CA IDMS - 19.0
IDMS Log Analyzer Reports

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IDMS Log Analyzer Reports

CA IDMS Log Analyzer, a CA IDMS database analysis and management tool, produces a variety of reports that present useful information on database utilization. All of the CA IDMS Log Analyzer reports are generated from information written to the CA IDMS Log. The CA IDMS Log Analyzer assumes if the year is greater than 69 the century is 19; if the year is less than 69 the century is 20.
What is CA IDMS Log Analyzer?

CA IDMS Log Analyzer, a CA IDMS performance analysis and management tool, records information taken from the CA IDMS Log and produces a variety of database analysis reports that gauge resource use and system performance.

CA IDMS Log Analyzer reports provide a clear, accurate, and up-to-date picture of resource use at your installation. This database utility also answers many other system management questions that will help you fine-tune your CA IDMS environment and help make users accountable for database use.

Users who are familiar with CA IDMS Journal Analyzer will recognize certain CA IDMS Log Analyzer reports because they closely resemble some of the reports available through CA IDMS Journal Analyzer. But they are generated using statistics from the Archived Log rather than the Journal File. This means you can get some of the same management information from CA IDMS Log Analyzer without the system overhead associated with reading statistics from the Journal File.

In addition, CA IDMS Log Analyzer uses information from the Log File that is not contained in the Journal File. With CA IDMS and the CA IDMS Log Analyzer version of the CA IDMS SVC exit, billing-related information that can be helpful in a chargeback situation is contained on the log. CA IDMS Log Analyzer takes this information, ties it to a particular user, and produces billing-related reports that can augment billing/chargeback and budgeting procedures at your installation. Source code for this SVC exit and these reports enables you to tailor them to meet your specific needs. Billing data also is available as a separate file. You can customize the CA IDMS Log Analyzer Billing Record File to meet existing system requirements by modifying source code supplied by CA.

For more information, see the following topics:
- How CA IDMS Log Analyzer Improves Productivity (see page 8)
- Reports and Their Functions (see page 9)
- Reports Produced By CA IDMS Log Analyzer (see page 10)
- SVC User Exit Module (see page 11)

How CA IDMS Log Analyzer Improves Productivity

CA IDMS Log Analyzer reports will expand your management perspective and allow you to improve productivity at your CA IDMS installation.
Using CA IDMS Log Analyzer reports, you can establish system controls with discretion, forecast trends concerning use of the information resource and gain a better understanding of CA IDMS performance capabilities. Specifically, CA IDMS Log Analyzer reports:

- Identify the user, transaction, terminal, or account number that is associated with database use.
- Present CA IDMS statistics in a format you can use to measure and evaluate database resource consumption and system performance.
- Provide quantitative statistics on I/Os, CPU cycles, total run-units that give you a picture of total system efficiency.

Reports and Their Functions

**Contents**

- Billing Reports (see page 9)
- Billing Record File (see page 9)
- Program Reports (see page 9)
- Management Reports (see page 10)
- Audit Report (see page 10)

**Billing Reports**

Billing Reports use statistics from the CA IDMS Log to produce four reports that can serve as a functional model for building an effective billing system in your environment. Depending on the parameters you select, run-unit activity can be tied to a specific user, transaction, terminal, or account number. These reports can be customized to meet your unique needs.

- Billing Details Report
- Billing Summary Report
- Billing System Summary Report
- Billing Grand Summary Report

** Billing Record File**

This file can be input to your existing billing/chargeback system and can also be customized to meet your unique requirements.

**Program Reports**

Program Reports use statistics from the CA IDMS Log to offer detailed and summarized reports that show how efficiently your application programs and dialogs are using CA IDMS.
Management Reports


- Management Highlights/Summary Reports
  - Highlights Program Summary Report
  - Highlights System Summary Report
  - Highlights Grand Summary Report
- Management Highlights/Buffer Pool Utilization Report
- Management Ranking Report

Audit Report

Generated dynamically, the Audit Report summarizes processing, lists messages received during an execution of CA IDMS Log Analyzer, and lists all the parameters you supplied.

Reports Produced By CA IDMS Log Analyzer

Contents
- Three Types of CA IDMS Log Analyzer Reports (see page 11)
  - Reports on CA ADS Dialogs (see page 11)
  - Audit Report Summarizes Processing (see page 11)
  - Using the Billing Record File (see page 11)
  - Customizing the Billing Record File (see page 11)

CA IDMS Log Analyzer generates a total of 13 log reports and an audit report, and it also creates a Billing Record File. This database utility is parameter-driven: you control the output by supplying the proper parameters. All CA IDMS Log Analyzer reports use statistics from the CA IDMS Log to produce reports.

CA IDMS Log Analyzer reports can optionally show all log record times in UTC time. By default all log records are shown in Local time.
Three Types of CA IDMS Log Analyzer Reports

CA IDMS Log Analyzer produces three major types of log reports, including:

**Billing Reports**—Four Billing Reports relate CA IDMS statistics to the user(s) of the database. While CA IDMS Log Analyzer is not a billing package, the reports provide useful CA IDMS statistics that are tied to job accounting data for batch users and to terminal ID, user ID, or transaction ID for CICS, CA IDMS/DC, or CA ADS dialog transactions. These reports are open-ended, because CA also provides source code that allows you to tailor them to the existing billing system in your environment. See Customizing the Billing Reports.

**Management Reports**—Five Management Reports present information on CPU cycle usage.

**Program Reports**—Four Program Reports contain both detailed and summarized information by application program or dialog. These reports provide statistics on pages read, ratios, counts, and other significant CA IDMS statistics.

**Reports on CA ADS Dialogs**

CA ADS dialogs are included in the reports, listed as online programs. The statistics generated are the same as the statistics for programs. CA IDMS Log Analyzer also reports overhead records for CA ADS, containing system usage statistics that cannot be attributed to any specific dialog. The overhead records are reported as separate programs (named $ADS@@OH and $ADS@@AO). If you are using these records for billing/chargeback purposes, you should divide the usage in these reports proportionately among the dialogs executed by each user.

**Audit Report Summarizes Processing**

The Audit Report monitors and summarizes CA IDMS Log Analyzer processing, lists all messages generated during each execution, and also lists the parameters you specified.

**Using the Billing Record File**

The Billing Record File collects database utilization information from the CA IDMS Log. This file can be used as input to an existing billing system in your environment. This file adds new flexibility to the CA IDMS environment by providing CA IDMS statistics such as CPU cycle information and I/Os, then ties this information to user ID by transaction, terminal, or operator.

**Customizing the Billing Record File**

The module that produces the Billing Record File is supplied as source code. This functional billing model can be customized to meet your particular needs, as dictated by your billing/chargeback system, and then used as input to your in-house billing system.

**SVC User Exit Module**

The SVC User Exit Module is a feature provided by CA IDMS Log Analyzer that helps control data from the CA IDMS Log.
Invoked in the CA IDMS SVC as a BIND RUN-UNIT is processed, this module makes it possible for you to not only log information on run-unit execution for inclusion in the billing file, but also to log information that relates run-unit information back to the specific batch job or TP task from which it originated.

As supplied, the module will capture user identification information (by terminal, transaction, or operator for each CICS transaction, or by account for each batch job) so that it can be written to the CA IDMS Log. Then CA IDMS statistics can be tied back to other statistics for the same user transaction or program.

The module is supplied as source code. This means you can use the identification information selected by CA or you can tailor it to meet your organization's needs. When combined with the ability to customize the billing reports and the billing file, this exit module gives you control over the content and format of statistical (billing) data taken from the CA IDMS Log.

CA IDMS Log Analyzer Parameters

This section describes the parameters needed to produce the CA IDMS Log Analyzer. There are two primary parameters: PROCESS and REPORT. The COMMENTS option allows you to include notes, observations, or comments with parameter statements.

Two parameters control CA IDMS Log Analyzer output: PROCESS and REPORT. The PROCESS parameter initiates CA IDMS Log Analyzer processing. The REPORT parameter specifies which CA IDMS Log Analyzer report is to be printed. The COMMENTS option gives you the ability to store comments, observations, or notes about certain reports and their uses with the parameter statements that request those reports.

PROCESS

The PROCESS parameter is mandatory and should precede all report parameters. It supplies certain global parameters that initiate all processing performed by CA IDMS Log Analyzer.

REPORT

The REPORT parameter specifies which type of CA IDMS Log Analyzer report is to be created and defines the data that is to be printed. Up to 20 reports can be requested for each execution of CA IDMS Log Analyzer.

For more information, see the following topics:
- Parameters and Their Uses (see page 13)
- Billing Reports/Billing Record File Parameters (see page 15)
- Program Report Parameters (see page 19)
- Management Highlights Summary Report Parameters (see page 22)
- Buffer Pool Utilization Report Parameters (see page 24)
- Management Ranking Report Parameters (see page 25)
Parameters and Their Uses

COMMENTS Option

The COMMENTS option included in CA IDMS Log Analyzer is designed for your convenience and can be used at your discretion. When you place an asterisk (*) in the first column of a parameter statement, you can insert notes, observations, comments on reports and their uses, or any other information that will be helpful for future reference. CA IDMS Log Analyzer parameter syntax follows the notation conventions shown in Table 3-1 and syntax rules shown in Table 3-2. Please review these conventions and rules.

Notation Conventions for Parameter Statements:

<table>
<thead>
<tr>
<th>Example</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROCESS</td>
<td>All keywords are written in UPPERCASE. Those portions of the keyword that must be entered are UNDERSCORED. When part of a keyword is not underscored, you may omit it without altering the meaning of the statement.</td>
</tr>
<tr>
<td>CONTINUE=YES</td>
<td>A keyword phrase is made up of a major keyword followed by an equal sign (=), followed by a minor keyword or a variable. A keyword phrase cannot be split between two parameter cards.</td>
</tr>
<tr>
<td>INTERVAL=60, RANK=4</td>
<td>Variables appear in lowercase italic. Substitute an appropriate value for each variable if the L=interval keyword phrase is required.</td>
</tr>
<tr>
<td>INTERVAL=5</td>
<td>Keyword phrases must be separated by a comma. All text between a keyword phrase and the next comma is ignored.</td>
</tr>
<tr>
<td>[NAME=aname]</td>
<td>Brackets indicate optional keyword phrases. If you omit the entire parameter, CA IDMS Log Analyzer will supply a default value.</td>
</tr>
</tbody>
</table>

Parameter Syntax Rules:

<table>
<thead>
<tr>
<th>Item</th>
<th>Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order of Parameter Statements</td>
<td>Parameter statements are free-form. They can be entered in any order.</td>
</tr>
<tr>
<td>Continuing a Parameter Statement</td>
<td>To continue a parameter statement onto the next card, key in a trailing comma.</td>
</tr>
</tbody>
</table>
**Item** | **Rule**
---|---
Maximum Number of Reports Possible Per Execution | A total of 20 reports can be requested during each execution of CA IDMS Log Analyzer. This means you can choose 20 Program Detail Reports, for example, or any combination of reports and options available through CA IDMS Log Analyzer.

Entering Blanks on Parameter Statements | You can enter blanks (character spaces) to separate keywords to improve readability in a parameter statement without affecting the parameter. Do not enter blanks within a keyword or value field.

Positions of Keyword Phrases on Parameter Statements | All keyword phrases must be entered between positions 1 and 72 on each parameter card.

```
PROCESS [CONTINUE= YES NO] [RHDORUAL= YES NO] [IDMSECTION= YES NO] [ABEND= YES NO]

BILLING [START= mmddyyhmm] [STOP= mmddyyhmm] [INTERVAL= mmmmm]
[FILE= ONLY NO] [RUNAME= OPERID TERMID TRANSID ACCOUNT]
[RUTYPE= BATCH ONLINE SYSTEM]

PROGRAM [START= mmddyyhmm] [STOP= mmddyyhmm] [INTERVAL= mmmmm]
[LEVEL= DETAIL SUMMARY SYSTEM] [NAME= name]

REPORT =

HI-SUM [START= mmddyyhmm] [STOP= mmddyyhmm] [INTERVAL= mmmmm]
[LEVEL= DETAIL SUMMARY SYSTEM]

HI-BPU [START= mmddyyhmm] [STOP= mmddyyhmm]

RANK [START= mmddyyhmm] [STOP= mmddyyhmm] [INTERVAL= mmmmm]
[RUTYPE= BATCH ONLINE SYSTEM] [RANKWHAT= item] [RANKVALIJ= MEAN MEDIAN ABSOLUTE]
[RANKHOW= HIGHEST LOWEST LT LE GT GE]
[RANK# = nn]
```

COMMENTS Option
Billing Reports/Billing Record File Parameters

Contents
- REPORT Syntax (see page 15)
- START Syntax (see page 16)
- STOP Syntax (see page 16)
- INTERVAL Syntax (see page 16)
- LEVEL Syntax and Options (see page 17)
- FILE Syntax and Options (see page 17)
- RUTYPE Syntax and Options (see page 17)
- RUNAME Syntax and Options (see page 18)
- NAME Syntax and Options (see page 18)
  - How RUNAME, RUTYPE, and NAME Parameters Interrelate (see page 19)

The Billing Reports are available at four levels: details, summary, system, and grand summary. Grand summary, the fourth report level, is produced automatically when you select multiple time intervals. To generate these reports or the Billing Record File, use the parameter syntax listed here.

The parameters are:

REPORT=BILLING [ ,START=mmddyyhhmm ] [ ,STOP=mmddyyhhmm ]

[ ,INTERVAL=mmmmmm ]
[ ,LEVEL={SUMMARY DETAIL SYSTEM} ]
[ ,FILE= {ONLY NO YES} ]
[ ,RUTYPE={ONLINE BATCH SYSTEM} ]
[ ,RUNAME={OPER-ID TERM-ID TRANS-ID ACCOUNT} ]
[ ,NAME=name or * ]

REPORT Syntax

REPORT=BILLING

Indicates that CA IDMS Log Analyzer is to process a request for a BILLING Report.
START Syntax

START=mmddyyhhmm

Specifies the starting date and time for a single report request.

Default: The default is the earliest Log date/time found in the input file.

Rules:

1. Start time must be specified in mmddyyhhmm format, where mmddyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.

2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

STOP Syntax

STOP=mmddyyhhmm

Specifies the end of a selected time period for a single report request.

Default: The default for this keyword is the latest Log date/time found in the input file.

Rules:

1. Stop time must be specified in mmddyyhhmm format, where mmddyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.

2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

INTERVAL Syntax

INTERVAL=mmmm

Specifies whether the time period you selected using the START and STOP parameters is to be divided into intervals and also specifies the length of those intervals.

Default: Zero. Therefore, the time period will be reported as a single interval.

Rules:

1. INTERVAL must be specified in mmmm (minutes) format. (It is not necessary to include leading zeros.)

2. If you specify multiple intervals, a Grand Summary Report will be produced automatically.
LEVEL Syntax and Options

\texttt{LEVEL=\{SUMMARY

\hspace*{1em}DETAIL

\hspace*{1em}SYSTEM\}}

Use this parameter to specify the level of reporting that you want printed.

- \texttt{DETAIL}--indicates that you want CA IDMS Log Analyzer to print the Billing Details Report. (A Billing Summary Report and a Billing System Summary Report also will be produced for each time interval. A Grand Summary is produced only when you request multiple intervals.)

- \texttt{SUMMARY}--indicates that you want a Billing Summary Report by program name. (A system summary will be produced for each time interval specified by the \texttt{INTERVAL} parameter. A Grand Summary is produced automatically whenever multiple intervals are reported.)

- \texttt{SYSTEM}--indicates that you want only system summaries to be produced for each time interval. A Grand Summary is produced if multiple intervals are reported.

Default: \texttt{SYSTEM}

FILE Syntax and Options

\texttt{FILE=\{ONLY

\hspace*{1em}NO

\hspace*{1em}YES\}}

Use the \texttt{FILE} parameter to control the creation of a Billing Record File and a Billing Report.

- \texttt{ONLY}--indicates that you want CA IDMS Log Analyzer to create \textit{only} the Billing Record File but not \textit{only} the Billing Report(s).

- \texttt{NO}--indicates that you want a Billing Report(s) but not the Billing Record File.

- \texttt{YES}--indicates that you want CA IDMS Log Analyzer to create the Billing Record File along with a Billing Report(s).

Default: \texttt{YES}

RUTYPE Syntax and Options

\texttt{RUTYPE=\{ONLINE

\hspace*{1em}BATCH

\hspace*{1em}SYSTEM\}}

When each run-unit was originally executed by CA IDMS, it was executed as either a batch or online task. Using this parameter, you can specify whether the Billing Report will select only batch or only online run-units, or you can use the \texttt{SYSTEM} parameter to indicate that all system tasks (both batch and online) are to be reported.

Use this parameter to specify which type of run-units are to be selected for reporting.
• **BATCH**--indicates that only batch run-units are to be reported on the Billing Report.

• **ONLINE**--indicates that only ONLINE run-units are to be reported on the Billing Report.

• **SYSTEM**--indicates that both batch and online run-units are to be reported on the Billing Report.

Default: **SYSTEM**

---

**RUNAME Syntax and Options**

```
RUNAME= {OPER-ID
         TERM-ID
         TRANS-ID
         ACCOUNT}
```

An individual run-unit or CA ADS dialog may be identified in a number of ways. The way CA IDMS Log Analyzer identifies a run-unit is determined by two things:

• Whether this run-unit originates from an online transaction or a batch transaction.

• Whether this is a request for a Billing Report or a Program Report.

Billing Report parameters allow you to specify which field will be chosen as the identifying element of the run-unit (the run-unit name or RUNAME). Only the Billing Reports offer you this option. Online run-units can be identified by operator, terminal, or transaction of origin. Batch run-units can only be identified by the batch job's accounting information (i.e., account number, etc.).

• **OPER-ID**--specifies that online run-units (or dialogs) are to be identified by operator ID.

• **TERM-ID**--specifies that online run-units (or dialogs) are to be identified by terminal ID.

• **TRANS-ID**--specifies that online run-units (or dialogs) are to be specified by transaction ID. **TRANS-ID** is the default for online run-units.

• **ACCOUNT**--specifies that batch run-units are to be identified by account (i.e., account number or account name). **ACCOUNT** is the default for all batch run-units.

Default: **ACCOUNT** is the default for all batch run-units. **TRANS-ID** is the default for all online run-units.

---

**NAME Syntax and Options**

```
NAME = name or *
```

This parameter lets you select only those run-unit records that have a specific (or generic) run-unit name. The field that is to contain this name is specified by the RUNAME parameter.

Use this parameter to specify the actual (or generic) operator ID, terminal ID, transaction ID, or account information that a run-unit must have in order for that run-unit to be selected for analysis on the Billing Report.
Default: *. See note below for more information.

⚠️ **Note:** CA IDMS Log Analyzer will perform generic processing. For example, if you key in an asterisk (*) before a name field (i.e., NAME = *ABC), all run-units whose name field (as specified by the RUNAME parameter) begins with ABC will be included in the report.

The overhead records for CA ADS can be accessed by specifying RUNAME=TRANS-ID, NAME=$ADS@@OH.

Rules:

1. A maximum of eight characters can be entered for OPER-ID, TERM-ID, or TRANS-ID.
2. When BATCH is selected as RUTYPE and ACCOUNT is chosen as RUNAME, up to eleven (11) characters can be supplied for this value field.

**How RUNAME, RUTYPE, and NAME Parameters Interrelate**

RUNAME is different for online run-units than it is for batch run-units. This means you should use NAME with RUTYPE = SYSTEM only after carefully considering whether the RUNAME fields of batch and online run-units will both contain the same value. For example, if you specify NAME = ABC, will batch run-units have an ACCOUNT field of ABC and online run-units have a TRANS-ID (or OPER-ID or TERM-ID) field of ABC?

**Program Report Parameters**

**Contents**

- REPORT Syntax (see page 20)
- START Syntax (see page 20)
- STOP Syntax (see page 20)
- INTERVAL Syntax (see page 20)
- LEVEL Syntax and Options (see page 21)
- NAME Syntax and Options (see page 21)

Four Program Reports are available at four different levels: detail, summary, and system. The fourth level, grand summary, is generated automatically if you select multiple intervals. To get these reports, use the parameter syntax listed on this page.

REPORT=PROGRAM [,START=mmddyyhhmm] [,STOP=mmddyyhhmm]

[ ,INTERVAL=mmmmm]

[ ,LEVEL={SUMMARY
DETAILED SYSTEM})]

[ ,NAME=name or * ]
REPORT Syntax

REPORT = PROGRAM

Specifies that CA IDMS Log Analyzer is to create and print a PROGRAM Report.

START Syntax

START = mmdyyyyhhmm

specifies the starting date and time for a single report request.

Default: The earliest Log date/time found in the input file.

Rules:

1. Start time must be specified in mmdyyyyhhmm format, where mmdyyyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.

2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

STOP Syntax

STOP = mmdyyyyhhmm

Specifies the end of a selected time period for a single report request.

Default: The default for this keyword is the latest Log date/time found in the input file.

Rules:

1. Stop time must be specified in mmdyyyyhhmm format, where mmdyyyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.

2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

INTERVAL Syntax

INTERVAL = mmmm

Specifies whether the time period you selected using the START and STOP parameters is to be divided into intervals and also specifies the length of those intervals.

Default: Zero. Therefore, the time period will be reported as a single interval.

Rules:
1. INTERVAL must be specified in the mmmmm (minutes) format. (It is not necessary to include leading zeros.)

2. If you specify multiple intervals, a Grand Summary Report will be produced automatically.

**LEVEL Syntax and Options**

```
LEVEL= {SUMMARY
          DETAIL
          SYSTEM}
```

Use this parameter to specify the level of report that you want printed.

- **DETAIL**—indicates that you want CA IDMS Log Analyzer to print the Program Details Report (A Program Summary Report and a Program System Summary Report also will be produced for each time interval. A Grand Summary is produced only when you request multiple intervals.)

- **SUMMARY**—indicates that you want a Program Summary Report for all run units selected. In addition, a system summary will be produced for each time interval specified by the INTERVAL parameter. A grand summary is produced if multiple intervals are reported. SYSTEM is the default value.

- **SYSTEM**—indicates that only Program System Summary Reports will be produced for each time interval. A grand summary is produced only when multiple intervals are requested.

Default: SYSTEM

**NAME Syntax and Options**

```
NAME = name or *
```

Allows you to supply the actual (or generic) name of the program(s) or dialog(s) to be reported on by CA IDMS Log Analyzer.

For CA ADS dialogs, NAME identifies the name of the dialog. Overhead records for CA ADS are reported under the name ADS@@OH.

For tasks executed within CA IDMS/DC, NAME is not the name of the program. Instead, it is the name of the CA IDMS/DC task.

Default: *.

*Note:* CA IDMS Log Analyzer will perform generic processing. For example, if you key in an asterisk (*) before a name field (i.e., NAME = *ABC), all run-units whose program name begins with ABC will be included in the report.
Management Highlights Summary Report Parameters

Contents
- REPORT Syntax (see page 22)
- START Syntax (see page 22)
- STOP Syntax (see page 22)
- INTERVAL Syntax (see page 23)
- LEVEL Syntax (see page 23)

The Management Highlights Summary Reports are available at three levels of detail: program, system, and grand. To generate these reports, use the parameter syntax listed on this page.

REPORT=HI-SUM [,START=mmddyyhhmm] [,STOP=mmddyyhhmm]
[ , INTERVAL=mmmmmm]
[ , LEVEL={PROGRAM
SYSTEM
GRAND}]}

REPORT Syntax

REPORT = HI-SUM

Indicates that CA IDMS Log Analyzer is to create and print a Management Highlights Summary Report.

START Syntax

START = mmddyyhhmm

Specifies the starting date and time for a single report request.

Default: The earliest Log date/time found in the input file.

Rules:

1. Start time must be specified in mmddyyhhmm format, where mmddyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.

2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

STOP Syntax

STOP = mmddyyhhmm
Specifies the end of a selected time period for a single report request.

Default: The default is the latest Log date/time found in the input file.

Rules:

1. Stop time must be specified in mmddyyhhmm format, where mmddyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.

2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

**INTERVAL Syntax**

```
INTERVAL = mmmm
```

specifies whether the time period you selected using the START and STOP parameters is to be divided into intervals and also specifies the length of those intervals.

Default: Zero. Therefore, the time period will be reported as a single interval.

Rules:

1. INTERVAL must be specified in the mmmmm (minutes) format. (It is not necessary to include leading zeros.)

2. If you specify multiple intervals, a Grand Summary Report will be produced automatically.

**LEVEL Syntax**

```
LEVEL={PROGRAM
      SYSTEM
      GRAND}
```

Use this parameter to specify the level of report you want printed.

- **PROGRAM**—indicates accumulation for each program or dialog in a time interval. A Management Highlights System Summary Report also will be produced for each time interval. (A Management Highlights Grand Summary Report is produced only when you request multiple intervals.)

- **SYSTEM**—indicates accumulation for all programs and dialogs within a time interval. A Management Highlights Grand Summary Report is produced if multiple intervals are reported.

- **GRAND**—indicates accumulation of all programs and dialogs within all time intervals. GRAND is identical to SYSTEM if the INTERVAL parameter is not supplied.

Default: GRAND
Buffer Pool Utilization Report Parameters

Contents
- REPORT Syntax (see page 24)
- START Syntax (see page 24)
- STOP Syntax (see page 24)

To generate the Management Highlights Buffer Pool Utilization Report, use the parameter syntax listed on this page.

REPORT= HI-BPU [, START =mmddyyhhmm] [, STOP =mmddyyhhmm]

REPORT Syntax
REPORT= HI-BPU

Specifies that CA IDMS Log Analyzer is to create and print a Management Highlights Buffer Pool Utilization Report.

⚠️ Note: Buffer Pool Utilization Reports are generated on 24-hour intervals only. The built-in interval begins at midnight and continues until midnight of the next day. CA IDMS Log Analyzer will override any INTERVAL you attempt to supply.

START Syntax
START = mmddyyhhmm

Specifies the starting date and time for a single report request.

Default: The default is the earliest Log date/time found in the input file.

Rules:

1. Start time must be specified in mmddyyhhmm format, where mmddyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.

2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

STOP Syntax
STOP = mmddyyhhmm
Specifies the end of a selected time period for a single report request.

Default: The default for this keyword is the latest Log date/time found in the input file.

Rules:

1. Stop time must be specified in mmddyyhhmm format, where mmddyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.

2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

Management Ranking Report Parameters

Contents

- REPORT Syntax (see page 26)
- START Syntax (see page 26)
- STOP Syntax (see page 26)
- INTERVAL Syntax (see page 26)
- RUTYPE Syntax and Options (see page 27)
- RANKWHAT Syntax and Options (see page 27)
- RANKVALUE Syntax and Options (see page 28)
- RANKHOW Syntax and Options (see page 28)
- RANK Syntax (see page 29)

The REPORT parameter syntax for the Management Ranking Report is listed below.

REPORT=RANK [,START=mmddyyhhmm] [,STOP=mmddyyhhmm]

[,INTERVAL=mmmmmm]

[,RUTYPE= {ONLINE
BATCH
SYSTEM}]

[,RANKWHAT= {item
DETAIL
SYSTEM}]

[,RANKVALU= {MEAN
MEDIAN
ABSOLUTE}]

[,RANKHOW= {HIGHEST
LOWEST
LT: value
LE: value
GT: value
GE: value}]

[,RANK# =nn]
REPORT Syntax

REPORT = RANK

Indicates that CA IDMS Log Analyzer is to create and print a Management Ranking Report.

START Syntax

START = mmddyyhhmm

Specifies the starting date and time for a single report request.

Default: The earliest Log date/time found in the input file.

Rules:

1. Start time must be specified in mmddyyhhmm format, where mmddyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.
2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

STOP Syntax

STOP = mmddyyhhmm

Specifies the end of a selected time period for a single report request.

Default: The default for this keyword is the latest Log date/time found in the input file.

Rules:

1. Stop time must be specified in mmddyyhhmm format, where mmddyy represents the Gregorian date (month/day/year) and hhmm is the time (hour/minute) using the 24-hour clock.
2. All zeros must be entered as placeholders. For example, 0102032301 would be entered for 11:01 p.m. on January 2, 2003.

INTERVAL Syntax

INTERVAL = mmmmn

Specifies whether the time period you selected using the START and STOP parameters is to be divided into intervals and also specifies how long those intervals should be.

Default: An interval of zero means that the time period will be reported as a single interval. This is the default.
Rule: INTERVAL must be specified in the mmmmm (minutes) format. (It is not necessary to include leading zeros.)

**RUTYPE Syntax and Options**

RUTYPE = {ONLINE
          BATCH
          SYSTEM}

When each run-unit was originally executed by CA IDMS, it was executed as either a batch or online task. Using this parameter, you can specify whether the Management Ranking Report will select only batch or only online run-units, or you can use the SYSTEM parameter to indicate that all system tasks (both batch and online) are to be reported.

Use this parameter to specify which type of run-units are to be selected for ranking.

- **ONLINE**—indicates that only online programs or dialogs are to be ranked.
- **BATCH**—indicates that only batch programs are to be ranked.
- **SYSTEM**—indicates that both batch and online programs and dialogs will be ranked.

Default: SYSTEM

**RANKWHAT Syntax and Options**

RANKWHAT = item

Specifies which attribute is to be ranked in the report.

Default: None. You must select one of the following items:

- **#RU**—number of run units (RANKVALU must be ABSOLUTE)
- **PG-READ**—pages read
- **PG-WRITTEN**—pages written
- **PG-/O**—pages written + pages read (total I/Os)
- **PG-RATIO**—pages requested/pages read
- **CALC-RATIO**—calc records overflow/calc records on home page
- **VIA-RATIO**—via records overflow/via records on owner page
- **CPU-TIME**—user-mode-time + system-mode-time
RANKVALUE Syntax and Options

RANKVALU= {MEAN
MEDIAN
ABSOLUTE}

Run-unit information may be ranked according to the actual value of the attribute selected. As an alternative, you may specify that the MEAN or MEDIAN value for all program occurrences of the attribute is to be the basis of the ranking.

- **MEAN**—indicates that programs are to be ranked by the average value of the attribute for all run-units of the ranked program.
- **MEDIAN**—indicates that programs are to be ranked by the median value of the attribute for all run-units of the ranked program.
- **ABSOLUTE**—indicates that run-units are to be ranked by the value of the attribute from each run-unit of the ranked program.

Default: ABSOLUTE

Rule: ABSOLUTE must be specified when RANKWHAT=#RU is specified.

RANKHOW Syntax and Options

RANKHOW= {HIGHEST
LOWEST
LT: value
LE: value
GT: value
GE: value}

Use this keyword to specify how the attribute you selected is to be ranked. There are six methods to choose from.

- **HIGHEST**—the attribute will be ranked from its highest value in a descending order.
- **LOWEST**—the attribute will be ranked from its lowest value in an ascending order.
- **LT: value**—the attribute will be ranked from a value less than the specified value in a descending order.
- **LE: value**—the attribute will be ranked from a value less than or equal to the specified value in a descending order.
- **GT: value**—the attribute will be ranked from a value greater than the specified value in an ascending order.
- **GE: value**—the attribute will be ranked from a value greater than or equal to the specified value in an ascending order.

Default: None. You must select one of the six available ranking methods.
Rules:

1. The specified values for LT, LE, GT, and GE must include two decimal positions when ranking medians or ratios (e.g., median of five pages read is 500; a ratio of 3.14 is 314).

2. Value (for LT, LE, GT, and GE) must be nine digits or less. Leading zeros are not required.

3. HIGHEST or LOWEST must be specified when RANKWHAT=#RU is specified.

4. HIGHEST or LOWEST must be specified when either RANKVALU=MEAN or RANKVALU=MEDIAN is specified.

RANK Syntax

RANK# = nn

After all of the run-unit records have been selected and ranked, you may also request how many you want to see on the Management Ranking Report. For example, if you only want to see the first 10 when ranked according to your RANKHOW parameter, specify RANK# = 10.

Use this parameter to specify the number of items to be reported on the RANKING report.

Default: 20

Rule: The maximum number of items that can be reported is 50. (It is not necessary to include leading zeros.)

Customizing the Billing Reports

This section contains sectionlines for customizing the billing data produced by CA IDMS Log Analyzer. Billing data for batch jobs or CICS transactions is initially created by GSISVCX, the CA IDMS Tools module that operates as an exit to the CA IDMS SVC (billing data for CA IDMS/DC tasks are created by CA IDMS). Billing data is reported by USLRPT5, the Billing Report module, and formatted as a file by USLBILX, the Billing Formatter Exit module. Source code is provided for these modules so that you can easily change them. Tailoring the format of the billing data can provide you with data that conforms to the processing requirements of your billing system. The billing data contained in the Billing Record File can then be merged and processed with other cost and billing information in your system.

- Customizing the GSISVCX Module (see page 30)
- Customizing the USLBILX Module (see page 31)
- Customizing the USLRPT5 Module (see page 31)

Two portions of the CA IDMS Log Analyzer system are supplied to you in executable object code format and also in source code format. With object and source code available, you can run CA IDMS Log Analyzer just as it is supplied to you, or you can customize any aspect of the billing functions CA IDMS Log Analyzer performs.

Source code is supplied for:
Customizing the GSISVCX Module

GSISVCX, the CA IDMS Tools version of the assembler language module IDMSSVCX is designed to create a 40-position extension to the CA IDMS External Request Element control block (ERE). The type of data that is placed into these 40 positions by the module depends, in part, on whether the run-unit being processed is identified by CA IDMS as BATCH or CICS.

For any type of run-unit—the JOBNAME, the run-unit start date and time, and the step start time are moved into the ERE by GSISVCX.

For BATCH run-units—up to 16 bytes of information contained in the account field of the job card are moved into the ERE by GSISVCX.

For CICS run-units—the transaction ID, terminal ID, and operator ID are moved into the ERE by GSISVCX. You will need to customize this module if your installation already uses a version of IDMSSVCX and that function must be retained for continued use: if your account number is not in the first field of the z/OS JOB ACCT parameter; if your installation uses a TP monitor other than CICS; or if the data moved into the ERE is not sufficient for your billing system requirements.

To customize GSISVCX, your systems programmer must make the desired changes to the source code. See the CA IDMS Installation and Maintenance Section.

When altering the source code for GSISVCX, follow these sectionlines:

- The ERE may be defined as any length between 40 and 32767 but only the first 40 positions will be written by CA IDMS to the Task Statistics Record.

- All CA IDMS Log Analyzer Billing Report functions depend upon the data in the ERE. This is especially true of the ERE fields containing the ONLINE/BATCH designation, and the ACCOUNT/TRANS-ID, TERM-ID, OPER-ID data. If the position, size, or format of these data fields is altered, it will have serious impact on your ability to select log records for inclusion in the Billing Reports or Billing File. Specifically, if the ONLINE/BATCH indicator is moved or altered, you will no longer be able to specify RUTYPE=ONLINE or RUTYPE=BATCH on any request for Billing Reports or Billing Files. See Parameters. If ACCOUNT/TRANS-ID, TERM-ID, or OPER-ID are moved or altered, you will no longer be able to use the NAME parameter for any Billing request. Finally, if any of these fields are moved or altered, the USLBILX and USLRPT5 modules will have to be modified to accept the revised format of the ERE. See External Request Element Extension for the ERE descriptions.
After the GSISVCX source code is modified, the resulting load module must be identified to the CA IDMS SVC. See the CA IDMS Installation and Maintenance Section for detailed information.

Customizing the USLBILX Module

The COBOL language Billing File formatter module, USLBILX, is designed to access the information placed into the ERE. In addition, this module is designed to combine ERE extension information with other data from the Task Statistics Archive Log Record to create a Billing Record in a predefined format. See Billing Record file for a description of the Billing Record File.

When a CA IDMS/DC task is processed, there will not be any ERE extension information.

You must customize this module if the content of the ERE extension is changed when GSISVCX is changed; if the content or format of the Billing Record is not compatible with the billing system in your environment; or if data from additional sources must be merged into the Billing Record. See USLBILX and USLRPT5 Source Code for information on printing the source module.

After making the desired changes to the source code, recompile USLRPT5 specifying NODYNAM, NORES and relink the CA IDMS Log Analyzer module USLRPT5. Target or Distribution s (z/OS), TOOLJCL library member USLRLNK5.S(Z/VSE), the USLRLNK5 EXEC (Z/VM), contains the linkage editor control statements for USRLNK5.

Customizing the USLRPT5 Module

The COBOL language Billing Reporter module, USLRPT5, is designed to access the information placed into the ERE extension by GSISVCX. For CA IDMS/DC tasks, the ERE extension portion of the log contains no data, but all necessary information is contained elsewhere in the log record. Using this information, along with other data from the Task Statistics Record, USLRPT5 produces the CA IDMS Log Analyzer Billing Report.

Extracted data from the log file is presented, one record at a time, to USLRPT5 in a predefined sequence depending upon the value of RUNAME on the Billing request. Because the field defined by RUNAME resides in the ERE extension, the sequence may be adversely affected by alterations to the ERE extension.

You must customize this module if the content of the ERE extension is altered when you changed GSISVCX or if you need to change the Billing Report format to conform with standards in your environment. See USLBILX and USLRPT5 Source Code for information on printing the source module.

After making the desired changes to the source code, recompile USLRPT5 specifying NODYNAM, NORES and relink the CA IDMS Log Analyzer module USLRPT5. Target or Distribution s (z/OS), TOOLJCL library member USLRLNK5.S(Z/VSE), the USLRLNK5 EXEC (Z/VM), contains the linkage editor control statements for USRLNK5.
CA IDMS - 19.0

CA IDMS Log Analyzer Operations

This section lists and explains the JCL necessary to successfully execute CA IDMS Log Analyzer in a z/OS, Z/VSE, or Z/VM environment.

- **z/OS Environment** (see page 32)
- **Z/VSE Environment** (see page 34)
- **Z/VM Environment** (see page 35)

z/OS Environment

Contents

- **z/OS JCL** (see page 32)
  - z/OS Operation Notes (see page 33)

The z/OS JCL necessary to execute CA IDMS Log Analyzer is contained in Target or Distribution source library member USLEXEC. A sample of the supplied JCL is listed, followed by notes.

z/OS JCL

```
//USLMAIN JOB(job accounting information)
//LOGAPROC PROC OUTCLASS=A, (1)
//   LOGALIB='YOUR.LOGA.LOADLIB', (2)
//   PROG=USLMAIN, (3)
//   LOGDSN='IDMS.LGARCHIV', (4)
//   LOGUNIT=, (5)
//   LOGVOL=, (5)
//   SORTCYL='(5,5)', (6)
//   EXTCYL='(5,5)', (6)
//   EXTBLK=, (7)
//   EXTDISP='(NEW,DELETE,DELETE)', (8)
//   BILDDSN='YOUR.LOGA.BILLFILE', (9)
//   BILLCYL='(5,5)', (6)
//   BILLBLK=, (10)
//   BILDISP=CATLG (11)
//LOGA EXEC PGM=USLMAIN.
//STEPLIB EXEC DSN=USLEXEC, DISP=SHR
//SORTMSG EXEC DSN=USLEXEC, DISP=DELETE
//SYSSOUT EXEC DSN=USLEXEC, DISP=DELETE
//SYSSORT EXEC DSN=USLEXEC, DISP=DELETE
//SYSSUDDump EXEC DSN=USLEXEC, DISP=DELETE
//LOGFILE EXEC DSN=USLEXEC, DISP=DELETE
//SORTWK01 EXEC DSN=USLEXEC, DISP=DELETE
//SORTWK02 EXEC DSN=USLEXEC, DISP=DELETE
//SORTWK03 EXEC DSN=USLEXEC, DISP=DELETE
//SORTWK04 EXEC DSN=USLEXEC, DISP=DELETE
//SORTWK05 EXEC DSN=USLEXEC, DISP=DELETE
//SORTWK06 EXEC DSN=USLEXEC, DISP=DELETE
//EXTRACT EXEC DSN=USLEXEC, DISP=DELETE
//BILLFILE EXEC DSN=USLEXEC, DISP=DELETE
```

---

15-Jan-2018 32/41
//SYSIPT DD DDNAME=SYSIN
//PEND
//LOGA EXEC LOGAPROC,
//* ENTER INPUT PARAMETERS HERE
PROCESS, CONT=Y, IDMSXXXX=YES, RHDCRUAL=NO
REPORT=HI-BPU
REPORT=HI-SUM
REPORT=BILLING, LEVEL=DETAIL
REPORT=PROGRAM, LEVEL=SUMMARY
REPORT=RANK, RANKWHAT=PG-I0, RANKHOW = HIGHEST

z/OS Operation Notes

1. Specify OUTCLAS to assign print output to other than CLASS=A.

2. Specify LOGALIB to be the same as LOADLIB in STEP1 of the installation procedure.

3. Specify PROG if you have changed the name of the CA IDMS Log Analyzer module as created in the first step of the installation process.

4. Specify LOGDSN to name the input Archive Log File. This file must be the SYS002 file from the CA IDMS ARCHIVE LOG utility or the SYS020 file from CA Culprit Statistics Report 99.

5. Specify LOGUNIT and LOGVOL if the archive log file to be processed by CA IDMS Log Analyzer is not a cataloged dataset. Observe the required format for these parameters.

6. Specify SORTCYL, EXTCYL or BILLCYL if CYL (5,5) is not an appropriate space allocation for that file.
You can estimate file size if you know how many run-units are likely to match the selection criteria of your REPORT parameter statements. For each run-unit, 19 records are created for each HI-SUM request, and one record is created for every other type of report. These records are sorted and then written to the EXTRACT file. Also, each record for a BILLING request where FILE = YES or FILE = ONLY is written to the BILLFILE.

7. Specify EXTBLK to create an EXTRACT file BLKSIZE suited to the type of storage device used in your environment.
Extract records for Billing or Program reports are 516 bytes long. All other records on the variable length extract file are 164 bytes long. EXTBLK may specify any BLKSIZE that is at least 4 bytes larger than the largest record being created. The default EXTBLK is 6144.

8. Specify EXTDISP to choose a final disposition of the Extract File. The Extract File is used within CA IDMS Log Analyzer. The default disposition is (NEW, DELETE, DELETE).

9. Specify BILLDSN to name the Billing Record File that CA IDMS Log Analyzer is to create. This may be specified as BILLDSN=NULLFILE if no Billing record File is to be created.

10. Specify BILLBLK to create a BILLING RECORD file BLKSIZE suited to the type of storage device used at your installation. BILLBLK must specify a BLKSIZE that is a multiple of 100, the BILLFILE file record length. The default BILLBLK is 6100.

11. Specify BILDISP to choose a disposition for the Billing Record File. The default disposition is CATLG. Specify BILDISP=PASS or BILDISP=DELETE.
12. If it is required by your installation, insert //SORTLIB DD DSN=sort-library-name, DISP=SHR prior to the parameter statements. This statement names the library containing your SORT utility.

Z/VSE Environment

Contents
- Z/VSE JCL (see page 34)
  - Z/VSE Operation Notes (see page 35)
  - Z/VSE File Processing Alternate Method (see page 35)

A sample of a Z/VSE environment JCL to execute CA IDMS Log Analyzer is contained in TOOLJCL library member USLEXEC.S. This sample must be modified to reflect your hardware. A sample of the supplied JCL is listed below followed by the notes.

Z/VSE JCL

```plaintext
// OPTION PARTDUMP
// ASGN SYS005,SYSIPT  PARAMETER INPUT
// ASGN SYS006,SYSLST  AUDIT REPORT
// ASGN SYS007,CUU     SELECTED REPORTS (1)
// ASGN SYS010,CUU     ARCHIVE LOG FILE (1)
// DLBL LOGFILE,'IDMS16.LGARCHIV',999,SD X (3,4,6)
// EXTENT SYS010,DISK,1,0,417200,10000 X
*
// ASGN SYS009,CUU     BILLING FILE (1)
// DLBL BILLFIL,'BILLING.LOGA',0,SD X
default of 10000
// EXTENT SYS009,DISK,1,0,348000,01999 X (2)
*
// ASGN SYS008,CUU     EXTRACT FILE (1)
// DLBL EXTRACT,'LOGA.EXTRACT',0,SD X (3,6)
// EXTENT SYS008,DISK,1,0,427200,05270 X (2)
*
// ASGN SYS001,CUU     SORT WORK #1 (1)
// DLBL SORTWK1,'SORT.WORK.1',0,SD X
// EXTENT SYS001,DISK,1,0,396000,07000 X (2)
*
// ASGN SYS002,CUU     SORT WORK #2 (1)
// DLBL SORTWK2,'SORT.WORK.2',0,SD X
// EXTENT SYS002,DISK,1,0,403000,07000 X (2)
*
// ASGN SYS003,CUU     SORT WORK #3 (1)
// DLBL SORTWK3,'SORT.WORK.3',0,SD X
// EXTENT SYS003,DISK,1,0,410000,07000 X (2)
*
* PRIVATE CORE IMAGE LIBRARY(S)
// DLBL CILIB1,'YOUR-LOGA-CORELIB' LOG ANALYZER LIBRARY
// EXTENT ,VOL=VOLSER
// DLBL CILIB2,'YOUR-IDMS-CORELIB' IDMS LIBRARY
// EXTENT ,VOL=VOLSER
// LIBDEF CL,SEARCH=(CILIB1,CILIB2),TEMP *
// EXEC USLMAIN,SIZE=(AUTO,48K) (5)
*ENTER INPUT PARAMETERS
PROCESS, CONT=Y, IDMSXXXX=YES, RHDCRUAL=NO
REPORT=HI-BPU
REPORT=HI-SUM
REPORT=BILLING,LEVEL=DETAIL
```
1. Modify the unit addresses to refer to your installation’s unit(s).

2. Specify extents and volume serial number(s) appropriate to your volume(s).
   You can estimate size if you know how many run-units is likely to match the selection criteria of your REPORT parameter statements. For each run-unit, 19 records are created for each HI-SUM request, and one record is created for each other type of request. These records are sorted and then written to the EXTRACT file. Also, each record for a BILLING request where FILE = YES or FILE = ONLY is also written to the BILLFILE.

3. Block sizes are assigned for all files by the GSSGNCB module.

4. This file must be the SYS002 file from the CA IDMS ARCHIVE LOG utility or the SYS020 file from CA Culprit Statistics Report 99.

5. Ensure that a 1024K partition is available for this job.

6. Even if you use a storage management tool such as CA-DYNAM, an ASSGN statement is required by CA IDMS Log Analyzer for every file except SORTWKnn. This assignment is necessary because CA IDMS Log Analyzer has its own device-independent support which dynamically builds a DTF based on the device type indicated by the assignment of the logical unit. The logical unit required for each work file is provided in the table in 5-2. The device may be defined with DLBL or TLBL.

Z/VSE File Processing Alternate Method

Occasionally you will receive a message that a file is not VSAM. The message indicates that the dataset will be processed SAM instead of VSAM because CA IDMS Log Analyzer was not able to find the dataset in the VSAM catalog. The allocation will not affect processing results.

Z/VM Environment

Contents
- Z/VM EXEC (see page 35)
  - Key to Z/VM EXEC (see page 36)

A model Z/VM EXEC for executing CA IDMS Log Analyzer is shown below. Variables (boldface) are explained in the key following the EXEC.
LOG_ARCHIVE_FN = 'your.log.archive'
LOG_ARCHIVE_FT = 'filetype'
LOG_ARCHIVE_FM = '*'

/* Link and access the Minidisks containing the required librarie(s) */

'CP SPOOL PRINTER NOCONT CLOSE'
'CP SPOOL PRINTER TO * NOHOLD CONT FORM OFF DIST OFF'

'GLOBAL LOADLIB ' CA_LOADLIB_FN IDMS_LOADLIB_FN
'GLOBAL TXTLIB ' SORTLIB_FN

/* Files needed for all runs. */

'FILEDEF SORTMSG PRINTER'
'FILEDEF SYSUDUMP PRINTER'
'FILEDEF SYSOUT PRINTER'
'FILEDEF AUDIT DISK LOGA AUDIT fm'
'FILEDEF REPORTS DISK LOGA REPORTS fm'
'FILEDEF EXTRACT DISK LOGA EXTRACT fm'

LOG_ARCHIVE_FN LOG_ARCHIVE_FT LOG_ARCHIVE_FM

/* You must create a file 'USLEXEC SYSIPT A' containing the input */
/* parameter statements prior to executing this EXEC. */
/* This file must include a PROCESS statement and other statements */
/* for the reports and displays that you want generated. See CA IDMS */
/* Log Analyzer User Guide for further details. */

'FILEDEF SYSIPT DISK USLEXEC SYSIPT A'

/* Insert FILEDEF statements for SORT work space as required by */
/* your SORT product. */

'FILEDEF SORTWK01 DISK sort_fn sort_ft sort_fm4 ( XTENT 100 '

/*
SIGNAL OFF ERROR
SAY 'STARTING EXECUTION OF CA IDMS/LOG ANALYZER'
USLEXEC RC = RC
'
EXECOS GSRUN USLMAIN
USLEXEC RC = RC
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME LOGA LISTING'
'CP SPOOL PRINTER OFF'
SAY 'USLEXEC FINISHED WITH A RETURN CODE OF' USLEXEC_RC
'GLOBAL LOADLIB'
'GLOBAL TXTLIB'
'FILEDEF * CLEAR'
EXIT USLEXEC_RC
*/

/*++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++*/
ERROR:
/*++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++*/

ERROR: RC = RC
TRACE OFF; SIGNAL OFF ERROR
SAY 'NON-ZERO RETURN CODE ENCOUNTRED IN EXEC AT LINE' SIGL
'CP SPOOL PRINTER NOCONT'
'CP CLOSE PRINTER NAME LOGA LISTING'
'CP SPOOL PRINTER OFF'
'GLOBAL LOADLIB'
'GLOBAL TXTLIB'
'FILEDEF * CLEAR'
EXIT ERROR_RC
*/

Key to Z/VM EXEC

Z/VM JCL Sample Key:
### Parameter Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>yourlib</td>
<td>The file name of the library into which you downloaded CA IDMS Log Analyzer.</td>
</tr>
<tr>
<td>idmslib</td>
<td>The file name of the load library containing your CA IDMS SUBSCHEMA and DMCL modules.</td>
</tr>
<tr>
<td>sortlib</td>
<td>The file name of the text library containing your sort modules.</td>
</tr>
<tr>
<td>your.log. archive</td>
<td>The file name of your log archive file. This file must be the SYS002 file from the CA IDMS utility RHDCPRLG or the SYS020 file from CA Culprit Statistics Report 99.</td>
</tr>
<tr>
<td>LOGA REPORTS fm</td>
<td>The file name, file type, and file mode of your REPORTS file.</td>
</tr>
<tr>
<td>LOGA EXTRACT fm</td>
<td>The file name, file type, and file mode of your EXTRACT file.</td>
</tr>
<tr>
<td>sort_fn sort_ft sort_fm4</td>
<td>The file name, file type, and file mode of your sort work files. The size of the sort work files can be adjusted depending on the size of the EXTRACT file. You can estimate extract file size if you know how many records are likely to match the selection criteria of your REPORT parameter statements. For each run-unit, 19 records are created for each HI-SUM request, and one record is created for each other type of report. These records are sorted and then written to the EXTRACT file.</td>
</tr>
<tr>
<td>fm</td>
<td>The file mode of the relevant file.</td>
</tr>
</tbody>
</table>

**Note:** Ensure that your virtual machine has been IPL'd with enough storage. Contact your systems programmer for information on increasing its size, if necessary. The Log must be archived using the CA IDMS utility with a file mode of x4, to indicate z/OS file-type simulation, and a DCB of: (RECFM U LRECL 4096.

### File Attributes Used in CA IDMS Log Analyzer:

<table>
<thead>
<tr>
<th>FILE/ NAME</th>
<th>LOGICAL UNIT</th>
<th>RECORD SIZE</th>
<th>BLOCK SIZE - RDR</th>
<th>PRT</th>
<th>DISK/ TAPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSIPT</td>
<td>SYS005</td>
<td>80</td>
<td>80</td>
<td>*</td>
<td>6080 ***</td>
</tr>
<tr>
<td>AUDIT</td>
<td>SYS006</td>
<td>133</td>
<td>*</td>
<td>133</td>
<td>6118</td>
</tr>
<tr>
<td>REPORTS</td>
<td>SYS007</td>
<td>133</td>
<td>*</td>
<td>133</td>
<td>6118</td>
</tr>
<tr>
<td>EXTRACT</td>
<td>SYS008</td>
<td>164-516 **</td>
<td>*</td>
<td>*</td>
<td>6144</td>
</tr>
<tr>
<td>BILLFILE</td>
<td>SYS009</td>
<td>100</td>
<td>*</td>
<td>*</td>
<td>6100</td>
</tr>
<tr>
<td>LOGFILE</td>
<td>SYS010</td>
<td>24-376 **</td>
<td>*</td>
<td>*</td>
<td>6144 ***</td>
</tr>
<tr>
<td>DISKLOG</td>
<td>SYS011</td>
<td>133</td>
<td>*</td>
<td>*</td>
<td>6118 ***</td>
</tr>
</tbody>
</table>
Notes:

* This file cannot be assigned to this device type.

** This record is variable length: minimum and maximum shown.

*** The size shown is the maximum that can be processed. Smaller block sizes that are an appropriate multiple of the record size can also be processed.

USLBILX and USLRPT5 Source Code

This section gives instructions for printing the CA source code for USLBILX and USLRPT5. The source code will allow you to tailor the CA IDMS Log Analyzer billing reports. The source code for USLBILX and USLRPT5 was cataloged into your source statement library during the installation procedure. The procedure for listing these modules differs for Z/OS and Z/VSE users. See the CA IDMS Installation and Maintenance for z/OS for further information.

Listing Modules for Z/OS

We suggest that Z/OS users use the utility IEBGENER to print or punch the source code for the desired member.

Listing Modules for Z/VSE

We suggest that Z/VSE users use the LIBR function LIST or PUNCH to display and/or punch the desired modules. USLBILX and USLRPT5 are in the COBOL statement library.

External Request Element Extension

This appendix provides a description of the External Request Element (ERE) extension.

Altering the ERE description is necessary if you want to tailor the CA IDMS Log Analyzer Billing Reports or the Billing Record file.

To change the ERE extension you must alter GSISVCX, USLBILX, and USLRPT5.

```
* ERP LAYOUT (AS CREATED BY GSISVCX FOR USE IN CA IDMS /LOG ANALYZER)
* NOTE: THESE FIELDS ARE CONTAINED WITHIN THE EXTRACT RECORD
* 25 EXT-LOG ERUS-ID
```
Billing the Record File

This appendix provides a description of the CA IDMS Log Analyzer Billing Record File.

Altering this record layout is necessary if you want to tailor the CA IDMS Log Analyzer Billing file.

```
*--------------------------------------------------------------------------------*
* BILLING RECORD                                                          *
* NOTICE: THIS COPY BOOK IS USED BY THE CA IDMS/LOG ANALYZER MODULE USLBILX.*
* DISCRETION MUST BE USED IN CHANGING IT.                                 *
* BILL-START IS THE DATE/TIME THE IDMSSVCX ROUTINE RECEIVED CONTROL FOR    *
* THE PARTICULAR RUN-UNIT.                                                 *
* BILL-STOP IS THE TIME THE LOG RECORD WAS WRITTEN AND IS, IN EFFECT,      *
* THE TIME OF TASK TERMINATION.                                           *
* BILL-ACT-DATA IS UP TO 16 BYTES FROM THE ACCOUNT FIELD OF THE z/OS OR    *
* VS/ESA JOB CARD.                                                        *
* CV AND DC TASKS ARE "INTERNAL" TASKS TO CA IDMS/DC. THE IDMSSVCX ROUTINE*
* DOES NOT RECEIVE CONTROL FOR INTERNAL TASKS AND AN ERE IS NEVER CREATED.*
* THEREFORE, JOB NAME AND RUN-UNIT START DATE/TIME IS NOT AVAILABLE.      *
* BILLING EXIT SETS THOSE FIELDS AS SHOWN BELOW:                          *
* BILL-JOB-NAME TO 'IDMSDBDC'                                            *
* BILL-RU-START-DATE TO ZERO                                              *
* BILL-RU-START-TIME TO ZERO                                              *
* INTERNAL TASKS ARE IDENTIFIED BY CA IDMS WITH A POSITIVE TASK-ID.*      *
* EXTERNAL TASKS ARE IDENTIFIED BY CA IDMS WITH A NEGATIVE TASK-ID.*      *
* WHEN BUILDING THE BILLING RECORD, USLBILX CREATES A POSITIVE TASK-ID   *
* FOR EXTERNAL RUN-UNITS BY MULTIPLYING THE TASK-ID BY A NEGATIVE ONE.    *
* NOTE: BILL-START-DATETIME IS IN 00YYDDDS FORMAT ("S" IS SIGN).         *
* BILL-START-DATETIME IS IN UNITS OF 1/10,000 SECONDS.                    *
* BILL-START-DATETIME IS IN "SQL INTERNAL" FORMAT                        *
* BITS 00-26 = NBR OF DAYS SINCE JANUARY 1, 0001                           *
* BITS 27-43 = NBR OF SECONDS SINCE MIDNIGHT OF THIS DATE                  *
* BITS 44-63 = NBR OF MICROSECONDS WITHIN THIS SECOND                     *
* CHANGE CONTROL.                                                        *
*--------------------------------------------------------------------------------*
```
I/O Modules

Included here are specific names of I/O modules needed in the core image library by CA IDMS Log Analyzer.

Also shown are the conditions under which each I/O module is needed and typical JCL for linking the module into the core image library.

IJCFZIIO for Parameter card input

IJDFAZIZ for Printer output

IJFVZZZZ for Archive file input on tape and for EXTRACT file input on tape

IJFFZZZZ for Sequential log file input on tape

IJFVZZWZ for EXTRACT file output on tape and for Billing file output on tape if the Billing file is customized to have variable length records.

IJFZZZZWZ for Billing file output on tape

// OPTION CATAL,NODUMP,NOSTR APHASE xxxxxxxx,* INCLUDE xxxxxxxx// EXEC LNEDT
Where xxxxxxxx is the name of I/O module to be linked.