the close date and the usage end date is in the previous month.
- If the CIMSMONY run date and the usage end date are after the close date.

The accounting dates are always *different* from the usage end date in the following situations:

- If the CIMSMONY run date is after the close date, but the usage end date is prior to the close date, the accounting dates are set the previous day from the day CIMSMONY was run.

For example, if the first of each month is your close date and you process a CSR+ record with a usage end date of 20040131 (January 31) on February 15, the accounting start and end dates will be 20040214, February 14.

- If the CIMSMONY run date is prior to the close date and the usage end date is in a period prior to the previous period, the accounting dates are set the last day of the previous period.

For example, assume that the periods in the CIMS Calendar file are defined as the first day of the month to the last day of the month and that the fifteenth of each month is your close date. If you process an CSR+ file with a usage end date of 20040827 (August 27) on November 1, the accounting start and end dates will be 20041031 (October 31). October 31 is the last day of the previous period.

## **Control Statement Differences Between CIMSBILL and CIMSMONY**

### **CIMSBILL Control Statements Not Supported in CIMSMONY**

CIMSMONY does not support the following control statements. These statements are supported by CIMSEXTR:

- ALL PRINT IS LOCAL/REMOTE
- DISPATCH OFF
- INTERVAL ACCOUNTING
- PRINT CLASS
- PRINT CLASS ? IS FORM ? FOR PRINTER ?
- PRINTER ? IS LOCAL/REMOTE
- PRINT LINES=LOCAL/REMOTE
- PSF SUPPORT OFF
- SAR EXPRESS DELIVERY OFF
- SAR EXPRESS SPOOL OFF

The following control statements are no longer supported by CIMSMONY or CIMSEXTR. These statements are no longer applicable.

- Billing equation statements.
- CPU TIME =

This is controlled by rate codes, see *New CPU Value Determination* on page 4-21.

- FORM EIGHT OFF
- SERVICE UNITS

This is not applicable because service units no longer share the Z009–Z013 rate codes with SIO fields. For more information, see *New Rate Codes for Service Units* on page 4-21.

## New Control Statements

The following control statements are new for CIMSMONY. They have no equivalent in CIMSBILL.

### BACKLOAD DATA

This control statement is applicable to Server mode only.

This statement sets the accounting dates in the CIMS Server Detail and Summary records to the usage end date in the CSR+ records. When this statement is specified, the normal accounting dates calculation is not used (see *New Accounting Dates* on page 4-25).

This statement is very useful if you want to process old data and load it into the CIMS Server database for reporting.

### CLASS NAME =

This control statement specifies the job class identifier name that is used to determine a record's job class. If you don't specify a class identifier name, the default name is `Job_Class`.

When the `SUR-CHARGE CPU VALUES` statement is specified (see [page 4-31](#)), and one or more `CLASS` statements are specified in the CIMS CPU DD, then each CSR+ record is searched for an identifier with the name specified by this statement (if it is present) or by the default name `Job_Class` (if this statement is not present). The value of the identifier is compared with the `CLASS` statements. If a match is found, the CPU resources for that record are surcharged.

### Example

Assume that you changed the default identifier name `Job_Class` in the S390R792 records to `JB_CLASS`. You would use the following control statement to direct CIMSMONY to search for the identifier name `JB_CLASS` in the CSR+ records. The identifier value associated with this identifier name is then used to determine whether a surcharge should be applied to the CPU resource(s) in a record.

```
CLASS NAME = JB_CLASS
```

### DEFAULT CLOSE DAY

This control statement is applicable to Server mode only.

This statement specifies the day of the month to set as the close day. This value overrides the value in the `CurrentCloseDate` option in the CIMS Client file.

The year and the month used for the close day reflect the year and month in which CIMSMONY is run as shown in the following example.

### Example

```
DEFAULT CLOSE DAY 15
```

The close day is set to the 15th of the month. If CIMSMONY is run on 2004/01/06, the close date is set to 2004/01/15. If CIMSMONY is run on 2004/02/17, the close date is set to 2004/02/15.

## **NORMALIZE CPU VALUES**

This control statement instructs CIMSMONY to normalize CPU resource values across different systems. CIMSMONY reads DD CIMSNCPU for CPU normalization statements and applies the statements to the CSR+ records. In Server mode, all CPU rate codes that are normalized will appear in the CIMS Server Ident file with the original resource value.

For more information about CPU normalization, see [New CPU Normalization](#) on page 4-23.

## **PRIORITY NAME =**

This control statement specifies the job priority identifier name that is used to determine a record's job priority. If you don't specify a priority identifier name, the default name is Job\_Priority.

When the SUR-CHARGE CPU VALUES statement is specified (see [page 4-31](#)), and one or more PRIORITY statements are specified in the CIMSCPU DD, then each CSR+ record is searched for an identifier with the name specified by this statement (if it is present) or by the default name Job\_Priority (if this statement is not present). The value of the identifier is compared with the PRIORITY statements. If a match is found, the CPU resources for that record are surcharged.

### **Example**

Assume that you changed the default identifier name Job\_Priority in the S390R792 records to JB\_PRTY. You would use the following control statement to direct CIMSMONY to search for the identifier name JB\_PRTY in the CSR+ records. The identifier value associated with this identifier name is then used to determine whether a surcharge should be applied to the CPU resource(s) in a record.

```
CLASS NAME = JB_PRTY
```

## **PROCESS INVOICE MODE**

This control statement sets the CIMSMONY processing mode to Invoice. In this mode, an invoice (CIMSINVC) and optionally the CIMS Summary file (CIMSSUM) and the CIMS Desktop file (CIMSDIST) are produced.

---

**Note** • Invoice is the default mode for CIMSMONY.

---

## **PROCESS SERVER MODE**

This control statement sets the CIMSMONY processing mode to Server. In this mode, the CIMS Server Ident file (CIMSIDENT), Detail file (CIMSDETL), and Summary file (CIMSUMRY) are produced. An invoice is not produced in Server mode.

## RESET CLIENT LOADID TO nnnnnnnnnn

This statement is applicable to Server mode only.

A unique load tracking ID is used to link the CIMS Server Identifier and Detail files for a particular run of CIMS MONY. This ID is stored in the CIMS Client file. This control statement resets the load tracking ID. For each run of CIMS MONY, the load tracking ID is incremented by 1.

For CIMS MONY, the load tracking IDs 1000000000–999999999 are reserved. The CIMS Server version of CIMS BILL uses numbers 0000000001–099999999.

### Example

```
RESET CLIENT LOAD ID TO 1000000000
```

The load tracking ID in the CIMS Server Identifier and Detail files will be set to 1000000000. The CIMS Client file will be updated with this ID and the next run of CIMS MONY will produce the ID 1000000001.

## SET LOADID TO nnnnnnnnnn

This control statement sets the load tracking ID. Unlike the `RESET LOADID TO` statement, this statement does not change the load tracking ID in the CIMS Client file.

### Example

```
RESET CLIENT LOAD ID TO 1000000000
```

The load tracking ID in the CIMS Server Identifier and Detail files will be set to 1000000000, but the ID in the CIMS Client file is not changed. On the next run of CIMS MONY, the load ID in the CIMS Client file will be used.

## SORT

The control statement instructs CIMS MONY to execute an internal sort to put the CSR+ records in the correct account code/start date/end date sequence. This can be used instead of an external sort.

## SUR-CHARGE CPU VALUES

This control statement instructs CIMS MONY to apply a surcharge to CPU resource values for class and/or priority. CIMS MONY reads DD CIMSSCPU for CPU surcharge statements and applies the statements to the CSR+ records. In Server mode, all CPU rate codes that are surcharged will appear in the CIMS Server Ident file with the original resource value.

For more information about CPU surcharge, see [New Priority/Class Surcharging](#) on page 4-24.

## USE SHIFT CODES

The control statement instructs CIMS MONY to use shift codes from the CSR+ records and use the rate value associated with each shift as defined in the rate file. The default is to not use shift codes and treat every record as Shift 1.

## Updated Control Statement Functions

The following control statements are in CIMSBILL and CIMSMONY; however, the functions have changed.

### **CPU NORMALIZATION (CIMSBILL) and NORMALIZE CPU VALUES (CIMSMONY)**

In CIMSBILL, the CPU normalization statements are found in the CIMSCNTL DD. In CIMSMONY, the CPU normalization process has changed.

CPU normalization in CIMSMONY is similar to normalization in CIMS Server. To perform normalization, you need to do the following:

- 1 Ensure that the `System_ID` identifier is included as an aggregation point when you process 79x records through CIMSEXTR. If you want to use a work ID in addition to the system ID for normalization, The `Work_ID` identifier must also be included as an aggregation point. By default, both of these identifiers are included as aggregation points.

For more information about aggregation and aggregation points, refer to the Extract and Aggregation Program—CIMSEXTR chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

- 2 Define each CPU rate code that requires normalization as a CPU value. To define a rate code as a CPU value, set rate flag 11 in the rate record to Y (see [New Flag for CPU Normalization and Priority/Class Surcharging](#) on page 4-23).
- 3 Add a member that is referenced by DDNAME CIMSNCPU. This member defines a set of CPU normalization statements for the CIMS system. These statements must be in the following format:

System ID,Work ID, Factor (example: AL90, JES2, .80)

For z/OS, the system ID is the four-character System Model ID. For UNIX and Windows, the system ID is the computer name.

The optional work ID (subsystem) is any other system value that further narrows normalization (i.e., the CICS region name, the DB2 plan name, the Oracle instance name, etc.).

The factor is the percentage by which you want to normalize the CPU rate code value(s). For CIMSMONY, the factor is in its real precision. For example, if one system runs 20 percent faster than another system, in CIMSBILL, you would add a statement to normalize the slower system by 80 percent as shown in the following example.

```
AL90,JES2,80
```

CIMSBILL divides the factor by 100.

In CIMSMONY you would add a statement to normalize the slower system by a factor of .80 as shown in the following example:

```
AL90,JES2,.80
```

- 4 Add the NORMALIZE CPU VALUES control statement to the CIMSMONY input control statements (see page 4-30).

When the NORMALIZE CPU VALUES control statement is specified, CIMSMONY searches each CSR+ record for the System\_ID and Work\_ID identifiers and their associated identifier values. The table of system ID and work ID values that is built from the statements in DD CIMSNCPU is searched for any matches. If a match is found, the CPU value is normalized based on the factor.

If you are using CIMSMONY in Server mode, CIMSMONY will add an identifier to the CIMS Server Ident file with the name *Original\_ratecode* where *ratecode* is the rate code that has been normalized. The value for this identifier is the resource value before normalization. For an example, see the CIMS Server Ident file entry in [CPU Normalization Example](#).

### CPU Normalization Example

Assume that you defined rate code Z003 (z/OS CPU) as a CPU rate and that your organization has two z/OS systems. System AL95 is 20 percent faster than system AL90. To normalize the values, choose one of the systems to use as the base system. In this example, AL95 is the base system. Use a factor of .80 to normalize AL90 to reflect the speed of AL95.

- 1 In the CPU Normalization table (DD CIMSNCPU), add the statement:

```
AL90,JES2,.80
```

- 2 Add the following control statement to CIMSMONY to recalculate the z/OS CPU time for the AL90 system:

```
NORMALIZE CPU VALUES
```

Assume that the original resource value for the Z003 rate code was 1.1. The normalized value is 8.8.

If you are using CIMSMONY in Server mode, the following is an example of the corresponding record in the CIMS Server Detail file (some fields have been removed for simplicity).

```
991,S390R792,200306,10000000072,0000000002,0000000000,..1,2,ATI ... ,01,Z003 , 0.88
```

The following is an example of the corresponding entry in the CIMS Server Ident file:

```
10000000072,2,Account_Code,ATI
10000000072,2,System,AL90
10000000072,2,Type,
10000000072,2,CLASS,C
10000000072,2,Original_Z003,1.1
```

### DEFINE

In CIMSMONY, the DEFINE control statement has less functionality than in CIMSBILL. This statement is used in Invoice mode only unless you are using the CLIENT SEARCH ON control statement in Server mode. This statement is used for defining sequence levels (J Levels) only. It is no longer used for defining fields for record include or exclusion.

## **INCLUDE/EXCLUDE**

CIMSBILL processes a fixed format record. CIMSMONY processes a comma-delimited record. Therefore, you cannot define an include or exclude field based on an offset into a record. The format of the INCLUDE and EXCLUDE statements has to be changed to include or exclude records by identifier values.

The new format of the INCLUDE and EXCLUDE statements is:

```
EXCLUDE rec_id ident offset_into_ident len low high
```

Where:

rec\_id = record name (i.e., S390DASD, S390R792, etc.)

ident = name of the identifier (i.e., Account\_Code, System\_ID, etc.)

offset\_into\_ident = starting offset into the identifier value

len = length of the identifier value to compare (1-16)

low = the Low or From selection value

high = the High or To selection value

### **Example**

Assume that you want to exclude all job records with a program name that starts with CIMS.

For CIMSBILL, you would use the control statement `EXCLUDE B3 CIMS CIMS`.

For CIMSMONY, assume that the program identifier defined in the CIMS VSAM Dictionary is PROGRAM. You would use the control statement `EXCLUDE S90R72 PROGRAM 1 4 CIMS CIMS`.

## **REPORT DATE**

In CIMSBILL, the REPORT DATE specifies the from and to date to print on the Invoice (CIMSINVC). The statement is also used to populate the start and end date fields in the CIMS Desktop file (CIMSDIST).

In CIMSMONY, the REPORT DATE statement has different implications depending on the mode that you are running.

If you are running CIMSMONY in Invoice mode, then REPORT DATE functions the same as it does in CIMSBILL.

If you are running CIMSMONY in Server mode, then you should not use REPORT DATE. This statement will place report dates rather than actual usage end dates in the accounting date fields of the CIMS Detail and Summary Records. This could result in missed charges, charges in the incorrect month, drill down not functioning correctly, and other issues.

You should allow CIMSMONY to calculate the accounting dates as described in [New Accounting Dates](#) on page 4-25.



## **SUR-CHARGES (CIMSBILL) and SUR-CHARGE CPU VALUES (CIMSMONY)**

In CIMSBILL, the class and priority surcharge statements are found in the CIMSCNTL DD. In CIMSMONY, the class and priority surcharge process has changed.

CIMSMONY supports job priority and job class surcharging. Implementing priority and class surcharging is similar to implementing CPU normalization. However, CIMSMONY applies a surcharge to CPU resource values for a specified class and/or priority rather than normalizing the values.

To perform class or priority surcharging, you need to do the following:

- 1 Ensure that the identifier R792JBPR (job priority) and/or R792JBCL (job class) is included as an aggregation point when you process 79x records through CIMSEXTR. By default, both of these identifiers are included as aggregation points.

For more information about aggregation and aggregation points, refer to the Extract and Aggregation Program—CIMSEXTR chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

- 2 Define each rate code that requires a surcharge as a CPU rate. To define a resource as a CPU rate, set rate flag 11 in the rate record to Y (see [New Flag for CPU Normalization and Priority/Class Surcharging](#) on page 4-23).
- 3 Add a member that is referenced by DDNAME CIMSSCPU. This member defines a set of CPU normalization statements for the CIMS system. These statements must be in the following format:

```
CLASS|PRIORITY,Class_or_Priority,System ID,Work ID,Factor (example:
CLASS,C,SYS1,JES2,.10)
```

The CLASS or PRIORITY indicator specifies whether you want to add a surcharge for a class or priority. It is followed by the class or priority (and optionally the system ID and work ID [subsystem]) that you want to surcharge.

The factor is the percentage by which you want to surcharge the CPU rate code value(s). For CIMSMONY, the factor is in its real precision. For example, if you want to surcharge class C by 10 percent, in CIMSBILL, you would add the following statement.

```
CLASS,C,10
```

CIMSBILL divides the factor by 100

In CIMSMONY you would add the following statement:

```
CLASS,C,,.10
```

- 4 Add the SUR-CHARGE CPU VALUES control statement to CIMSMONY (see [page 4-31](#))

When the SUR-CHARGE CPU VALUES control statement is specified, CIMSMONY searches each CSR+ record for the class and/or job priority identifiers and their associated values. The default identifier names are Job\_Class and Job\_Priority. To change these names, use the CLASS NAME and PRIORITY NAME control statements (see [page 4-29](#) and [page 4-30](#)).

If a job class and/or a job priority identifier is found in the record, the table of job classes and job priorities that is built from the statements in the CIMSSCPU DD is searched for any matches. If a match is found, the CPU value is surcharged based on the factor. The factor can be negative for discounts.

If you are using CIMSMONY in Server mode, CIMSMONY will add an identifier to the CIMS Server Ident file with the name `Original_ratecode` where `ratecode` is the rate code that has been surcharged. The value for this identifier is the resource value before the surcharge was applied. For an example, see the CIMS Server Ident file entry in [Surcharge Example](#).

### Surcharge Example

Assume that you defined rate code Z003 (z/OS CPU) as a CPU rate. Class T is a high-priority class that is surcharged 10 percent for its usage regardless of the system or subsystem.

- 1 In the Class and Priority Surcharge CPU table (DD CIMSSCPU), set an entry of:

```
CLASS,C,.10
```

- 2 Add the following control statement to CIMSMONY to recalculate the CPU time for Class C jobs:

```
SUR-CHARGE CPU VALUES
```

Assume that the original resource value for rate code Z003 was 1.1. The new Z003 value would be 1.21.

If you are using CIMSMONY in Server mode, the following is an example of the corresponding record in the CIMS Server Detail file (some fields have been removed for simplicity).

```
991,S390R792,200306,10000000072,0000000002,0000000000,..1,2,ATI ... ,01,Z003 , 1.21
```

The following is an example of the corresponding entry in the CIMS Server Ident file:

```
10000000072,2,Account_Code,ATI  
10000000072,2,System,AL95  
10000000072,2,Type,  
10000000072,2,CLASS,C  
10000000072,2,Original_Z003,1.1
```

## Tracing Options

CIMSMONY provides the following process tracing options.

To turn tracing on, use the control statement `TEST x`, where `x` is one of the following.

<b>TEST Y</b>	Prints general messages (control options specified, number of J levels specified, client search results, date selection criteria, etc.)
<b>TEST R</b>	Lists all rate tables, including their rates, options, and values
<b>TEST P</b>	Lists CSR+ record parsing results
<b>TEST S</b>	Lists the space needed for rate tables and internal control blocks.
<b>TEST C</b>	Traces the client processing.
<b>TEST B</b>	Lists all client break levels (J levels). This is primarily used in Invoice mode.
<b>TEST N</b>	Lists all CPU normalization processing.
<b>TEST D</b>	Lists the accounting date setting—all usage start and end dates and the accounting dates assigned to them.

## User Exits

In CIMSMONY, there are two user exits: CIMSACUA and CIMSUE16. These exits are controlled by the control statements `USER EXIT ROUTINE (CIMSACUA)` and `USER EXIT ROUTINE 2 (CIMSUE16)`.

The summary record passed to CIMSACUA is different than the summary record passed to CIMSACU8. Refer to the `DAILY-SUMMARY-REC1` layout in the CIMSUSER exit.

The record passed to CIMSUE16 is no longer the CIMS-ACCOUNT-FILE record—it is the CIMSMONY-RECORD. Refer to member `CIMRECMN` in `CIMS.DATAFILE` for the CIMSMONY-RECORD.

## **JCL and Interface Program Considerations**

### **JCL Changes**

The use of the CIMSMONY program requires multiple changes to the JCL. The JCL for all interface programs must be updated to include the CIMSACT2 DD statement, which contains the 79x records. CIMS required this DD statement in release 11.6; however, it might have been dummed out (DD DUMMY) of the JCL. You need to ensure that all of the CIMSACT2 files are produced. Refer to *Chapter 3, Upgrade Instructions* for a list of the JCL that you need to update.

If you are running CIMSMONY in Server mode, you should update all interface programs to execute CIMSEXTR and CIMSMONY and FTP data to CIMS Server. Refer to the sample interface JCL in CIMS.DATFILE.

The merge and end-of-month (or period) JCL members need to be updated. Refer to members CIMSMERG and CIMSEOM in CIMS.DATFILE.

### **Interface Program Considerations**

#### **CIMSCICS**

Program CIMSCICS is no longer needed if you are using CIMSMONY. All of the functionality of CIMSCICS is performed by the combination of CIMSCMF2, CIMSEXTR, and CIMSMONY.

CIMSEXTR summarizes the CICS transaction records based on the record definitions in the CIMS Dictionary. For more information about the CIMS Dictionary, refer to the CIMS Dictionary—CIMSDTV5 chapter in the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

#### **CIMSCMF2**

When using CIMSMONY, you need to update some of the CIMSCMF2 control parameters because the 791 records are not processed by CIMSCICS.

If you are using prime and non-prime shift code processing in CIMSCICS, you need to add the SHIFT control statements to your CIMSCMF2 control parameters. CIMSMONY and CIMS Server use shift codes rather than prime and non-prime rate codes.

The following control statements have been added to support this change. For more information about these statements, refer to the CIMS CICS Account Code Creation Program—CIMSCMF2 chapter in the *CIMS CICS Data Collector User Guide*.

- NON-PRIME SHIFT CODE = n. This control statement enables you to change the non-prime shift from the default shift 2 to another shift.
- NON-PRIME DAY yyyyddd/yyyymdd. The Julian or Gregorian Date specified by this control statement is considered a non-prime processing day. If the NON-PRIME SHIFT CODE control statement is not present, all work processed on this day is assigned to the default shift 2.

# Installation Flow Charts

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# Installation

The CIMS distribution tape contains ten (10) data sets.

*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 (see [page 2-8](#)).

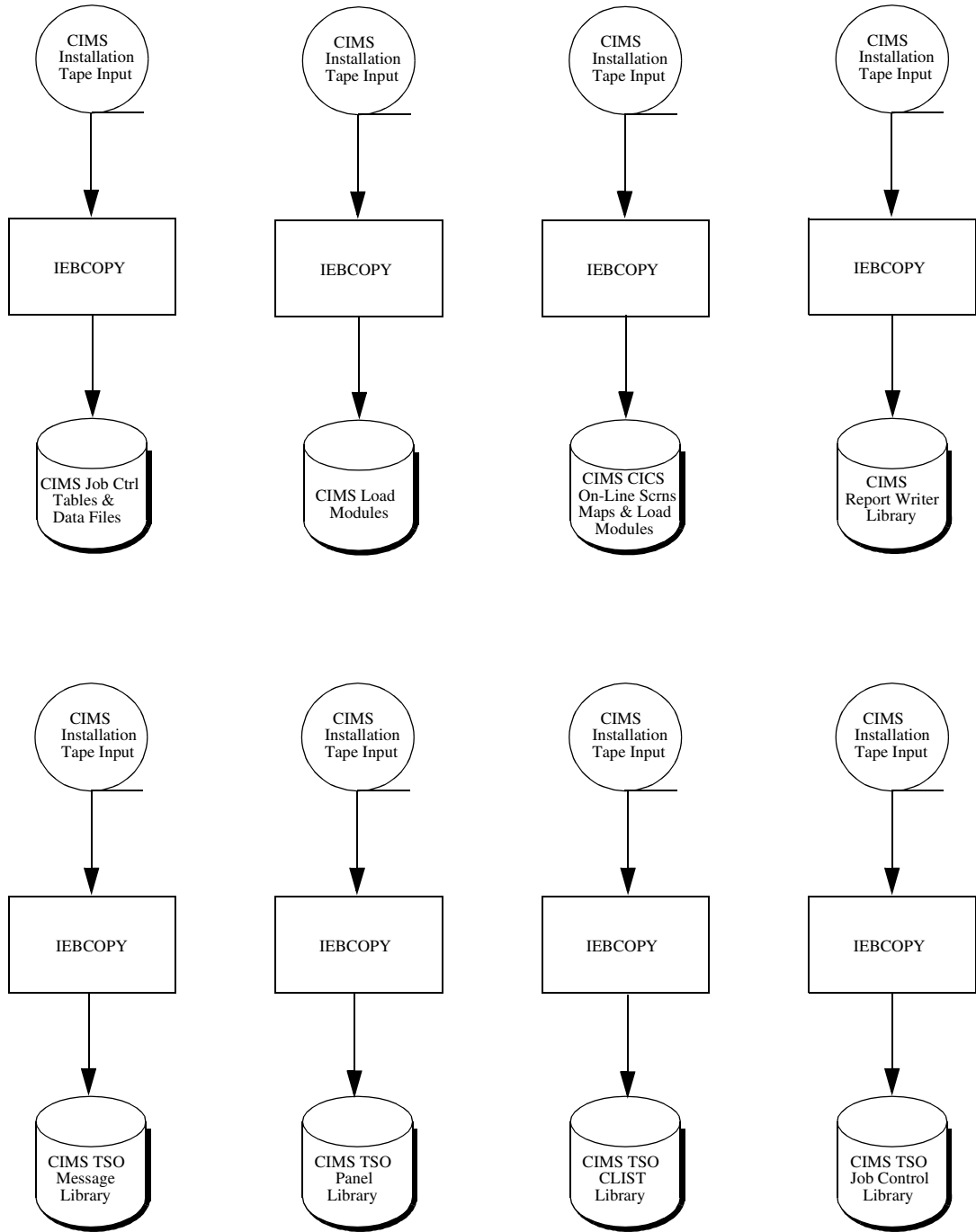
- Catalog files:

- '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.MESSAGES
- 'NODE'.CIMS.PANELS
- 'NODE'.CIMS.CLIST

- Access CIMS.DATAFILE and follow the instructions on [page 2-10](#) & [page 2-12](#).

<sup>1</sup>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.

CIMSDATA performs the following tasks:

- Processes IBM's SMF data
- Accepts control statements
- Writes data sets 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

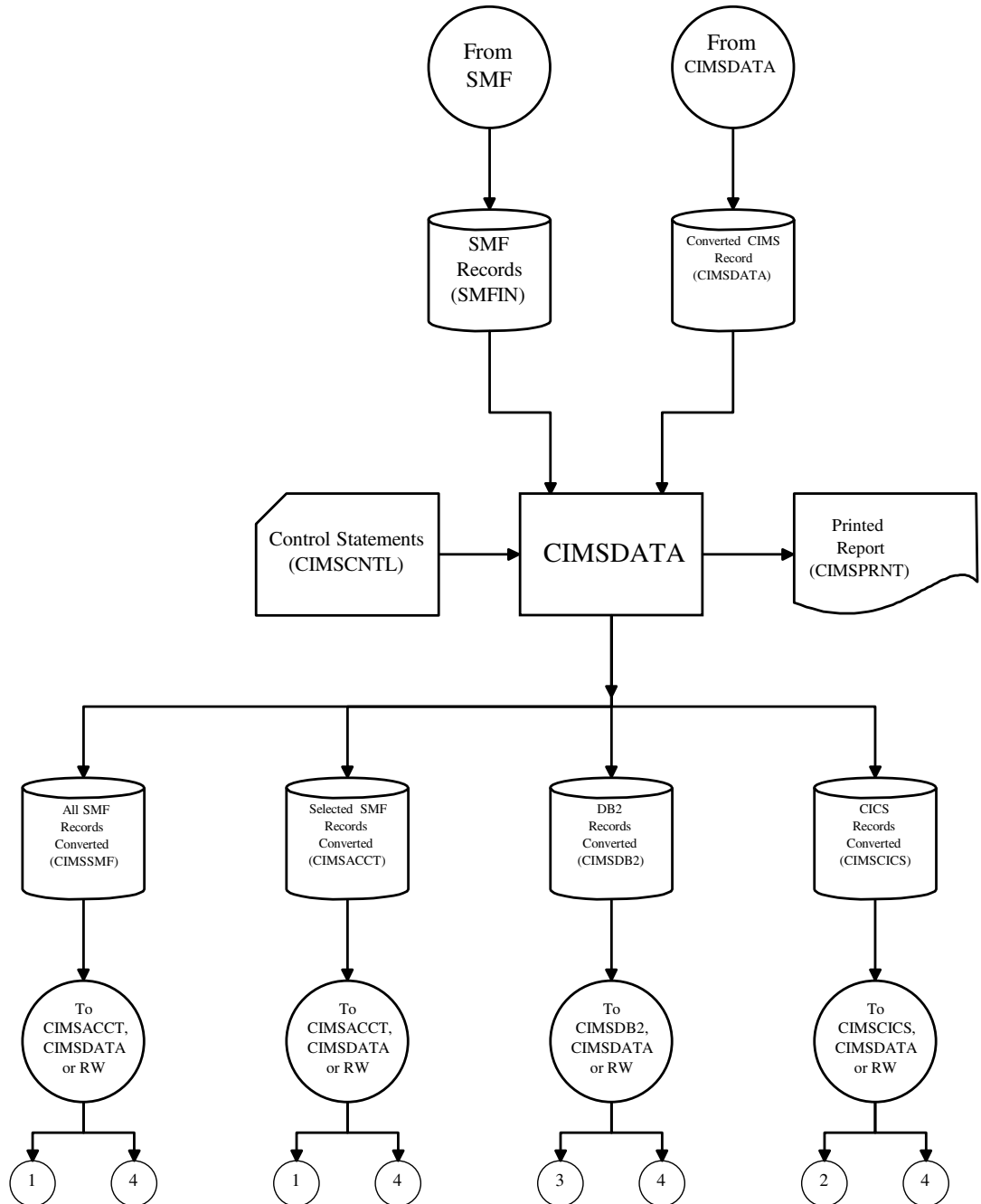
- Prints statistics on the number of SMF records read and written.

All of the data sets that CIMSDATA catalogs can be processed by the CIMS Report Writer.

### Connectors

- [1] Refers to the CIMSACCT flow chart on [page 5-8](#).
- [2] Refers to the CIMSCICS flow chart on [page 5-25](#).
- [3] Refers to the CIMSDB2 flow chart on [page 5-28](#).
- [4] Refers to the CIMS Report Writer flow chart on [page 5-30](#).

## CIMSDATA Flow Chart



**Note** • Values in parentheses represents DDNAMES.

## CIMSACCT–Process SMF

The CIMSACCT control statement `PROCESS SMF RECORDS` processes SMF data created by program CIMSDATA and produces CIMS accounting data.

Job control to execute CIMSACCT is in `CIMS.DATAFILE` as member CIMSJOB2.

When the `PROCESS SMF RECORDS` statement is used, the CIMSACCT performs the following tasks:

- Processes SMF data created by CIMSDATA
- Accepts the CIMS Calendar file
- Requires the CIMS Password file
- Accepts control statements
- Processes a Suspense file of unmatched accounting codes
- Writes CIMS accounting data (both CIMS 79x accounting records and 6 and 30 accounting records)
- Writes a Suspense file of unmatched accounting codes
- Prints statistics for each record type read and written

CIMS accounting data is passed to CIMS MERG, CIMSEXTR, CIMSMONY, CIMS BILL, and CIMS Report Writer.

## Connectors

- [4] Refers to CIMS Report Writer flow chart on [page 5-30](#) and the CIMS MERG flow chart on [page 5-32](#).
- [5] Refers to the CIMS MERG flow chart on [page 5-32](#).
- [5E] Refers to the CIMS MERG flow chart on [page 5-32](#).



## CIMSACCT—Process External Transactions

The CIMSACCT control statement `PROCESS EXTERNAL TRANSACTIONS` processes external transactions and produces CIMS Accounting data.

Job control to execute CIMSACCT 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 Mainframe Data Collector and Chargeback System User Guide*.

When the `PROCESS EXTERNAL TRANSACTIONS` control statement is used, CIMSACCT performs the following tasks:

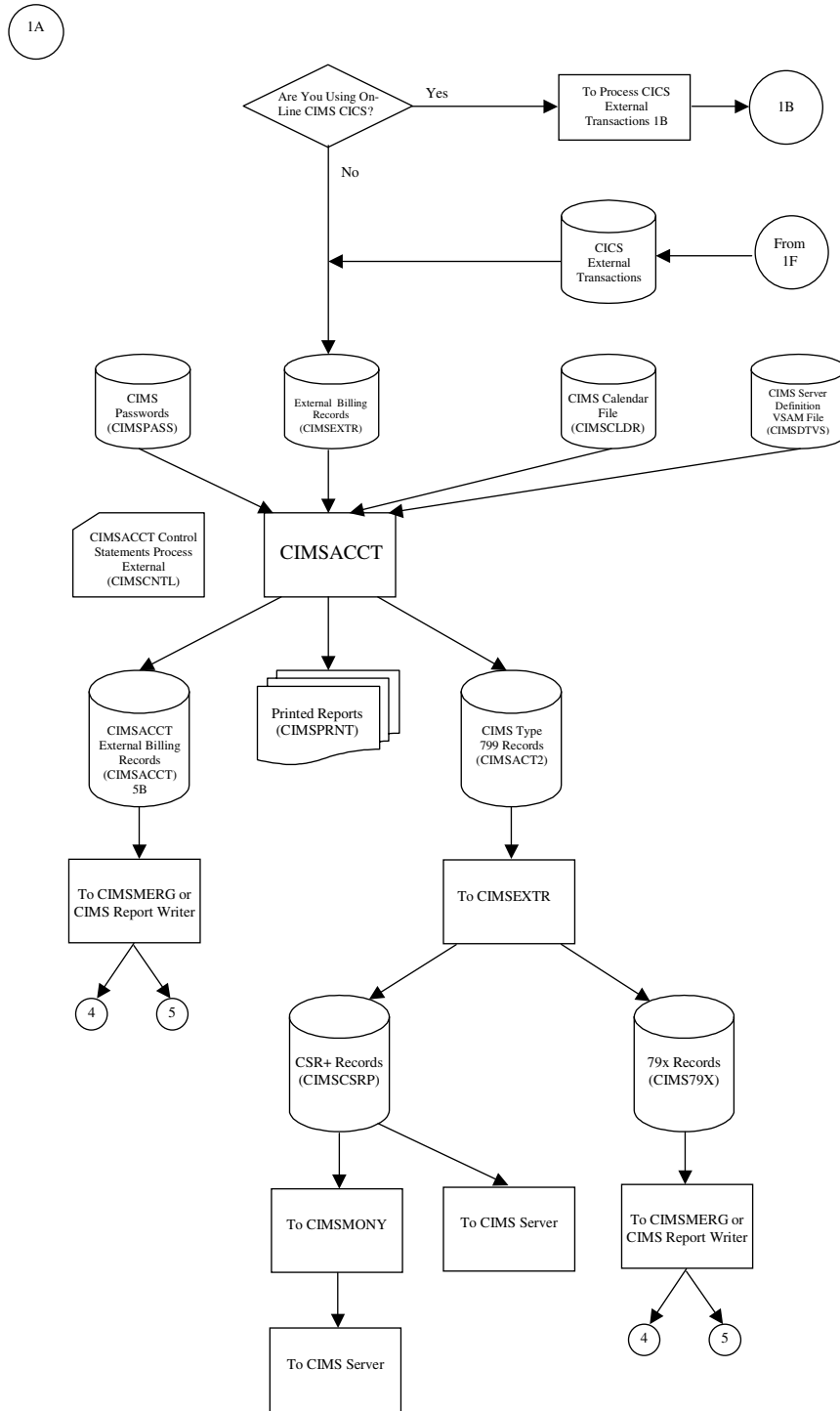
- Processes external transactions
- Processes external transactions from CIMS CICS screens
- Accepts the CIMS Calendar file
- Requires the CIMS Password file
- Accepts processing control statements
- Writes CIMS accounting data (both CIMS 799 accounting records and 999 accounting records)
- Prints statistics for each record type read and written

CIMS accounting data is passed to `CIMSMERG`, `CIMSEXTR`, `CIMSMONY`, `CIMSBILL`, and CIMS Report Writer.

### Connectors

- |      |   |
|------|---|
| [1B] | Refers to the CIMS CICS External Transaction Processing flow chart on <a href="#">page 5-12</a> . |
| [1F] | Refers to DATE processing for external transactions on <a href="#">page 5-19</a> .                |
| [4]  | Refers to the CIMS Report Writer flow chart on <a href="#">page 5-29</a> .                        |
| [5]  | Refers to the CIMSMERG flow chart on <a href="#">page 5-32</a> .                                  |
| [5B] | Refers to the CIMSMERG flow chart on <a href="#">page 5-32</a> .                                  |

## CIMSACCT—Process External Transactions Flow Chart



**Note** • Values in parentheses represents DDNAMES.

## Process CICS Online External Transactions

CIMS provides CICS on-line screens for the input of external transactions. Refer to the *CIMS Data Entry Screens* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*, which provides documentation for CIMS CICS on-line screens.

The CIMSACCT control statement `PROCESS EXTERNAL TRANSACTIONS` processes the following records:

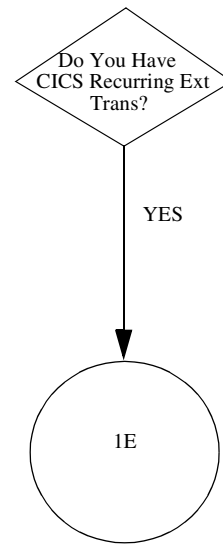
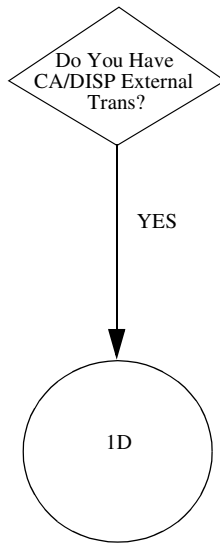
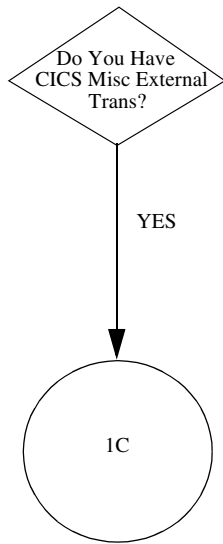
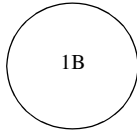
- Miscellaneous transactions
- CA/DISPATCH transactions
- Recurring transactions

Job control for CIMSMESS, CIMSDSPH, CIMSRECU, and CIMSBDTE are in CIMS.DATFILE as members CIMSEXT1, CIMSEXT2, CIMSEXT3, and CIMSEXT4.

### Connectors

- |      |   |
|------|---|
| [1C] | Refers to Miscellaneous External Transactions Flow Chart on <a href="#">page 5-14</a> . |
| [1D] | Refers to CA/DISPATCH External Transactions Flow Chart on <a href="#">page 5-16</a> .   |
| [1E] | Refers to Recurring External Transactions Flow Chart on <a href="#">page 5-17</a> .     |

## CICS Online External Transactions Flow Chart





## Process Miscellaneous CICS External Transactions

### CIMS CICS Miscellaneous External Transaction Processing

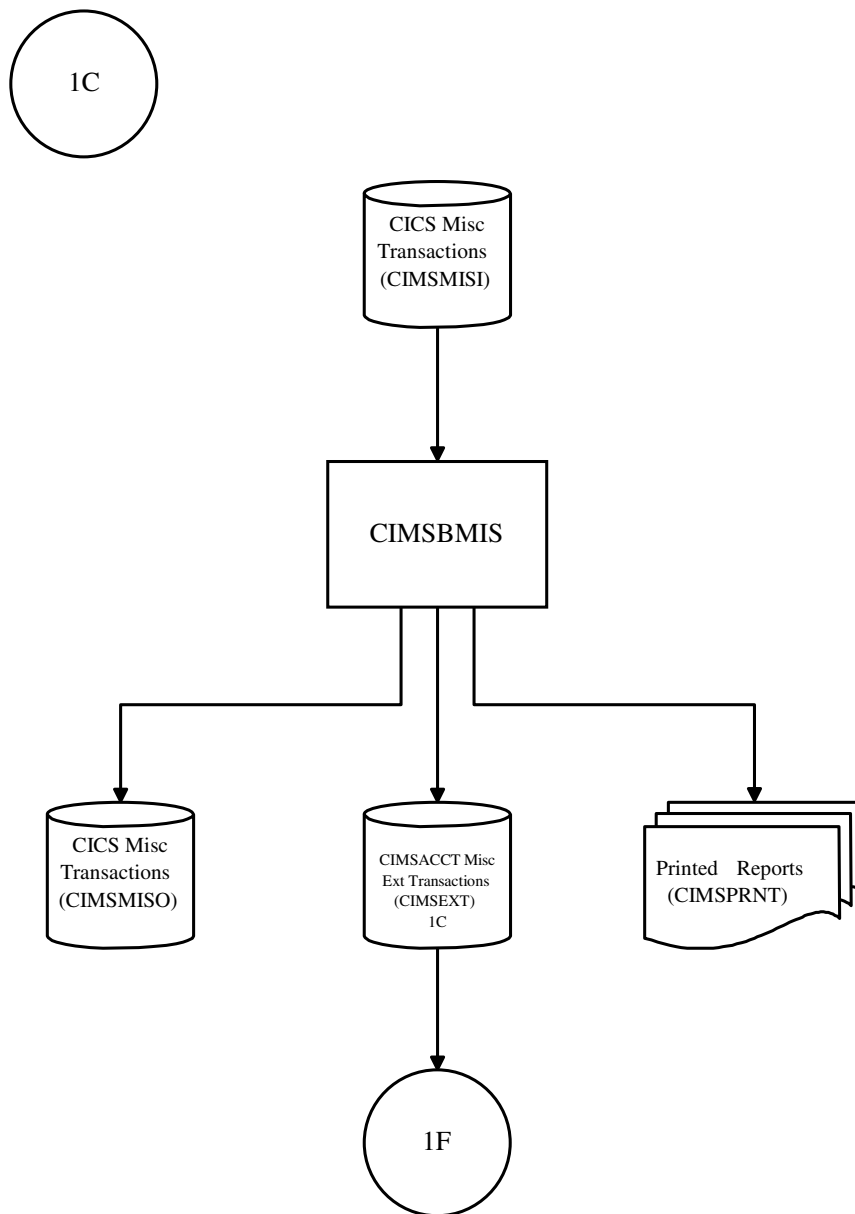
Job control CIMSEXT1 for program CIMSBMIS performs the following tasks:

- 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 5-19](#).
- [1F] Refers to CIMS Batch External Date Flow Chart on [page 5-19](#).

## Process Miscellaneous CICS External Transactions Flow Chart



---

**Note** • Values in parentheses represents DDNAMES.

---

## Process CA/DISPATCH CICS External Transactions

Job control CIMSEXT2 for program CIMSBDSP performs the following tasks:

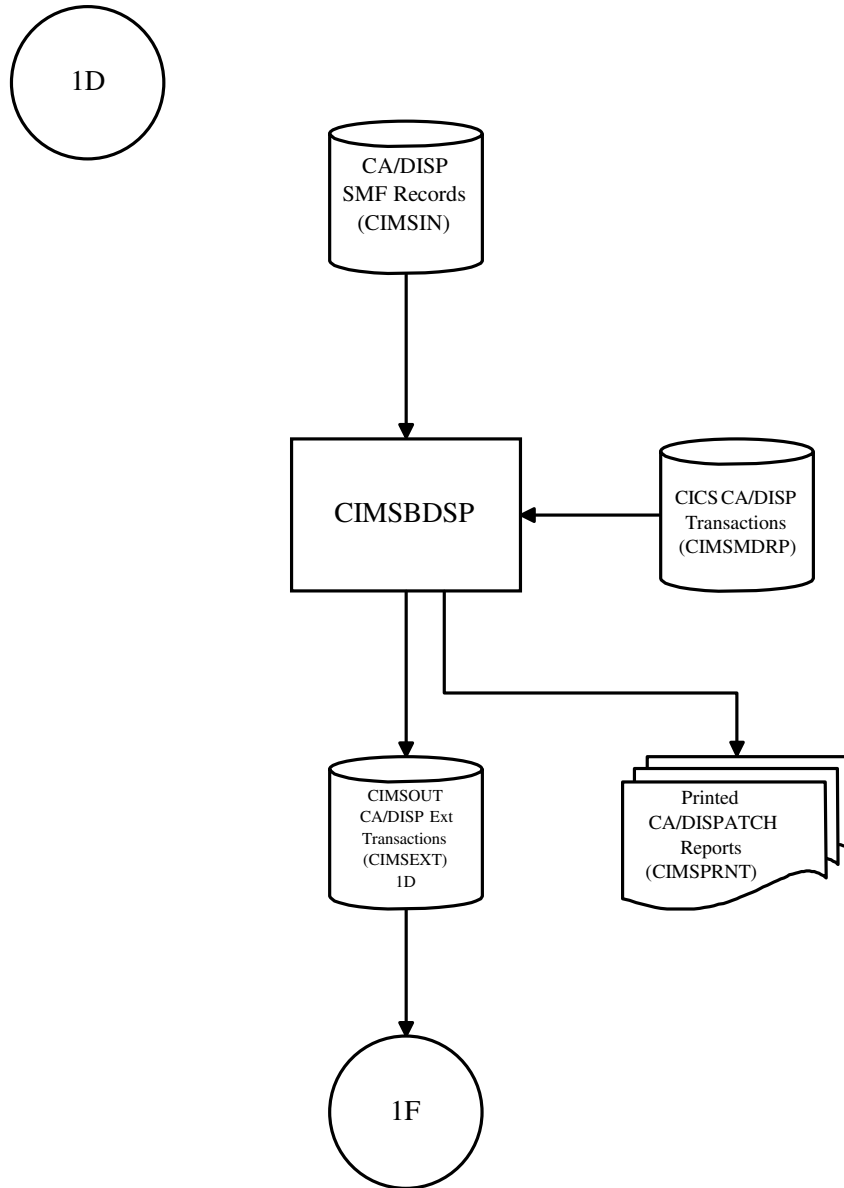
- Processes CA/DISPATCH SMF records
- Processes CA/DISPATCH transactions from the CICS database
- Writes CA/DISPATCH external transactions
- Prints CA/DISPATCH transactions

### Connectors

[1D] Refers to CIMS CA/DISPATCH External Transaction data set in CIMS Batch External Date flow Chart on [page 5-19](#).

[1F] Refers to CIMS Batch External Date Flow Chart on [page 5-19](#).

## Process CA/DISPATCH CICS External Transactions Flow Chart



---

**Note** • Values in parentheses represents DDNAMES.

---

## Process Recurring CICS External Transactions

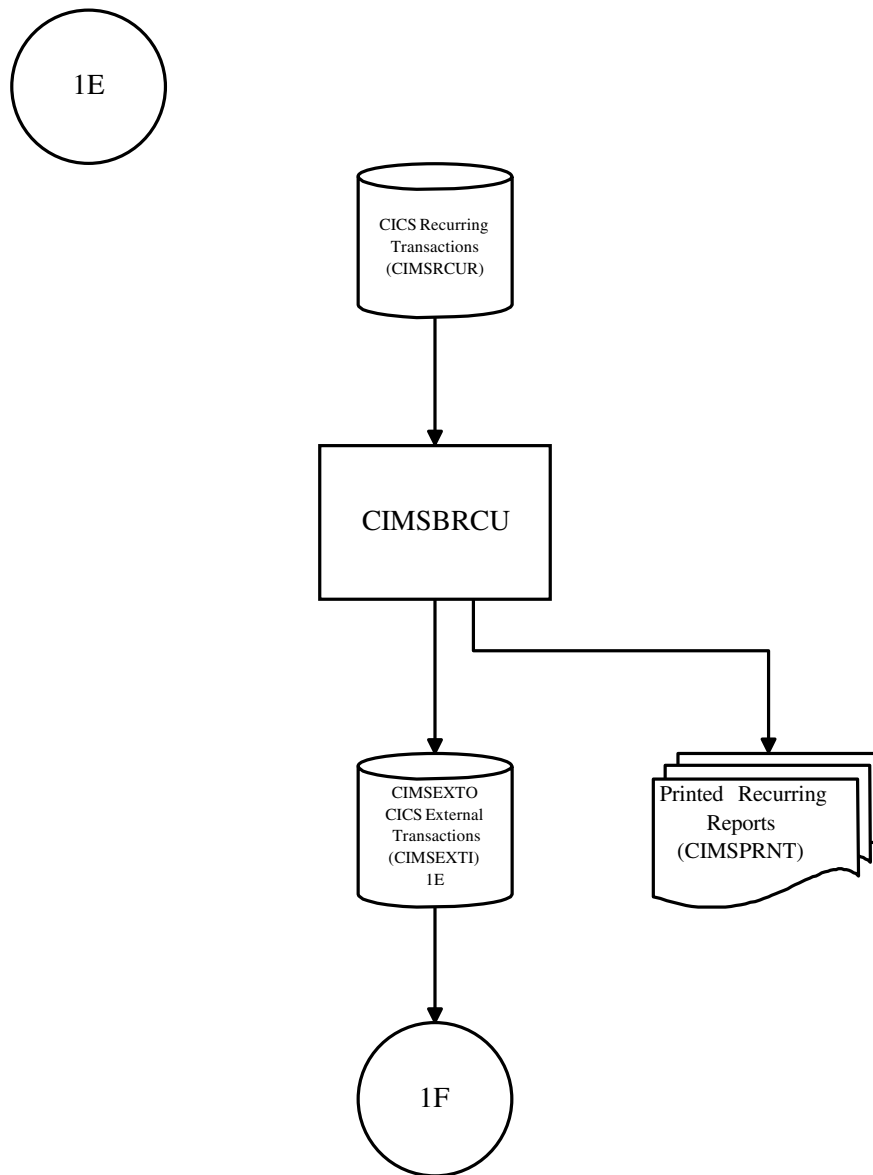
Job Control CIMSEXT3 for program CIMSBRUCU performs the following tasks:

- 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 [page 5-19](#).
- [1F] Refers to CIMS Batch External Date Flow Chart on [page 5-19](#).

## Process Recurring CICS External Transactions Flow Chart



---

**Note** • Values in parentheses represents DDNAMES.

---

## CIMSDTE Batch External Date Program

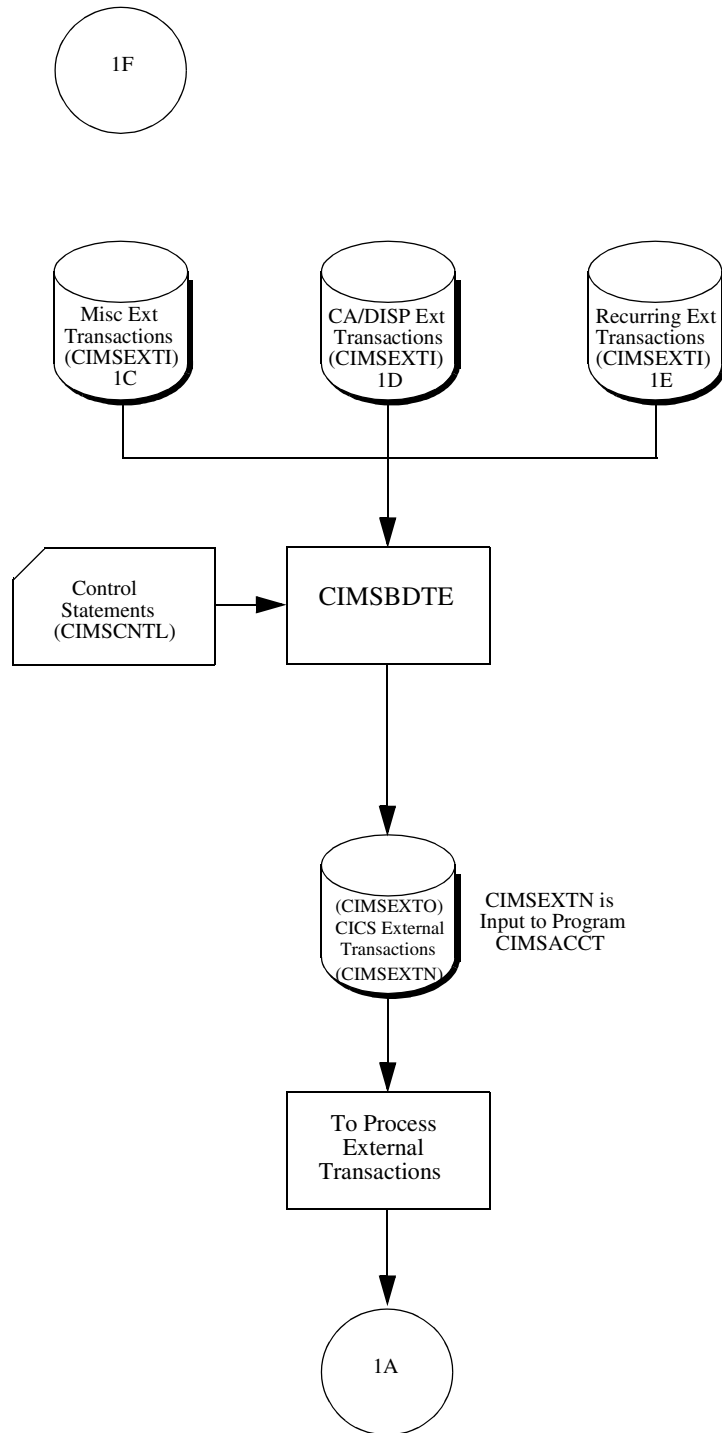
Job control CIMSEXT4 for program CIMSDTE performs the following tasks:

- 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 5-10](#).
- [1C] Refers to CIMSBMIS Flow Chart on [page 5-14](#).
- [1D] Refers to CIMSDSP Flow Chart on [page 5-16](#).
- [1E] Refers to CIMSBRUCU Flow Chart on [page 5-17](#).

## CIMSDTE—Batch External Date Program Flow Chart



---

**Note** • Values in parentheses represents DDNAMES.

---



## CIMSACCT—Process CIMS Maintenance

The CIMSACCT control statement `PROCESS CIMS MAINTENANCE` performs the following:

- Processes a data set created by CIMSACCT. DDNAME CIMSACIN
- Provides account code edit capability. **Ex: GLOBAL CHANGE**
- Produces an edited accounting file. DDNAME CIMSACCT

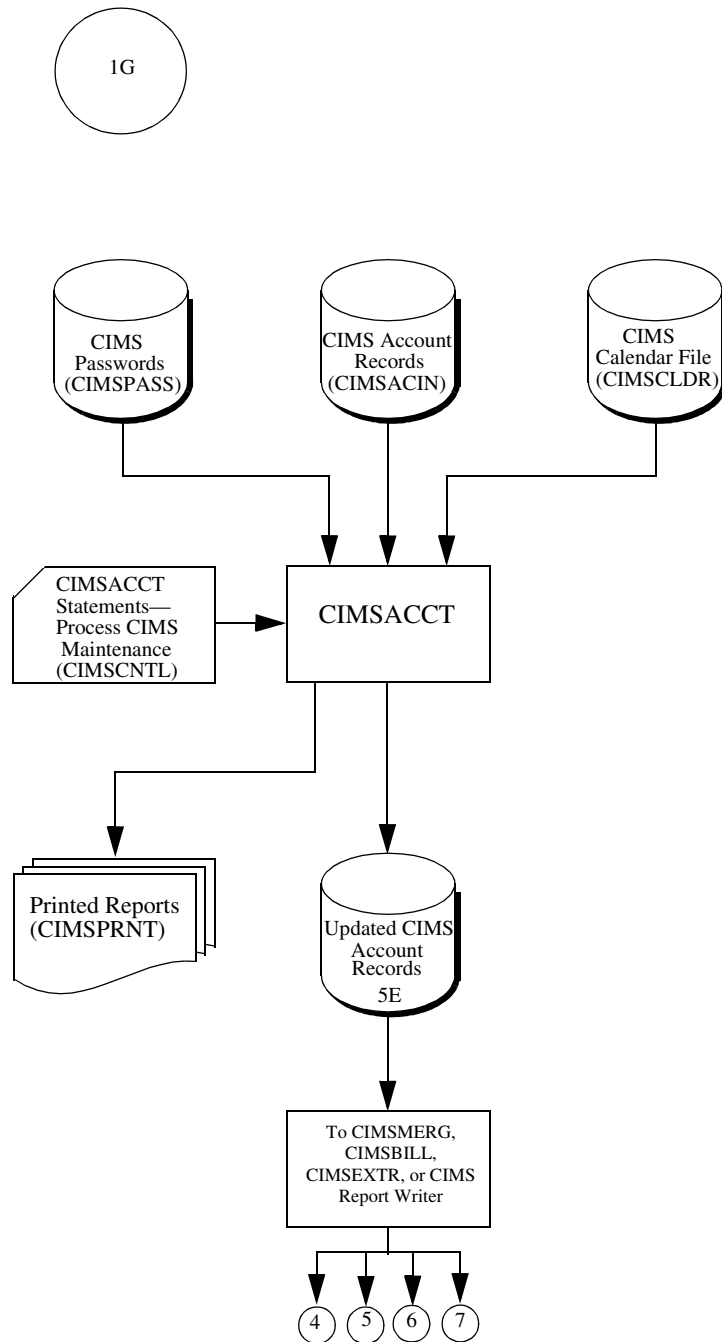
Job control to execute CIMSACCT is in `CIMS.DATAFILE` as member `CIMSJB2B`. An example of changing accounting data is provided in the *Accounting File Creation Program—CIMSACCT* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

CIMS accounting data is passed to CIMS`MERG`, CIMS`EXTR`, CIMS`MONY`, CIMS`BILL`, and CIMS Report Writer.

### Connectors

- [4] Refers to the CIMS Report Writer flow chart on [page 5-30](#).
  - [5] Refers to the CIMS`MERG` flow chart on [page 5-32](#).
  - [5E] Refers to the CIMS`MERG` flow chart on [page 5-32](#).
  - [6] Refers to the CIMS`MONY` flow chart on [page 5-34](#).
  - [7] Refers to the CIMS`BILL` flow chart on [page 5-36](#).
-

### CIMSACCT—Process CIMS Maintenance Flow Chart



---

**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 is in CIMS.DATFILE as member CIMSCICS.

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 [page 5-6](#).)
  - 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 data set, 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 data set to CIMSCICS and CIMS Report Writer.

## ■ Installation Flow Charts

### *CIMSCICS–CIMSCICS Transaction Chargeback*

---

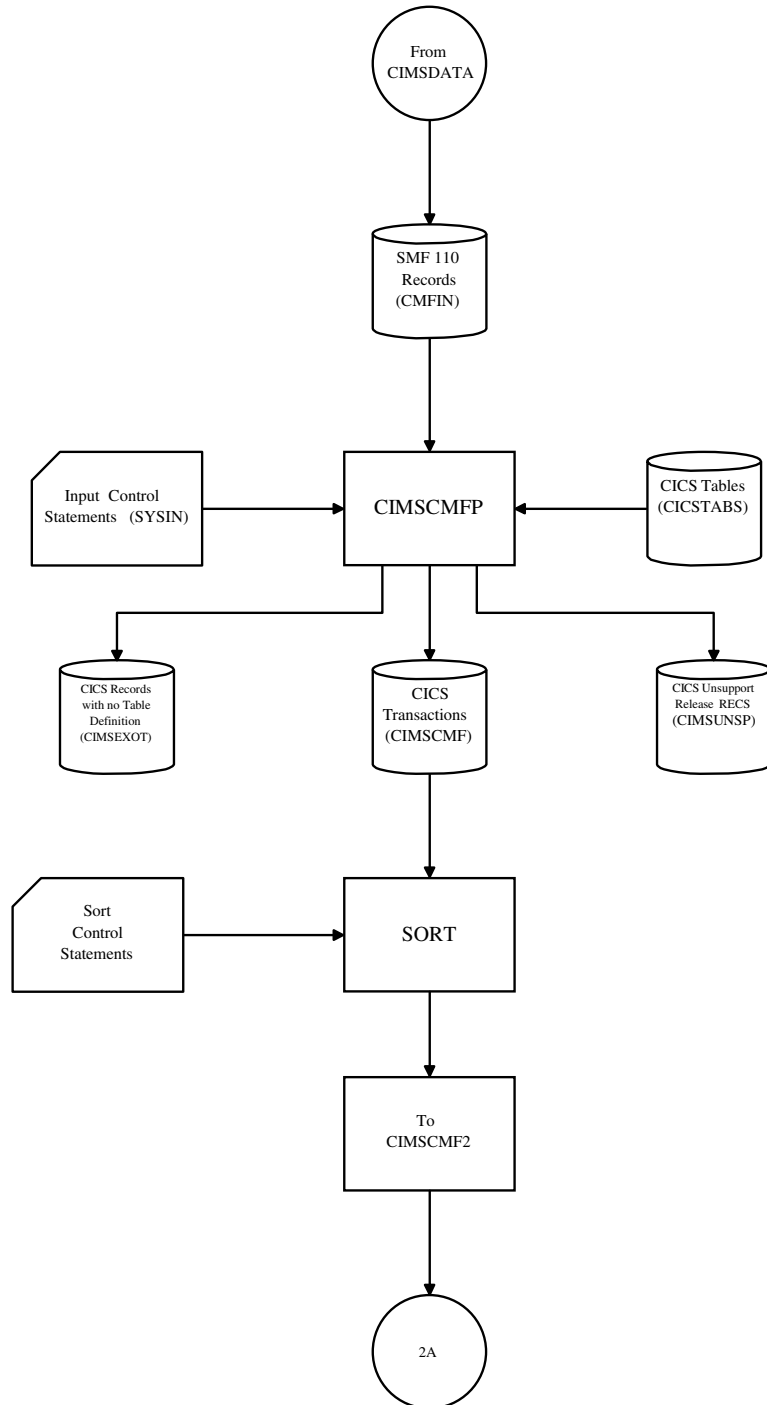
- Program CIMSCICS performs the following tasks:
  - Processes data set created by CIMSCMF2. (CIMSCICS is not needed to process this data if you are processing the 79x accounting records only.)
  - Reads Client VSAM file
  - Reads Rate VSAM file
  - Accepts CICS input control statements
  - Writes CIMS CICS Accounting data
  - Prints reports displaying detail and summary CICS usage
  - Passes the CIMS CICS accounting data set to CIMSMERG and CIMS Report Writer.

## Connectors

- [2A] Refers to the CIMS CICS Flow Chart on [page 5-26](#).
- [4] Refers to the CIMS Report Writer Flow Chart on [page 5-30](#).
- [5] Refers to the CIMSBILL Flow Chart on [page 5-36](#).

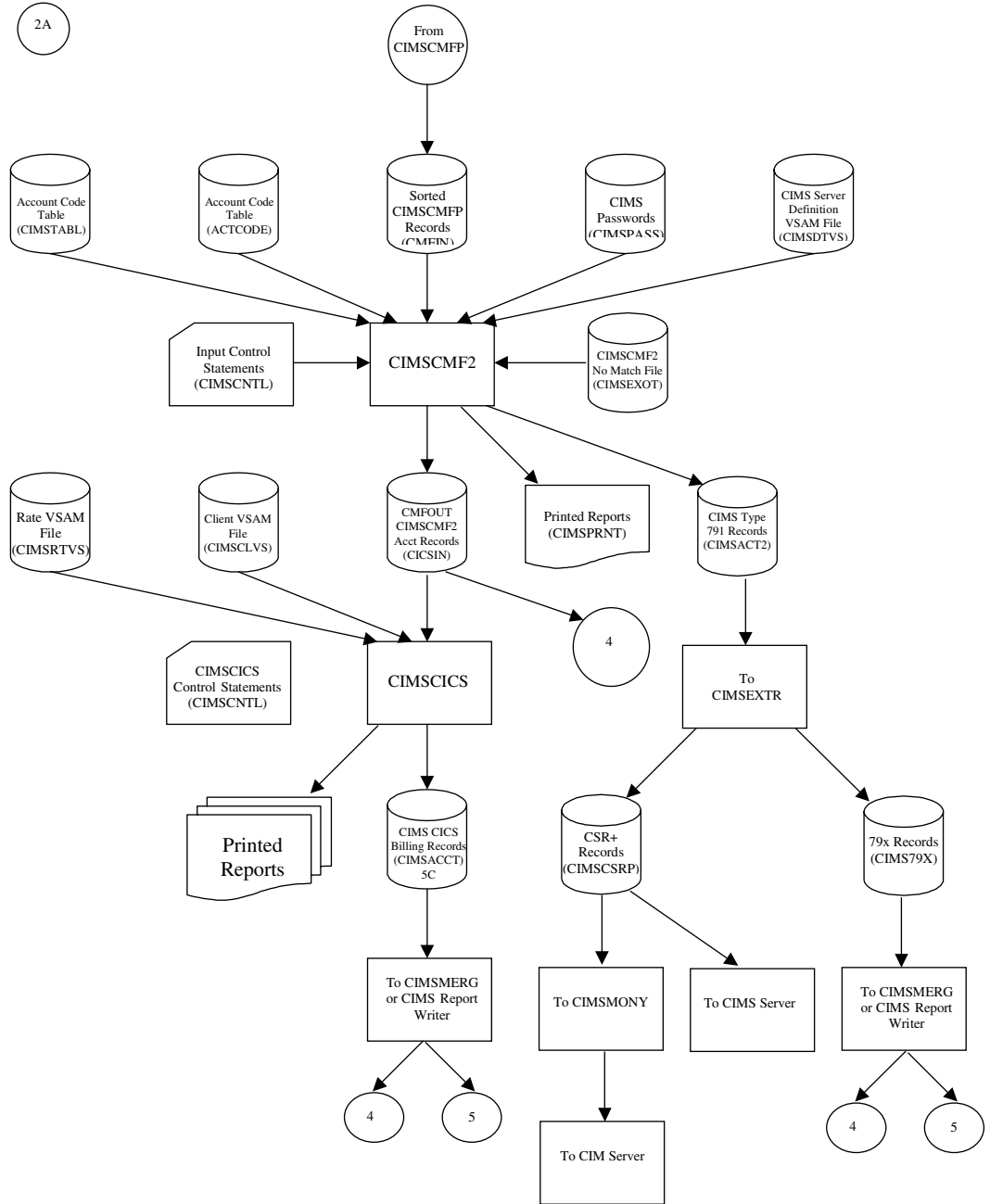
## CIMSCICS Flow Chart

2



**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 5-6](#).

CIMSDB2 produces CIMS DB2 accounting data.

Job Control to execute CIMSDB2 is in CIMS.DATFILE as member CIMSDB2. Example job control is provided in the *DB2 Transaction Accounting Program—CIMSDB2* chapter of the *CIMS Mainframe Data Collector and Chargeback System 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 5-30](#).
- [5D] Refers to the CIMSMERG data set in the flow chart on [page 5-32](#).
- [6] Refers to the CIMSMONY flow chart on [page 5-34](#).
- [7] Refers to the CIMSBILL flow chart on [page 5-36](#).





# CIMS Report Writer

## CIMS General Purpose Report Writer

CIMS Report Writer is a general purpose reporting system.

Job Control to execute CIMS Report Writer is in CIMS.DATFILE as member CIMSJOB4.

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

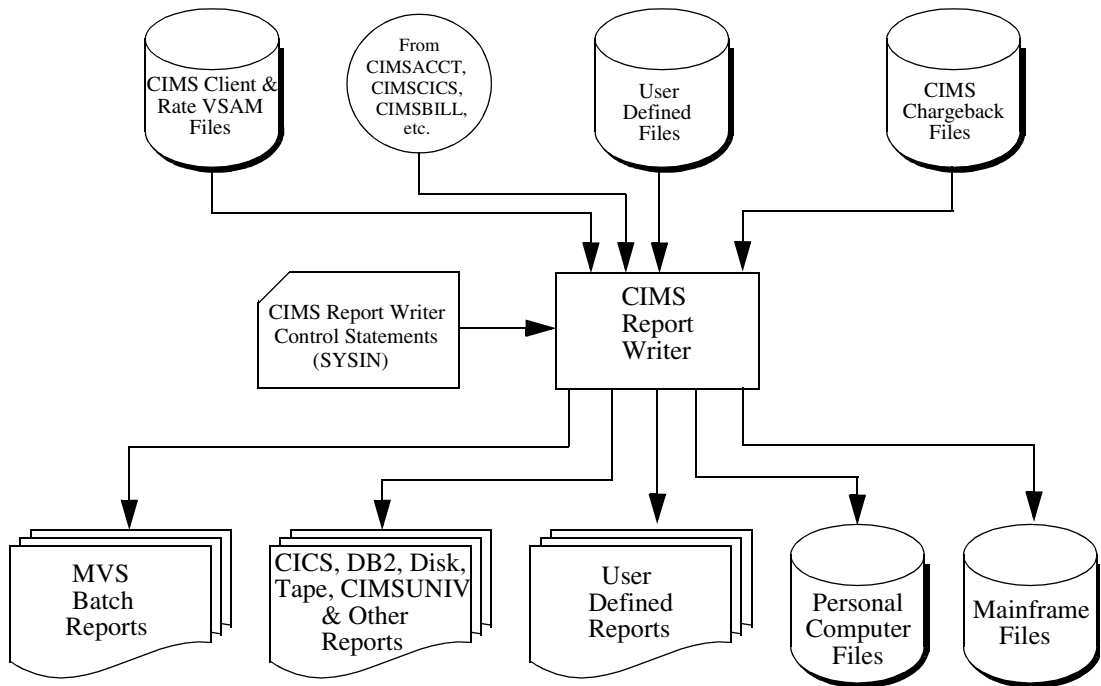
CIMS Report Writer is documented in a separate manual.

A list of standard reports is contained in member AALEGEND in CIMS.REPTLIB.

## CIMS Report Writer Flow Chart

### CIMS General Purpose Report Writer

4



---

**Note** • Values in parentheses represents DDNAMES.

---

# CIMSMERG

## CIMS Account File Merge Procedure

CIMSMERG performs three functions:

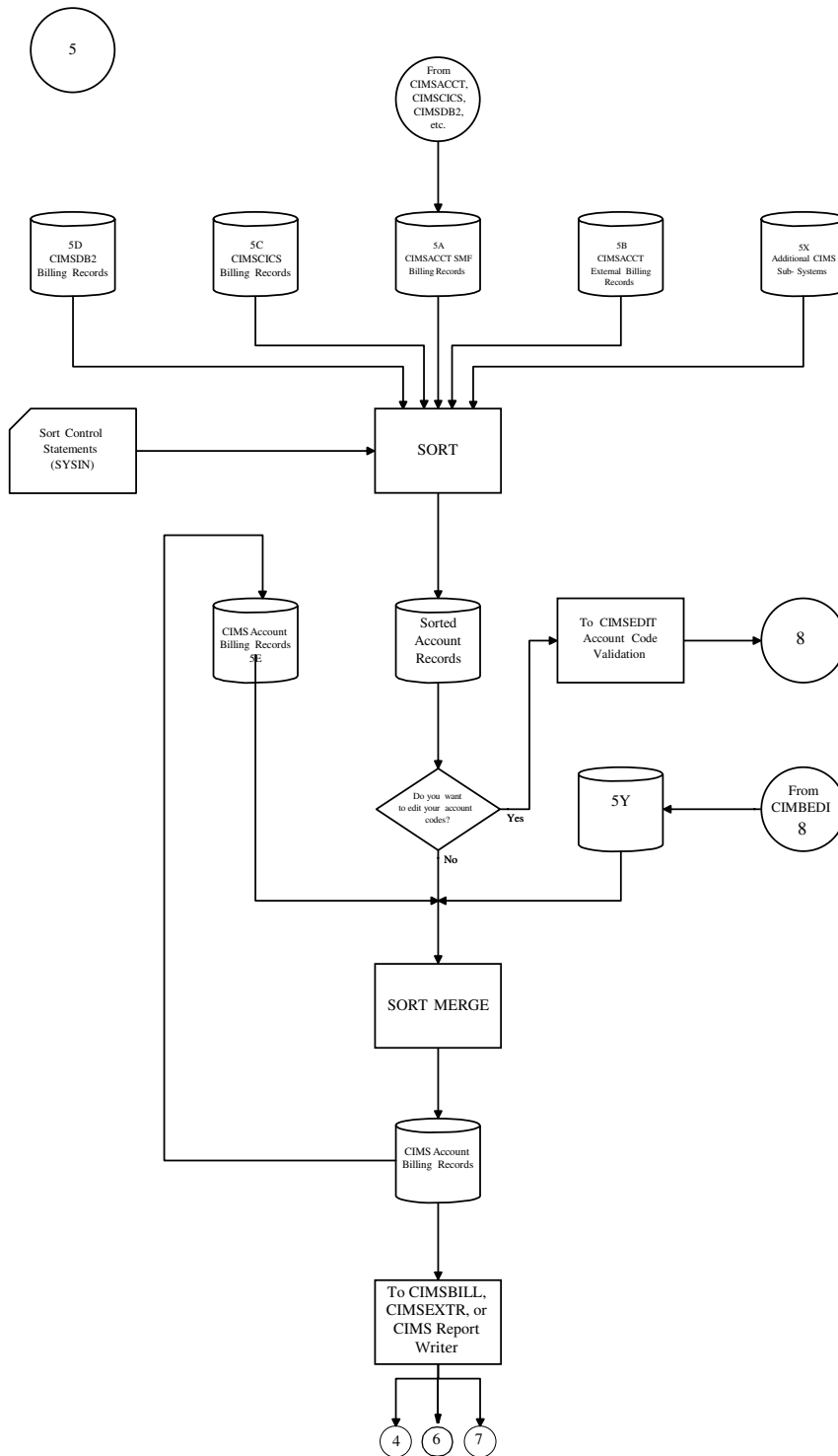
- Sorts the CIMS accounting records
- Merges Daily, Month-to-Date, CICS Miscellaneous, CICS Recurring, CA/DISPATCH and Rejected accounting records.
- Creates Month-to-Date accounting records

Job control for CIMSMERG is in CIMS.DATFILE as member CIMSMERG. Month-to-Date accounting records are passed to CIMSBILL and CIMS Report Writer.

## Connectors

- [4] Refers to the CIMS Report Writer flow chart on [page 5-30](#).
- [5A] Refers to the CIMSACCT (SMF) flow chart on [page 5-8](#).
- [5B] Refers to the CIMSACCT (External) flow chart on [page 5-10](#).
- [5C] Refers to the CIMS CICS flow chart on [page 5-26](#).
- [5D] Refers to the CIMS DB2 flow chart on [page 5-28](#).
- [5X] Refers to any additional files coming from other sub-systems.
- [5Y] Refers to the CIMSEEDIT flow chart on [page 5-39](#).
- [6] Refers to the CIMSMONY flow chart on [page 5-34](#).
- [7] Refers to the CIMSBILL flow chart on [page 5-36](#).
- [8] Refers to the CIMSEEDIT flow chart on [page 5-39](#).

**CIMSMERG Flow Chart**



**Note** • Values in parentheses represents DDNAMES.

# CIMSMONY

## CIMS Billing & Chargeback Program

CIMSMONY processes the CSR+ records that are generated by CIMSEXTR and produces:

- Invoices
- CIMS Summary File
- CIMS Desktop File

Job control for CIMSMONY is in CIMS.DATFILE as member CIMSJOB3.

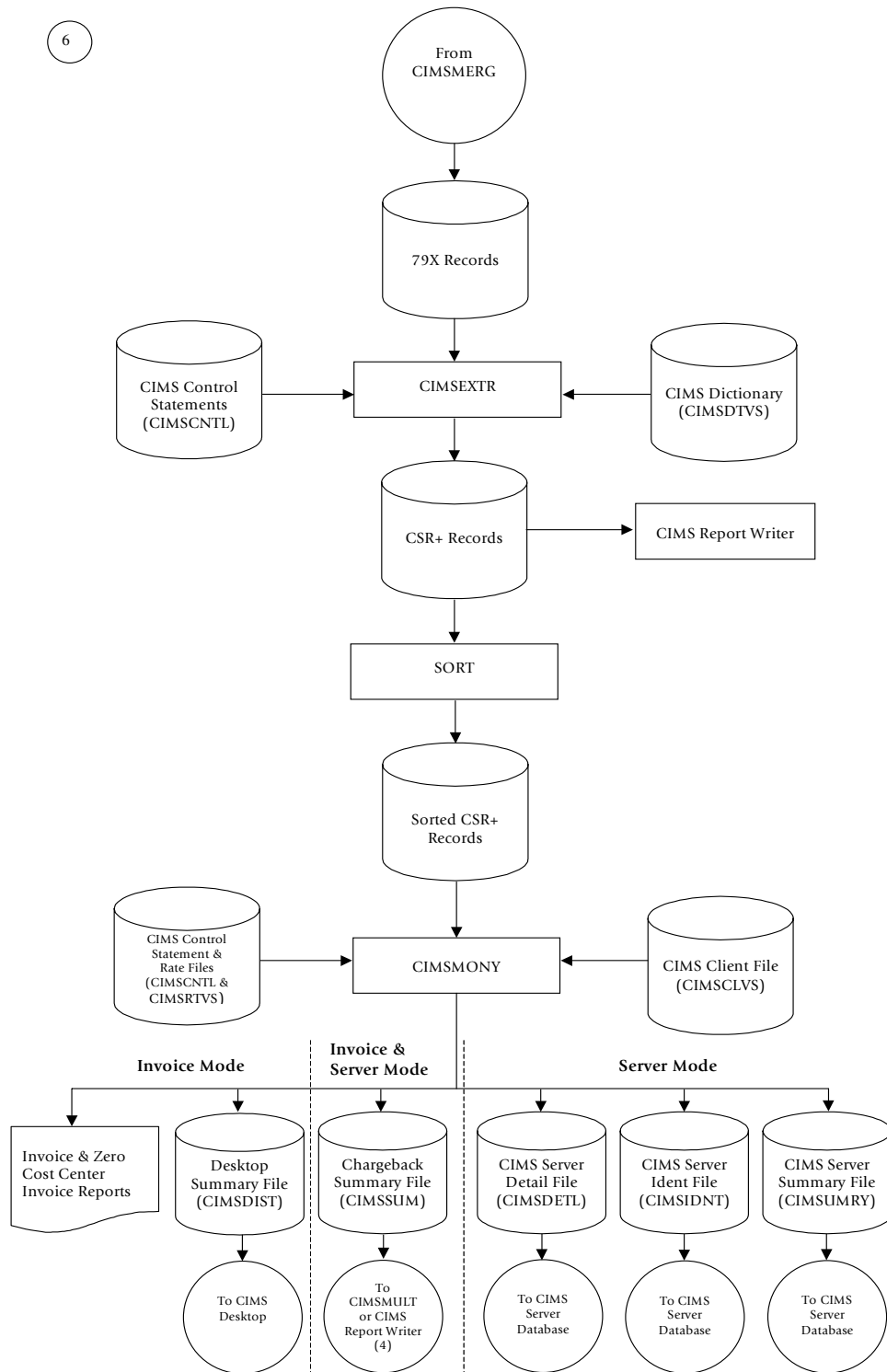
CIMSMONY performs the following tasks:

- Processes Sorted Month to Date CSR+ Records
- Reads the CIMS Client VSAM file
- Reads the CIMS Rate VSAM file
- Accepts Control statements
- Writes Summary File
- Writes CIMS Desktop File
- Writes Invoices
- Can also produce CIMS Server Ident, Detail, and Summary files for input into CIMS Server database.

## Connectors

[4]                      Refers to the CIMS Report Writer flow chart on [page 5-30](#).

**CIMSMONY Flow Chart**



**Note** • Values in parentheses represents DDNAMES.

# CIMSBILL

## CIMS Billing & Chargeback Program

CIMSBILL processes the accounting records created by CIMSMEG and produces:

- Billing Reports
- CIMS Year to Date File
- CIMS Summary File
- CIMS Resource File

Job Control for CIMSBILL is in CIMS.DATFILE as member CIMSJOB5. Example job control is provided in the *Computer Center Chargeback Program—CIMSBILL* chapter of the *CIMS Mainframe Data Collector and Chargeback System User Guide*.

CIMSBILL performs the following tasks:

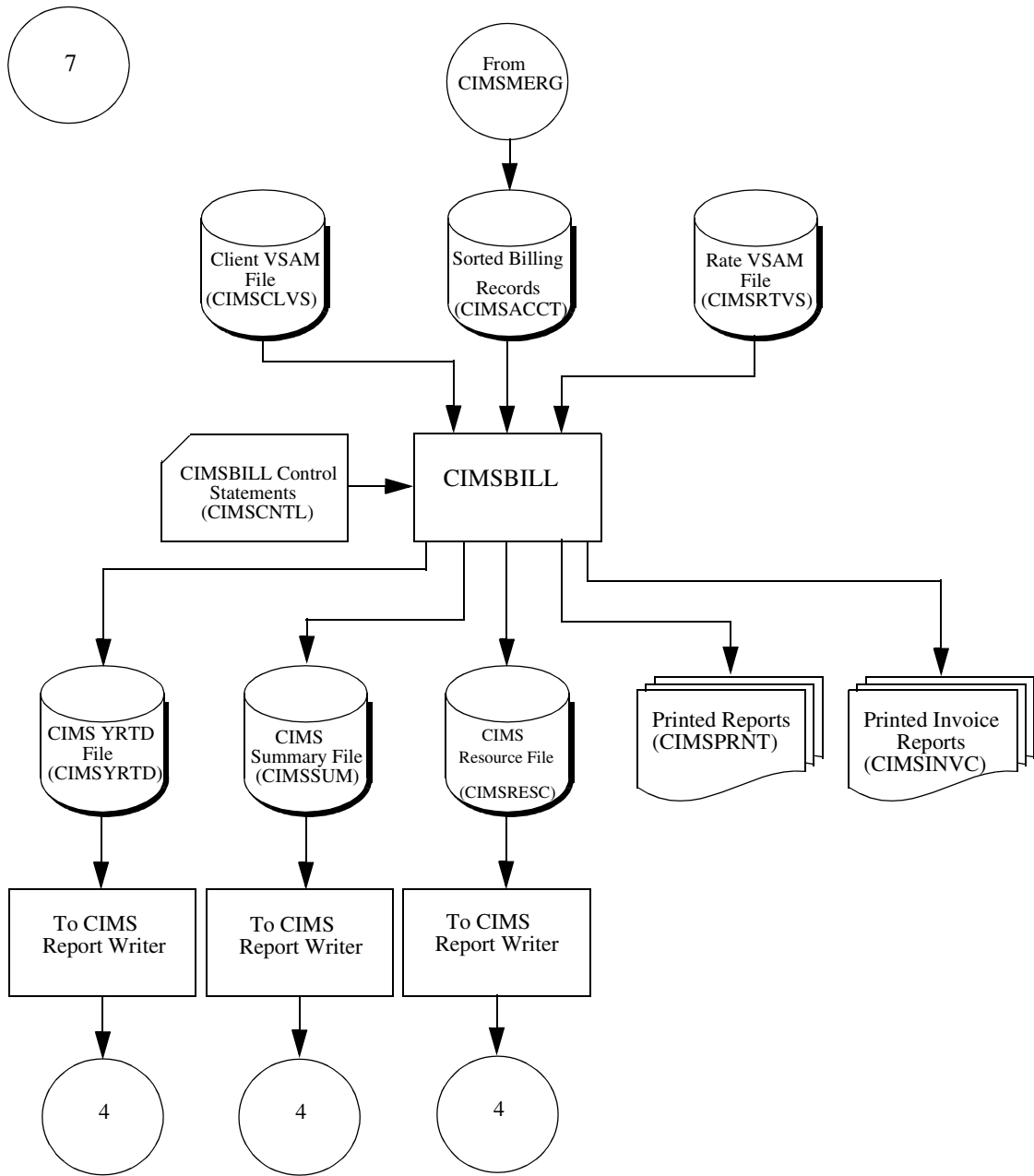
- Processes Sorted Month to Date Accounting Records
- Reads the CIMS Client VSAM file
- Reads the CIMS Rate VSAM file
- Accepts Control statements
- Writes Year to Date File
- Writes Summary File
- Writes Resource File
- Prints Invoice, Zero Cost, Job Cost, Detail & Summary Reports
- Creates a File of Selected Records

Year to Date, Summary, and Resource files are passed to CIMS Report Writer.

## Connectors

- [4]                      Refers to the CIMS Report Writer flow chart on [page 5-30](#).

### CIMSBILL Flow Chart



**Note** • Values in parentheses represents DDNAMES.



## CIMSEDIT–Account Code Validation

CIMSEDIT validates account codes against the CIMS Client file and produces validated accounting records. Job control for CIMSEDIT is in `CIMS.DATFILE` as member `CIMSEXT6`. Example job control is provided in the *CIMS Data Entry Screens* chapter of the *CIMS Mainframe Data Collector and Chargeback System 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 CIMS Report Writer.

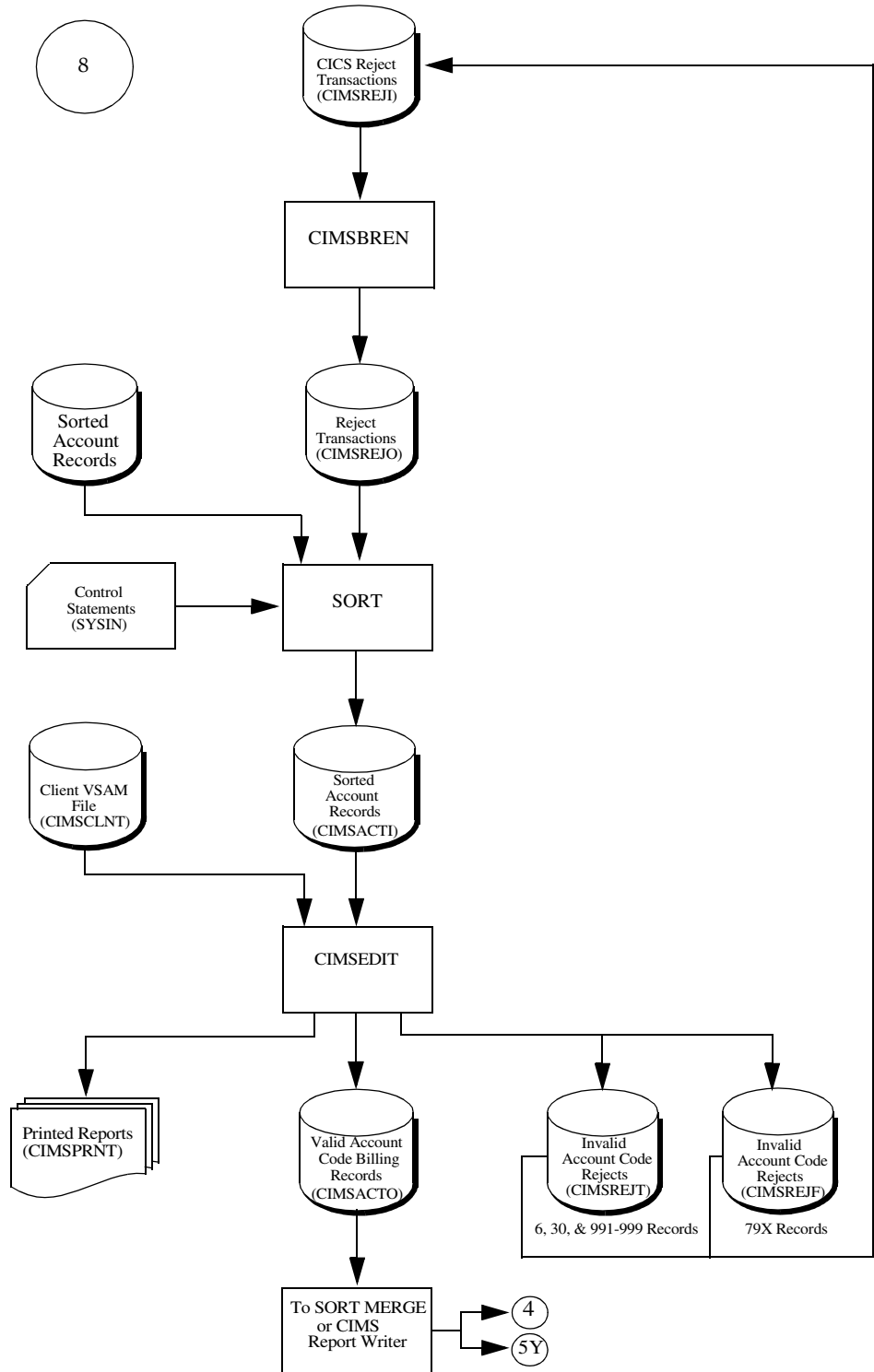
The invalid account code file is passed back to the Reject CICS screen for corrections and then recycled.

## **Connectors**

- [4] Refers to the CIMS Report Writer flow chart on [page 5-30](#).
- [5Y] Refers to the CIMSMERG flow chart on [page 5-32](#).

## CIMSEDIT–Account Code Validation Flow Chart

### CIMS Account Code Validation Procedure



**Note** • Values in parentheses represents DDNAMES.

■ **Installation Flow Charts**

---

*CIMSEdit–Account Code Validation*

---

## **README File**

<b>Overview .....</b>	<b>6-2</b>
<b>README File .....</b>	<b>6-2</b>

## Overview

This chapter is a copy of the readme file that contains the instructions for installing CIMS from a self-extracting executable. You can download this executable from the CIMS Lab Web site, <http://www.cimslab.com>.

## README File

### **CIMS Mainframe Data Collector and Chargeback System, Version 12.0 March 1, 2004 Genlevel**

Revision Date: March 1, 2004

This file contains installation instructions and information for CIMS, version 12.0, genlevel 2004/03/01.

### **1.0 Installation Instructions**

Please contact CIMS Lab technical support (see [page viii](#)) if you have any problems installing this downloaded version of CIMS.

### **1.1 Supplied files**

Run `cimsmdcc_20040301.exe` to extract the following files from the archive. These files will require approximately 19 MB of space. There are a total of thirteen (13) files included with the download.

Name	Description
CLIST_20040301.SEQ	A TSO transmitted sequential data set containing the CLIST library for CIMS.
LOADLIB_20040301.SEQ	A TSO transmitted sequential data set containing some Load modules for CIMS.
REPTLIB_20040301.SEQ	A TSO transmitted sequential data set containing the REPORT library for CIMS.
DATAFILE_20040301.SEQ	A TSO transmitted sequential data set containing the CONTROL library for CIMS.
MESSAGES_20040301.SEQ	A TSO Transmitted sequential data set containing the ISPF message library for CIMS.
PANELS_20040301.SEQ	A TSO transmitted sequential data set containing the ISPF panel library for CIMS.
OBJECT_20040301.SEQ	A TSO Transmitted sequential data set containing the CIMS object code.
LINKJCL_20040301.SEQ	A TSO transmitted sequential data set containing the link JCL to build the CIMS load modules from the object code.

Name	Description
README_20040301.RTF	This file contains the installation instructions.
ALLOC_20040301.JCL	A sample JCL member that allocates all the temporary install and permanent product libraries.
INSTJOB1_20040301.JCL	A sample JCL member that restores the data sets from the sequential files.
FtpCimsFiles.wsf	A Windows Script file that automates the loading of the .seq files to the mainframe.
FtpInstallFiles.wsf	A Windows batch file that invokes the FtpCimsFiles.wsf script.

## 1.2 Installation

The following stages must be performed to install the product.

- 1 Transfer the files INSTJOB1\_20040301.JCL and ALLOC\_20040301.JCL to a PDS on z/OS.

Perform an ASCII transfer for the files:

- Convert the data from ASCII to EBCDIC
- Append CRLF (carriage return/line feed) sequences

The target data set should have the following data set 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 z/OS.

This JCL will allocate the temporary sequential data sets (to be used in [Step 4](#) on page 6-4) 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 data sets to reside on
&DELETE	= "LT" to delete the sequential data sets = "LE" to bypass allocation of libraries
&ALLOC	= "LT" to allocate the CIMS 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 data sets 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 data set 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 data sets on z/OS. Follow the chart below:

Extracted Zip File	z/OS Name Data Set
CLIST_20040301.SEQ	hlq.CIMS.CLIST.SEQ
LOADLIB_20040301.SEQ	hlq.CIMS.LOADLIB.SEQ
DATAFILE_20040301.SEQ	hlq.CIMS.DATAFILE.SEQ
REPTLIB_20040301.SEQ	hlq.CIMS.REPTLIB.SEQ
LINKJCL_20040301.SEQ	hlq.CIMS.LINKJCL.SEQ
OBJECT_20040301.SEQ	hlq.CIMS.OBJECT.SEQ
MESSAGES_20040301.SEQ	hlq.CIMS.MESSAGES.SEQ
PANELS_20040301.SEQ	hlq.CIMS.PANELS.SEQ

where hlq = Your CIMS high-level data set 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

There is a Windows Script file and batch file that you can use to transfer the files. From the command prompt, execute the script `FtpInstallFiles.bat`. There are four parameters for this batch script. You will be prompted to enter any parameters that you do not include. The output from the transfer process is written in the command window and also to the file `FtpCIMSFiles_Report.txt`.

The format of the `FtpInstallFiles.bat` script is:

```
FtpInstallFiles server|IP address hlq userid password
```

Where:

server|IP address=the mainframe server name or the mainframe IP address

hlq=the hlq from [Step 2](#) on page 6-3

userid=the mainframe user ID used for FTP sign on

password=the password for the user ID

The target data set should have the following data set attributes:  
(These were built in [Step 3](#) on page 6-4 by the ALLOC JCL).

<b>Organization</b>	PS
<b>Record format</b>	FB
<b>Record length</b>	80
<b>Block size</b>	3120
<b>1st extent cylinders</b>	1
<b>Secondary cylinders</b>	1

**5** Modify the INSTJOB1 JCL on z/OS.

This JCL will restore the TSO transmitted sequential data sets to partitioned data sets.

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 data sets 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 load modules. Edit the procedure and change the following to meet your installation requirements:

---

OBJECT	= The CIMS V12.0 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 V12.0 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 object (using the preceding LINKPROC procedure).

Edit the JCL and change the following to meet your installation requirements:

<b>Edit the Jobcard</b>	
&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 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 0C4, 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 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 2-10. If you are performing an upgrade, continue to the appropriate upgrade section in [Chapter 3, Upgrade Instructions](#).





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