

Trademarks and registered trademarks of other companies: AIX, DB2, MQSeries and WebSphere are registered trademarks of International Business Machines Corporation. SAP is a registered trademark and R/3 is a trademark of SAP AG. UNIX is a registered trademark in the U.S. and other countries, licensed exclusively through X/Open Company Ltd. HP-UX is a trademark of Hewlett-Packard Company. SunOS is a trademark of Sun Microsystems, Inc. All other company and product names used herein are trademarks or registered trademarks of their respective companies.

Copyright © March 2002, Candle Corporation, a California corporation. All rights reserved. International rights secured.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Figures</td>
<td>7</td>
</tr>
<tr>
<td>List of Tables</td>
<td>9</td>
</tr>
<tr>
<td>Preface</td>
<td>11</td>
</tr>
<tr>
<td>About This Book</td>
<td>12</td>
</tr>
<tr>
<td>Adobe Portable Document Format</td>
<td>16</td>
</tr>
<tr>
<td>Documentation Conventions</td>
<td>17</td>
</tr>
<tr>
<td>What’s New</td>
<td>19</td>
</tr>
<tr>
<td>Application Trace Facility</td>
<td>20</td>
</tr>
<tr>
<td>New OMEGAMON II Functions</td>
<td>21</td>
</tr>
<tr>
<td>Documentation Changes</td>
<td>22</td>
</tr>
<tr>
<td>Chapter 1. Overview of I/CF</td>
<td>23</td>
</tr>
<tr>
<td>Introduction to I/CF</td>
<td>24</td>
</tr>
<tr>
<td>New Features</td>
<td>25</td>
</tr>
<tr>
<td>Storage Requirements</td>
<td>26</td>
</tr>
<tr>
<td>Chapter 2. Installing, Configuring, and Customizing I/CF</td>
<td>27</td>
</tr>
<tr>
<td>Overview of the Process</td>
<td>29</td>
</tr>
<tr>
<td>CICAT Background and Requirements</td>
<td>31</td>
</tr>
<tr>
<td>CICAT Installation Procedure</td>
<td>32</td>
</tr>
<tr>
<td>CICAT Configuration Procedures</td>
<td>34</td>
</tr>
<tr>
<td>Manual Configuration Procedures</td>
<td>38</td>
</tr>
<tr>
<td>Manual Customization Procedures</td>
<td>39</td>
</tr>
<tr>
<td>Chapter 3. Customizing I/CF</td>
<td>41</td>
</tr>
<tr>
<td>Defining an I/CF Console</td>
<td>42</td>
</tr>
<tr>
<td>Defining a Direct VTAM Interface</td>
<td>44</td>
</tr>
<tr>
<td>Defining an Interface for Entering VTAM Commands</td>
<td>46</td>
</tr>
<tr>
<td>Defining a Command Resource Class</td>
<td>48</td>
</tr>
<tr>
<td>APF-Authorization Requirements</td>
<td>50</td>
</tr>
<tr>
<td>Chapter 4. Automating an I/CF Console</td>
<td>51</td>
</tr>
<tr>
<td>Automation Strategy</td>
<td>52</td>
</tr>
<tr>
<td>Defining Automation for an I/CF Console</td>
<td>54</td>
</tr>
<tr>
<td>Providing an Automation Exit</td>
<td>55</td>
</tr>
</tbody>
</table>
Chapter 5. Remote Console Interface ................................................................. 57
Defining an I/CF Remote Console Interface .................................................. 58
Defining an I/CF Remote Console ................................................................. 62
Security ............................................................................................................ 64

Chapter 6. Using I/CF ...................................................................................... 65
Logon Methods ................................................................................................. 67
I/CF Features ................................................................................................... 70
Changing the Way the System Displays Information ...................................... 74
Entering Commands ......................................................................................... 77
Logging Data ................................................................................................... 79
Switching the Logs ........................................................................................... 81

Chapter 7. Security .......................................................................................... 83
Set Up Logon Security ...................................................................................... 84
Command Entry Security ................................................................................ 91
Command Entry Audit ...................................................................................... 97

Chapter 8. Console Recovery Facilities .......................................................... 99
Automatic Console Recovery Facilities ......................................................... 100
Manual Console Recovery Facilities ............................................................. 101
ICFX Exception ............................................................................................... 102

Chapter 9. Command Reference .................................................................... 103
ICFCMD - MVS Console Command ................................................................ 104
ICFCONS command ....................................................................................... 107
ICFTRAP command ....................................................................................... 115
MSG Command .............................................................................................. 118
AFOPER Command ....................................................................................... 119
RECYCLE Command .................................................................................... 120
RESTART Command ..................................................................................... 121
OPEN Command ........................................................................................... 122
CLOSE Command ......................................................................................... 123
SWITCH Command ....................................................................................... 124

Chapter 10. Messages ..................................................................................... 125
I/CF Date/Time Stamp Messages .................................................................. 126
I/CF Messages ............................................................................................... 127
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIGURE 1</td>
<td>Sample IMS System Generation Changes</td>
<td>43</td>
</tr>
<tr>
<td>FIGURE 2</td>
<td>Sample IMS Master Console Definition</td>
<td>43</td>
</tr>
<tr>
<td>FIGURE 3</td>
<td>Sample Direct VTAM Interface Definition</td>
<td>45</td>
</tr>
<tr>
<td>FIGURE 4</td>
<td>Sample SPO APPLID Definition</td>
<td>46</td>
</tr>
<tr>
<td>FIGURE 5</td>
<td>I/CF Remote Console Connected to an I/CF Master Console</td>
<td>58</td>
</tr>
<tr>
<td>FIGURE 6</td>
<td>Sample IMS System Generation Changes</td>
<td>59</td>
</tr>
<tr>
<td>FIGURE 7</td>
<td>Sample IMS Applid</td>
<td>59</td>
</tr>
<tr>
<td>FIGURE 8</td>
<td>Sample VTAM Major Node with a Remote Console Interface</td>
<td>60</td>
</tr>
<tr>
<td>FIGURE 9</td>
<td>Sample Parameters for I/CF Remote Console Interface</td>
<td>61</td>
</tr>
<tr>
<td>FIGURE 10</td>
<td>Sample VTAM Major Node for the I/CF Remote Console Interface</td>
<td>62</td>
</tr>
<tr>
<td>FIGURE 11</td>
<td>Sample Parameters for I/CF Remote Console</td>
<td>63</td>
</tr>
<tr>
<td>FIGURE 12</td>
<td>CUA Sign On Panel</td>
<td>134</td>
</tr>
<tr>
<td>FIGURE 13</td>
<td>IMS Console Facility Sign On Panel</td>
<td>135</td>
</tr>
<tr>
<td>FIGURE 14</td>
<td>IMS Console Selection Pop-up</td>
<td>137</td>
</tr>
<tr>
<td>FIGURE 15</td>
<td>IMS Console Facility Panel - Integrated Logon</td>
<td>138</td>
</tr>
<tr>
<td>FIGURE 16</td>
<td>IMS Console Facility Panel - Direct/Indirect Logon</td>
<td>139</td>
</tr>
<tr>
<td>FIGURE 17</td>
<td>CUA Operator Assist Panels</td>
<td>140</td>
</tr>
<tr>
<td>FIGURE 18</td>
<td>Set Controls Pop-up</td>
<td>141</td>
</tr>
<tr>
<td>FIGURE 19</td>
<td>IMS Status Alerts Exceptions Panel</td>
<td>142</td>
</tr>
<tr>
<td>Table 1.</td>
<td>OMEGAMON II for IMS Documentation Set</td>
<td>12</td>
</tr>
<tr>
<td>Table 2.</td>
<td>OMEGAMON II for DBCTL Documentation Set</td>
<td>13</td>
</tr>
<tr>
<td>Table 3.</td>
<td>Symbols in Command Syntax</td>
<td>18</td>
</tr>
<tr>
<td>Table 4.</td>
<td>Storage and Space Requirements</td>
<td>26</td>
</tr>
<tr>
<td>Table 5.</td>
<td>Overview of the Process</td>
<td>29</td>
</tr>
<tr>
<td>Table 6.</td>
<td>CICAT Configuration Procedure Checklist</td>
<td>37</td>
</tr>
<tr>
<td>Table 7.</td>
<td>Manual Configuration Procedure Checklist</td>
<td>38</td>
</tr>
<tr>
<td>Table 8.</td>
<td>Manual Customization Procedure Checklist</td>
<td>39</td>
</tr>
<tr>
<td>Table 9.</td>
<td>Default Color Scheme</td>
<td>75</td>
</tr>
<tr>
<td>Table 10.</td>
<td>Command Conversion Examples</td>
<td>92</td>
</tr>
<tr>
<td>Table 11.</td>
<td>I/CF Command Conversion Examples</td>
<td>93</td>
</tr>
<tr>
<td>Table 12.</td>
<td>ICFCMD Command Subparameter Descriptions</td>
<td>104</td>
</tr>
<tr>
<td>Table 13.</td>
<td>ICFCONSL Command Subparameter Descriptions</td>
<td>108</td>
</tr>
<tr>
<td>Table 14.</td>
<td>ICFTRAP Command Subparameter Descriptions</td>
<td>115</td>
</tr>
<tr>
<td>Table 15.</td>
<td>STATUS Field Values</td>
<td>136</td>
</tr>
</tbody>
</table>
Introduction

This document describes how to configure and use the IMS Console Facility (I/CF) feature of OMEGAMON II for IMS® and OMEGAMON II for DBCTL.
About This Book

Who should read this book

The intended audience for I/CF includes:

- Systems programmers responsible for installing I/CF
- Systems operators responsible for using the IMS Master Console

Documentation set information

The documentation listed in the following table is available for the Candle IMS products. A table containing the product manuals for OMEGAMON II for DBCTL follows this one. To order additional product manuals, contact your Candle Support Services representative.

<table>
<thead>
<tr>
<th>Document Number</th>
<th>Document Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC51-6057</td>
<td>Installing Candle Products on MVS</td>
<td>Provides installation instructions and other installation considerations.</td>
</tr>
<tr>
<td>I251-5610</td>
<td>OMEGAMON II for IMS and OMEGAMON II for DBCTL Configuration and Customization Guide</td>
<td>Explains how to configure and customize OMEGAMON II and its user interfaces and components.</td>
</tr>
<tr>
<td>I253-6332</td>
<td>OMEGAMON II for IMS Realtime Commands Reference Manual</td>
<td>Describes in detail all of the features of the OMEGAMON II command interface.</td>
</tr>
<tr>
<td>I253-6333</td>
<td>OMEGAMON II for IMS Bottleneck Analysis Reference Manual</td>
<td>Provides reference information and descriptions of the features of the bottleneck analysis component.</td>
</tr>
<tr>
<td>I253-6336</td>
<td>OMEGAMON II for IMS Historical Component (EPILOG) Reference Manual</td>
<td>Provides a comprehensive description of the features of the historical component (EPILOG).</td>
</tr>
<tr>
<td>I254-6334</td>
<td>OMEGAMON II for IMS User’s Guide</td>
<td>Teaches the basics of using OMEGAMON II for IMS to manage realtime IMS environments.</td>
</tr>
</tbody>
</table>
Table 1. OMEGAMON II for IMS Documentation Set

<table>
<thead>
<tr>
<th>Document Number</th>
<th>Document Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I299-6303</td>
<td>OMEGAMON II for IMS and OMEGAMON II for DBCTL Application Trace Facility</td>
<td>Provides user and reference information about the features of the Application Trace Facility (ATF) component.</td>
</tr>
<tr>
<td>I299-6338</td>
<td>OMEGAMON II for IMS and OMEGAMON II for DBCTL Transaction Reporting Facility</td>
<td>Provides user and reference information about the features of the Transaction Reporting Facility (TRF) component.</td>
</tr>
<tr>
<td>I299-6339</td>
<td>OMEGAMON II for IMS and OMEGAMON II for DBCTL IMS Console Facility</td>
<td>Provides a comprehensive description of the features of the IMS Console Facility (ICF) component.</td>
</tr>
</tbody>
</table>

Table 2. OMEGAMON II for DBCTL Documentation Set

<table>
<thead>
<tr>
<th>Document Number</th>
<th>Document Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC51-6057</td>
<td>Installing Candle Products on MVS</td>
<td>Provides installation instructions and other installation considerations.</td>
</tr>
<tr>
<td>ID53-6341</td>
<td>OMEGAMON II for DBCTL Realtime Commands Reference Manual</td>
<td>Describes in detail all of the features of the OMEGAMON II for DBCTL command interface.</td>
</tr>
<tr>
<td>ID53-6344</td>
<td>OMEGAMON II for DBCTL Bottleneck Analysis Reference Manual</td>
<td>Provides reference information and descriptions of the features of the bottleneck analysis component.</td>
</tr>
</tbody>
</table>
### Table 2. OMEGAMON II for DBCTL Documentation Set

<table>
<thead>
<tr>
<th>Document Number</th>
<th>Document Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID53-6345</td>
<td>OMEGAMON II for DBCTL Historical Component (EPILOG) Reference Manual</td>
<td>Provides a comprehensive description of the features of the historical component (EPILOG).</td>
</tr>
<tr>
<td>ID53-6346</td>
<td>OMEGAMON II for DBCTL Historical Component (EPILOG) User’s Guide</td>
<td>Teaches you, step-by-step, how to operate the historical component (EPILOG) reporter after installation.</td>
</tr>
<tr>
<td>I251-6317</td>
<td>OMEGAMON II for IMS and OMEGAMON II for DBCTL Configuration and Customization Guide</td>
<td>Explains how to configure and customize OMEGAMON II and its user interfaces and components.</td>
</tr>
<tr>
<td>I299-6303</td>
<td>OMEGAMON II for IMS and OMEGAMON II for DBCTL Application Trace Facility</td>
<td>Provides user and reference information about the features of the Application Trace Facility (ATF) component.</td>
</tr>
<tr>
<td>I299-6338</td>
<td>OMEGAMON II for IMS and OMEGAMON II for DBCTL Transaction Reporting Facility</td>
<td>Provides user and reference information about the features of the Transaction Reporting Facility (TRF) component.</td>
</tr>
<tr>
<td>I299-6339</td>
<td>OMEGAMON II for IMS and OMEGAMON II for DBCTL IMS Console Facility</td>
<td>Provides a comprehensive description of the features of the IMS Console Facility (ICF) component.</td>
</tr>
</tbody>
</table>

### Where to look for more information

For more information related to this product, please see the:

- technical documentation CD-ROM that came with your product
- technical documentation information available on the Candle Web site at [www.candle.com](http://www.candle.com)
- online help provided with this and the other related products.
Ordering additional documentation

To order additional product manuals, contact your Candle Customer Support representative.

We would like to hear from you

Candle welcomes your comments and suggestions for changes or additions to the documentation set. A user comment form, located at the back of each manual, provides simple instructions for communicating with the Candle Information Development department.

You can also send email to UserDoc@candle.com. Please include “OMEGAMON II for IMS and OMEGAMON II for DBCTL IMS Console Facility” in the subject line.
Adobe Portable Document Format

Printing this book

Candle supplies documentation in the Adobe Portable Document Format (PDF). The Adobe Acrobat Reader will print PDF documents with the fonts, formatting, and graphics in the original document. To print a Candle document, do the following:

1. Specify the print options for your system. From the Acrobat Reader Menu bar, select File > Page Setup… and make your selections. A setting of 300 dpi is highly recommended as is duplex printing if your printer supports this option.

2. To start printing, select File > Print... on the Acrobat Reader Menu bar.

3. On the Print pop-up, select one of the Print Range options for
   - All
   - Current page
   - Pages from: [ ] to: [ ]

4. (Optional). Select the Shrink to Fit option if you need to fit oversize pages to the paper size currently loaded on your printer.

Printing problems?

The print quality of your output is ultimately determined by your printer. Sometimes printing problems can occur. If you experience printing problems, potential areas to check are:

- settings for your printer and printer driver. (The dpi settings for both your driver and printer should be the same. A setting of 300 dpi is recommended.)
- the printer driver you are using. (You may need a different printer driver or the Universal Printer driver from Adobe. This free printer driver is available at www.adobe.com.)
- the halftone/graphics color adjustment for printing color on black and white printers (check the printer properties under Start > Settings > Printer). For more information, see the online help for the Acrobat Reader.
- the amount of available memory in your printer. (Insufficient memory can cause a document or graphics to fail to print.)

For additional information on printing problems, refer to the documentation for your printer or contact your printer manufacturer.

Contacting Adobe

If additional information is needed about Adobe Acrobat Reader or printing problems, see the Readme.pdf file that ships with Adobe Acrobat Reader or contact Adobe at www.adobe.com.
Documentation Conventions

Introduction
Candle documentation adheres to accepted typographical conventions for command syntax. Conventions specific to Candle documentation are discussed in the following sections.

Panels and figures
The panels and figures in this document are representations. Actual product panels may differ.

Revision bars
Revision bars (||) may appear in the left margin to identify new or updated material.

Variables and literals
In examples of command syntax, uppercase letters are actual values (literals) that the user should type; lowercase letters are used for variables that represent data supplied by the user. Default values are underscored.

LOGON APPLID (cccccccc)
In the above example, you type LOGON APPLID followed by an application identifier (represented by cccccccc) within parentheses.

Note: In ordinary text, variable names appear in italics.
Symbols

The following symbols may appear in command syntax:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Usage</th>
</tr>
</thead>
</table>
| The “or” symbol is used to denote a choice. Either the argument on the left or the argument on the right may be used. Example: **YES | NO**  
In this example, YES or NO may be specified. |
| [ ] | Denotes optional arguments. Those arguments not enclosed in square brackets are required. Example: **APPLDEST DEST [ALTDEST]**  
In this example, DEST is a required argument and ALTDEST is optional. |
| { } | Some documents use braces to denote required arguments, or to group arguments for clarity. Example: **COMPARE {workload} - REPORT={SUMMARY | HISTOGRAM}**  
The workload variable is required. The REPORT keyword must be specified with a value of SUMMARY or HISTOGRAM. |
| _ | Default values are underscored. Example: **COPY infile outfile - [COMPRESS={YES | NO}]**  
In this example, the COMPRESS keyword is optional. If specified, the only valid values are YES or NO. If omitted, the default is YES. |
Chapter overview

Version 510 of OMEGAMON II for IMS and OMEGAMON II for DBCTL significantly enhanced the Application Trace Facility. This version also provides several new functions, which broaden the overall functionality of OMEGAMON II for IMS and OMEGAMON II for DBCTL.

Chapter contents

Application Trace Facility ........................................ 20
New OMEGAMON II Functions ................................. 21
Documentation Changes ........................................ 22
Application Trace Facility

Application Trace Facility (ATF) is a monitoring agent in OMEGAMON II for IMS and OMEGAMON II for DBCTL. In Version 510, ATF was significantly enhanced so that:

- Multiple ATF OMEGAMON Classic address space sessions can monitor the same IMS
- The IMS Monitor can run concurrently with these ATF sessions
- All environments for IMS, IMS DB/DC, IMS DC and IMS DBCTL are supported
- A site has external control of its operations
- IMS Version 7 DC Monitor is supported
- Concurrent Online TRF display and ATF display functions are supported

In the previous Version 500, ATF had a DETAIL parameter that could be set to LOW or HIGH. In Version 510, this parameter was removed and the function was separated to display this information on separate sets of panels:

- What used to be DETAIL=LOW in ATF V500 is now the Online TRF Display
- What used to be DETAIL=HIGH in ATF V500 is now new ATF panels

The changes made to ATF in this release are explained in detail in the OMEGAMON II for IMS and OMEGAMON II for DBCTL Application Trace Facility Manual, V510. ATF’s online help has been upgraded to reflect these new features.
New OMEGAMON II Functions

Several new functions were added to OMEGAMON II for IMS and OMEGAMON II for DBCTL. These functions are:

- Expanded generic IMS command support
- Enhanced VSAM buffer pool statistics
- Enhanced fast path buffer pool statistics
- Enhanced fast path statistics
- Enhanced operator assistance for fast path areas
- Additional data and sorting on IMS Message region fields
Online documentation

With version 510, Candle Corporation has moved OMEGAMON II for IMS manuals from IBM BookMaster to Adobe FrameMaker. This move was made to better enable us to address our customers’ needs by providing tools that enhance productivity.

One of the results of the move is that it is no longer possible to create BookManager versions of the OMEGAMON II for IMS manuals. However, the manuals remain available online in the Adobe PDF version on CD-ROM and are also available on the Candle Corporation website at www. Candle.com.

The documentation CD being provided with this release has robust and easy-to-use search capabilities. You can search for information in multiple volumes, multiple versions, and across products. The CD also provides easy setup of search indexes with a single click of the mouse.

If you want to order printed copies of the documentation, please contact your Candle Support Services representative.
Overview of I/CF

Chapter overview

This chapter provides an overview of the IMS Console Facility (I/CF). It includes an introduction, a list of new functions and features, and information you need to know before you install I/CF.

Chapter contents

- Introduction to I/CF .......................................................... 24
- Overview ................................................................. 24
- Available through CUA only ................................................. 24
- Console support capability .................................................. 24
- Single point of entry ....................................................... 24
- New Features ............................................................... 25
- Overview ................................................................. 25
- New and modified features and functions ............................... 25
- Storage Requirements ..................................................... 26
- Introduction ................................................................. 26
- Types of storage and space requirements ............................. 26
Introduction to I/CF

Overview

The IMS Console Facility (I/CF) provides a complete IMS Master Console solution for OMEGAMON II for IMS and OMEGAMON II for DBCTL version 500.

This unit provides an overview of the product.

Available through CUA only

I/CF takes full advantage of Candle Technologies by using the CL/Engine to facilitate the IMS Master Terminal interface. I/CF is available only through the CUA component of OMEGAMON II for IMS and OMEGAMON II for DBCTL V300 and above.

Console support capability

I/CF provides console support for any IMS DC or DB/DC environment that has VTAM connectivity to the MVS image running the OMEGAMON II for IMS or OMEGAMON II for DBCTL address space.

You must start OMEGAMON II for IMS or OMEGAMON II for DBCTL on the same MVS system that runs your IMS or DBCTL subsystem if you want to:

- Get MVS messages not normally sent to the IMS Master Terminal
- Provide an I/CF Console for a DBCTL environment
- Issue MVS and VTAM commands

```
Important
```

Candle recommends that you start one OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space on each MVS system. You can monitor any number of IMS systems.

Refer to the overview of the sysplex configuration section of Chapter 1, in the OMEGAMON II for IMS and OMEGAMON II for DBCTL Configuration and Customization Guide.

Single point of entry

I/CF provides a single point of entry to the IMS Master Terminal for multiple concurrent users. It also eliminates the need to define a physical device as the IMS Master Console with 24 hour per day support personnel.
New Features

Overview

This unit provides a list of new and modified features and functions that I/CF provides. The remainder of this document details these features.

New and modified features and functions

I/CF contains the following features:

- 4-way screen scrolling
- IMS, MVS, and VTAM command entry
- Multi-directional FIND
- Date/Time stamped Console log
- Command entry audit
- Command entry security
- Multi-color highlighting
- Console recovery facilities
- Message suppression
- Direct VTAM logon interface
- Sysout or dataset log
- User message logging
- Exception logging
- CICAT support
- Automation interface to OMEGACENTER Gateway™ for MVS
- Remote Console Interface
Storage Requirements

Introduction

This unit lists the storage requirements for I/CF.

Types of storage and space requirements

I/CF has the following additional storage requirements.

Note: Unless otherwise stated, the system releases all allocated storage when the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space terminate.

Table 4. Storage and Space Requirements

<table>
<thead>
<tr>
<th>Type of storage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSA</td>
<td><strong>360 bytes</strong> Used to connect to the MVS Subsystem Interface. Multiple OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address spaces reuse this storage. You must IPL the system to release this storage.</td>
</tr>
<tr>
<td>Extended CSA</td>
<td>Use the following guidelines for Extended CSA storage:</td>
</tr>
<tr>
<td></td>
<td><strong>4K</strong> Used to connect to the MVS Subsystem Interface. Multiple OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address spaces reuse this storage. You must IPL the system to release this storage.</td>
</tr>
<tr>
<td></td>
<td><strong>520 bytes</strong> Per I/CF Master Console.</td>
</tr>
<tr>
<td></td>
<td><strong>260 bytes</strong> Per user-requested subsystem console.</td>
</tr>
<tr>
<td></td>
<td><strong>300 bytes</strong> Per OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.</td>
</tr>
<tr>
<td>Private</td>
<td>Does not require additional storage</td>
</tr>
<tr>
<td>Extended Private</td>
<td>Use the following guidelines for Extended Private storage:</td>
</tr>
<tr>
<td></td>
<td><strong>300 bytes</strong> Per I/CF console</td>
</tr>
<tr>
<td></td>
<td><strong>2k bytes</strong> Per I/CF console viewable data line</td>
</tr>
<tr>
<td></td>
<td><strong>160 bytes</strong> Per I/CF console viewable data line</td>
</tr>
</tbody>
</table>
Chapter overview

This chapter provides information about installing, configuring, and customizing I/CF. You configure I/CF as part of the OMEGAMON II for IMS/DBCTL configuration.

This chapter provides:

- a broad overview of the installation, configuration, and customization process (as well as where you can locate the information you will need)
- background about the Candle Installation and Configuration Assistance Tool (CICAT)
- an overview of how you install OMEGAMON II for IMS and OMEGAMON II for DBCTL using CICAT
- an overview of how you configure OMEGAMON II for IMS and OMEGAMON II for DBCTL using CICAT and a checklist listing the steps for the I/CF CICAT configuration procedure
- a checklist listing the steps for the manual configuration procedures
- a checklist listing the steps for the manual customization procedures

If you are installing OMEGAMON II for IMS and OMEGAMON II for DBCTL for the first time or you need a reminder about the different components and modes of operation for OMEGAMON II for IMS and OMEGAMON II for DBCTL, see the chapter “Configuration Planning and Considerations” in the OMEGAMON II for IMS and OMEGAMON II for DBCTL Configuration and Customization Guide.

Chapter contents

Overview of the Process .................................................. 29
Introduction ................................................................. 29
Broad overview of the process ........................................ 29
Getting help with CICAT .................................................. 30
CICAT Background and Requirements ............................... 31
Introduction ................................................................. 31
Restrictions on specifying values in CICAT ......................... 31
Reminder about the information available ........................................ 31
CICAT Installation Procedure ................................................. 32
  Introduction ........................................................................ 32
  Overview of the installation process using CICAT .................. 32
CICAT Configuration Procedures ............................................. 34
  Introduction ........................................................................ 34
  Prerequisites for configuring OMEGAMON II for IMS/DBCTL and I/CF 34
  Reminder about the information available ............................ 34
  Accessing the Configure OMEGAMON II for IMS/DBCTL menu .... 35
  Example of the Configure OMEGAMON II for IMS/DBCTL menu in
  CICAT .............................................................................. 36
  CICAT configuration checklist ............................................. 37
Manual Configuration Procedures ......................................... 38
  Introduction ........................................................................ 38
  Reminder about the information available ............................ 38
  Manual configuration checklist .......................................... 38
Manual Customization Procedures ........................................ 39
  Introduction ........................................................................ 39
  Reminder about the information available ............................ 39
  Manual customization checklist ........................................... 39
Introduction

This section provides a broad overview of the installation, configuration, and customization process. It also includes information about accessing help when using CICAT.

Broad overview of the process

The following table contains the broad steps you follow when you install, configure, and customize OMEGAMON II for IMS and OMEGAMON II for DBCTL. The table also shows where you can find the information you will need during each of the steps.

Table 5. Overview of the Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Using CICAT, install the product and create any new runtime environments.</td>
<td>Installing Candle Products on MVS and the online help for the product panel you are using</td>
</tr>
<tr>
<td>2</td>
<td>Using CICAT, configure the components you want to use.</td>
<td>Online help for the product panel you are using</td>
</tr>
<tr>
<td>4</td>
<td>Manually configure the I/CF components.</td>
<td>Chapters 3 and 5 in this guide</td>
</tr>
<tr>
<td>5</td>
<td>Manually customize the I/CF components you want to use.</td>
<td>Chapters 3 in this guide</td>
</tr>
</tbody>
</table>
Getting help with CICAT

The help for CICAT contains detailed information about using the CICAT panels. For example, the help contains information about:

- how to use the panel
- why parameters are required
- what the available action codes provide
- what the input fields mean
- what you are required to supply

To display help from any CICAT panel, press the Help key (F1) or enter HELP on the command line.

You can also display help for the help. For example, you can display information about the command to use to return to the previous topic in the help system. To display the help for help from any help panel, press the Help key (F1) or enter HELP on the command line.
CICAT Background and Requirements

Introduction

This section describes using the Candle Installation and Configuration Assistance Tool (CICAT).

You must use CICAT to install and configure OMEGAMON II for IMS and OMEGAMON II for DBCTL and I/CF. CICAT is an ISPF dialog that guides you through the installation and configuration steps required to install this product. Data entry panels assist you in understanding your site-specific parameter values. Associated help panels assist you in understanding the CICAT process and describe the input fields on the entry panels.

CICAT is restartable. If necessary, you can end the dialog, start it again, and continue from the point of interruption. ISPF V2.3 or above is required to use CICAT.

If you have not previously installed CICAT during installation of this or any other Candle product, you must do so now. For instructions on installing CICAT, see the Installing Candle Products on MVS manual. If you want to use CICAT from a previous installation, you must ensure that it is the most current version of CICAT. The Installing Candle Products on MVS manual will help you make this determination.

Restrictions on specifying values in CICAT

Important note: Entering ampersand (&) in any CICAT parameter string, whether you are in interactive or batch mode, results in a CICAT abend.

Reminder about the information available

If you need information about installing OMEGAMON II for IMS and OMEGAMON II for DBCTL using CICAT, you can locate information in the:

- Installing Candle Products on MVS manual
- online help for the product panel you are using
CICAT Installation Procedure

Introduction

This section provides information about the CICAT installation process, including information on:

- selecting products to configure
- managing your runtime environment

Overview of the installation process using CICAT

The following is an overview of how you select products to configure and manage your runtime environment.

The following is an overview of how you select products to configure and manage your runtime environment.

1. Invoke CICAT.
2. Select from the CICAT Main Menu as follows:
   - If installing a standalone product, select the item for the product.
   - If installing from a multi-product quick install tape, select the item MultiProduct Quick Install, nnnn level.
3. Ensure that installation and maintenance is completed before starting configuration.
4. Select Assist Configuration.
5. If a target RTE has not already been defined, use action code A (Add) to define an RTE.
6. Use action B (Build) to allocate runtime libraries.
7. Use action code C (Configure) to invoke configuration of an RTE.
8. Select a product to configure, depending on how you selected from the CICAT Main Menu, as follows:
   - If you selected a single-component product on the CICAT Main Menu, the product configuration menu appears and you can proceed to configure.
   - If you selected a multi-component product, a list of components appears. Select and configure each component in the order presented.
   - If you selected a multi-product quick install tape, a list of products and components found on the tape appears. Select and configure each product/component in the order presented.
9. If you want to configure another product and it is not part of a quick install tape, return to the initial CICAT menu, select the product, and return to step 4 to select Assist Configuration.
10. When you are finished configuring all the products you want in an RTE, return to the Runtime Environments panel and use action code L (Load) to load the runtime libraries.

11. You can now proceed to verify and customize the products you configured in your RTE.
CICAT Configuration Procedures

Introduction

This section describes the CICAT configuration procedures for I/CF.

Prerequisites for configuring OMEGAMON II for IMS/DBCTL and I/CF

Before you start to configure I/CF, be sure that you have reviewed the considerations and planning information in the chapter “Configuration Planning and Considerations” in the OMEGAMON II for IMS and OMEGAMON II for DBCTL Configuration and Customization Guide.

The following configuration procedures assume that you have:

- Completed SMP/E installation and applied maintenance for OMEGAMON II for IMS or OMEGAMON II for DBCTL, or for a MultiProduct Quick Install tape that includes OMEGAMON II for IMS or OMEGAMON II for DBCTL, as described in your Installing Candle Products on MVS manual.

Reminder about the information available

If you need information about configuring I/CF using CICAT or specific information about the values you specify using CICAT, see the online help for the product panel you are using.
Accessing the Configure OMEGAMON II for IMS/DBCTL menu

To begin OMEGAMON II for IMS or OMEGAMON II for DBCTL configuration:

1. Start CICAT. (For a reminder, see your Installing Candle Products on MVS manual.)

2. On the CICAT Main Menu:
   - If you installed the MultiProduct Quick Install tape, select MultiProduct Quick Install.

   To preview the list of products included in your MultiProduct Quick Install tape, you can use action code V (View Additional Information) on MultiProduct Quick Install.

   - If you installed OMEGAMON II for IMS or OMEGAMON II for DBCTL as a separate product, select it.

3. On the Installation/Configuration Primary Menu, select Assist Configuration.

4. On the Runtime Environments panel, use action code C (Configure) on the RTE you are ready to configure.

5. If you installed the MultiProduct Quick Install tape or a multicomponent product, select OMEGAMON II for IMS or OMEGAMON II for DBCTL on the Product Configuration Selection Menu.

6. Proceed to use the Configure OMEGAMON II for IMS/DBCTL Menu.
Example of the Configure OMEGAMON II for IMS/DBCTL menu in CICAT

The following figure is an example of the Configure OMEGAMON II for IMS/DBCTL menu.

------------- CONFIGURE OMEGAMON II FOR IMS/DBCTL -------------

OPTION ===>

Perform these configuration steps in order:

1  Specify configuration values
2  Allocate additional runtime datasets
3  Create runtime members
4  Complete the configuration

Optional:

5  Configure I/CF console commands
6  Configure I/CF trap commands
7  Install Candle Subsystem
8  Run migration utility
9  Install BookManager data

F1=Help   F3=Back
**CICAT configuration checklist**

The following table contains the steps for configuring I/CF, that you perform on the CICAT Configure OMEGAMON II for IMS/DBCTL menu. The steps are listed in the sequence in which they are to be performed. Use the ✔ column to check off steps as you complete them.

### Table 6. CICAT Configuration Procedure Checklist

<table>
<thead>
<tr>
<th>✔</th>
<th>CICAT Configuration Step</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Use Configure I/CF console commands</strong> to specify the IMS console number and console commands parameters. See the online help and sub-parameter descriptions in “ICFCONSL command” on page 107 for more information about how to complete these fields. The result depends on what is specified in the <strong>LOG</strong> field: Log using Dataset (D), Sysout (S), or No (N) logging. If <strong>D</strong> is specified, enter the dataset information. If <strong>S</strong> is specified, enter the printing information. If <strong>N</strong> is specified, there is no logging.</td>
</tr>
<tr>
<td></td>
<td><strong>Use Configure I/CF trap commands</strong> to specify the IMS trap number and trap commands parameters. See the online help and sub-parameter descriptions for the ICFTRAP command on page “ICFTRAP command” on page 115 for more information on how to complete these fields.</td>
</tr>
</tbody>
</table>
Manual Configuration Procedures

Introduction
This section provides information about performing manual configuration procedures for I/CF.

Reminder about the information available
The checklist in the following table contains the location where you can find the information you will need.

Manual configuration checklist
The following table contains the steps you perform manually to configure I/CF. The steps are listed in the sequence in which they are to be performed. Use the ✓ column to check off steps as you complete them.

Table 7. Manual Configuration Procedure Checklist

<table>
<thead>
<tr>
<th>✓</th>
<th>Manual Configuration Step</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Configure I/CF IMS SYSGEN changes using “Changing the IMS system generation” on page 43.</td>
</tr>
<tr>
<td></td>
<td>Configure I/CF VTAM changes using “Defining the VTAM Major Node for SYSA” on page 60.</td>
</tr>
</tbody>
</table>
Manual Customization Procedures

Introduction

This section provides information about performing manual customization procedures for I/CF.

Reminder about the information available

The checklist in the following table contains the location where you can find the information you will need.

Manual customization checklist

The following table contains the steps you perform manually to customize I/CF. The steps are listed in the sequence in which they are to be performed. Use the ✓ column to check off steps as you complete them. Candle recommends that you review the entire process before you begin customizing I/CF.

Table 8. Manual Customization Procedure Checklist

<table>
<thead>
<tr>
<th>✓</th>
<th>Manual Customization Step</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Define an I/CF console using “Defining an I/CF Console” on page 42.</td>
</tr>
<tr>
<td></td>
<td>Define a direct VTAM interface using “Defining a Direct VTAM Interface” on page 44.</td>
</tr>
<tr>
<td></td>
<td>Define an interface for entering VTAM commands using “Defining an Interface for Entering VTAM Commands” on page 46.</td>
</tr>
<tr>
<td></td>
<td>Define a command resource class using “Defining a Command Resource Class” on page 48.</td>
</tr>
<tr>
<td></td>
<td>APF-authorize OMEGAMON II using “APF-Authorization Requirements” on page 50.</td>
</tr>
</tbody>
</table>
Chapter overview

This chapter describes how to manually customize the IMS Console Facility by defining an I/CF Console, defining a direct VTAM interface, defining a VTAM command entry interface, and defining a command resource class.

*Note:* Use the procedures in this chapter when you are modifying an existing system.

Chapter contents

- Defining an I/CF Console ................................................. 42
  - Overview .............................................................. 42
  - Using the ICFCONSL command ..................................... 42
  - Changing the IMS system generation ............................ 43
  - Defining a VTAM APPLID ............................................. 43
- Defining a Direct VTAM Interface ................................. 44
  - Overview .............................................................. 44
  - Modifying KI2START ............................................... 44
  - Defining the VTAM APPLID ......................................... 45
- Defining an Interface for Entering VTAM Commands .... 46
  - Overview .............................................................. 46
  - Defining a Secondary Program Operator (SPO) applid. ........ 46
  - Modifying the startup parameters .............................. 47
- Defining a Command Resource Class ............................. 48
  - Overview .............................................................. 48
  - Creating a command resource class name table .............. 48
  - Specifying the command resource class name table .......... 49
- APF-Authorization Requirements ................................. 50
  - Overview .............................................................. 50
  - APF-authorizing OMEGAMON II ................................. 50
Defining an I/CF Console

Overview

You can define any number of IMS Master Terminals to a single OMEGAMON II for IMS or OMEGAMON II for DBCTL address space. This manual method of defining a master console consists of issuing the ICFCONSL command, changing the IMS system generation, and defining the VTAM APPLID. This unit tells you how to do each of these steps.

Note: For these changes to take effect, stop/restart the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.

If you choose to use CICAT, see “Installing, Configuring, and Customizing I/CF” on page 27.

Using the ICFCONSL command

Define the I/CF console by modifying the OMEGAMON II for IMS or OMEGAMON II for DBCTL startup command.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit rhilev.midlev.RKANCMD(KI2START).</td>
</tr>
<tr>
<td>2</td>
<td>Add the ICFCONSL command and the appropriate parameters to KI2START. See “ICFCONSL command” on page 107 for detailed information about the ICFCONSL command.</td>
</tr>
<tr>
<td>3</td>
<td>Save KI2START.</td>
</tr>
</tbody>
</table>
Changing the IMS system generation

The following is an example of the IMS system generation changes you need to make to define the IMS Master Console for use by I/CF.

*Note:* This is only required for IMS DC or IMS DB/DC systems.

FIGURE 1. Sample IMS System Generation Changes

```
*** IMS MASTER CONSOLE DEFINITION FOR I/CF
***
TYPE       UNITYPE=SLUTYPE1
TERMINAL   NAME=xxxxxxxx,COMPT1=(CONSOLE,BASIC-SCS1)
NAME        (xxxxxxxx,MASTER)
NAME        (xxxxxxxx)
```

Defining a VTAM APPLID

The following is an example of the VTAM APPLID you need to define the IMS Master Console for use by I/CF.

FIGURE 2. Sample IMS Master Console Definition

```
*** VTAM APPLID FOR I/CF MASTER CONSOLE
***
ICFMJNOD   VBUILD       APPL
xxxxxxxx   AUTH=(ACQ,NVPACE),EAS=1,ACB=yyyyyyyy
```

In the example above,

- `xxxxxxxx` The 8-character VTAM APPLID.
  This must match the IMS system generation NAME subparameter in the TERMINAL macro. See Figure 1 above.

- `yyyyyyyy` The VTAM ACB name.
  If you omit this subparameter, VTAM defaults to the APPLID as the ACB name.

*Note:* The ACB subparameter of the ICFCONSL command requires the ACB name, not the APPLID.
Defining a Direct VTAM Interface

Overview

A direct VTAM interface allows you to log on to the IMS Console Facility by typing the logon applid for I/CF.

There are 2 steps to defining a direct VTAM interface, as follows:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Modify KI2START.</td>
</tr>
<tr>
<td>2</td>
<td>Define the VTAM APPLID.</td>
</tr>
</tbody>
</table>

This unit describes each of these steps.

**Note:** To make these changes take effect, stop/restart the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.

Modifying KI2START

Use the following procedure to modify KI2START.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit rhilev.midlev.RKANCMD(KI2START).</td>
</tr>
<tr>
<td>2</td>
<td>Insert the following line: <strong>DIALOG yyyyyyy KI2PICF</strong>&lt;br&gt;where <em>yyyyyyyy</em> is the ACB name.</td>
</tr>
<tr>
<td>3</td>
<td>Save KI2START.</td>
</tr>
</tbody>
</table>
Defining the VTAM APPLID

The following is an example of the VTAM APPLID you need for the direct VTAM interface.

FIGURE 3. Sample Direct VTAM Interface Definition

---

*** VTAM APPLID FOR DIRECT VTAM INTERFACE
***
ICFDLOG  VBUILD  APPL
YYYYYYYY  APPL  AUTH=(ACQ,NVPACE),EAS=100,ACB=YYYYYYYY,PARSESS=YES

---

In the example above,

- **YYYYYYYY**  The VTAM ACB name.
  This must match the ACB name you used when you modified KI2START in the section, “Defining a Direct VTAM Interface” on page 44.

- **YYYYYYYY**  The 8-character VTAM APPLID.

---
Defining an Interface for Entering VTAM Commands

Overview
There are two steps to defining an interface for entering VTAM commands, as follows:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Define a VTAM secondary program operator (SPO) APPLID.</td>
</tr>
<tr>
<td>2</td>
<td>Modify the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA startup parameters.</td>
</tr>
</tbody>
</table>

This unit describes each of these steps.

**Note:** To make these changes take effect, stop/restart the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.

Defining a Secondary Program Operator (SPO) applid

The following is an example of the SPO APPLID you need to define the interface for entering VTAM commands.

**FIGURE 4. Sample SPO APPLID Definition**

```plaintext
*** SPO APPLID FOR VTAM COMMAND ENTER INTERFACE
***
ICFSPO   VBUILD   APPL
xxxxxxxxx APPL AUTH=(SPO, NVPACE), EAS=1, ACB=yyyyyyyy, PARSESS=YES
```

In the example above,

- `xxxxxxxx` The 8-character VTAM APPLID.
- `yyyyyyyy` The VTAM ACB name.

This must match the ACB name you use when you modify the OMEGAMON II for IMS or OMEGAMON II for DBCTL startup parameters. See “Modifying the startup parameters” on page 47.
Modifying the startup parameters

Use the following procedure to modify the OMEGAMON II for IMS or OMEGAMON II for DBCTL startup parameters. If you want to modify these parameters, you must first copy the member to the runtime library and then edit it.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Copy KI2INVPO from your SMP/E target parameter library, thilev.TKANPAR, to your runtime parameter library, rhilev midfield.RKANPAR.</td>
</tr>
</tbody>
</table>
| 2    | Edit rhilev midfield.RKANPAR(KI2INVPO). Insert the following line: 

```
yyyyyyyy SHARE(16)
```

where yyyy is the ACB name, as in KI2START. |
| 3    | Save KI2INVPO. |
Defining a Command Resource Class

Overview

To use an external security system to validate commands that you enter through an I/CF console, you must define a Command Resource Class to the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.

To define a command resource class, modify the Network Access Manager (NAM) security parameters, as follows:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create a command resource class name table.</td>
</tr>
<tr>
<td>2</td>
<td>Specify the command resource class name table to the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.</td>
</tr>
</tbody>
</table>

This unit describes each of these steps.

**Note:** To make these changes take effect, stop/restart the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.

Creating a command resource class name table

Use the following procedure to create the command resource class name table:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Edit `rhilev.midlev.RKANPAR(xxxxxxxx)`.
|      | Substitute any valid member name for `xxxxxxx`.
|      | Candle recommends `KI2ICFCL`.
| 2    | Insert the following line: `ICFCMD EXTERNAL=yyyyyyyy` where `yyyyyyyy` is the command resource class name you use to define your external security system for I/CF command resources. See “Command Entry Security” on page 91.
| 3    | Save the member. |
Specifying the command resource class name table

Use the following procedure to specify the command resource class name table to the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA system:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Edit `rhilev.midlev.RKANPAR(KI2INNAM)`. Insert the following line:  

\[
\text{CLASSES=} \text{xxxxxxxx} 
\]

where `xxxxxxxx` is the name of the `rhilev.midlev.RKANPAR` member you specified when you created a command resource class name table on page 48. |
| 2    | Save KI2INNAM. |
APF-Authorization Requirements

Overview

OMEGAMON II requires APF authorization for the JOBLIB or STEPLIB dataset(s) that OMEGAMON II uses for execution. This unit tells you how to APF-authorize OMEGAMON II.

APF-authorizing OMEGAMON II

You can APF-authorize OMEGAMON II by adding the dataset name or names with the appropriate volume identification to your current SYS1.PARMLIB(IEAAPFxx) member and doing an IPL of your MVS operating environment.

You need to authorize the following datasets:

- rhilev.midlev.RKANMOD
- rhilev.midlev.RKANMODL

Notes:

1. If one library in a steplib or joblib concatenation requires APF authorization, all libraries in the concatenation require APF authorization or all libraries will lose their APF status. You may already have APF authorization, if you have already installed other Candle products.

2. ETE does not pertain to DBCTL users.
Automating an I/CF Console

Chapter overview

This chapter describes the overall automation strategy for I/CF, explains how to define automation for an I/CF console, and describes how to install the I/CF Automation Interface Exit.

Chapter contents

Automation Strategy .............................................................. 52
Overview .............................................................................. 52
External requirements ......................................................... 52
Messages sent through the automation interface .................. 52
Identifying I/CF messages in OMEGACENTER Gateway for MVS 53
Defining Automation for an I/CF Console .......................... 54
Overview .............................................................................. 54
Automating an I/CF console ................................................ 54
Providing an Automation Exit ............................................. 55
Overview .............................................................................. 55
Assemble and link the automation interface exit .................. 55
Automation Strategy

Overview

Candle designed I/CF to provide an automation interface between an I/CF console and OMEGACENTER Gateway for MVS. This unit discusses the overall automation strategy of I/CF.

External requirements

You can use the automation interface to provide full IMS message automation without the use of the AOI exit that OMEGACENTER Gateway for MVS provides. To do this, you must assemble and link an interface exit using OMEGACENTER Gateway for MVS macros and load modules. See “Providing an Automation Exit” on page 55 for more information.

I/CF provides a fully functioning sample program which sends all messages to OMEGACENTER Gateway for MVS using AOSIM. See the OMEGACENTER Gateway for MVS User’s Guide for complete information about the AOSIM facility.

Messages sent through the automation interface

I/CF passes the following messages to the OMEGACENTER Gateway for MVS interface exit:

- IMS Master Terminal messages I/CF retrieves for an IMS DC or IMS DB/DC Master Terminal
- I/CF messages including messages users generate through the I/CF AFOPER command and which are not sent to the Master Console.
- Exception messages the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA sends to the I/CF console

Note: OMEGAMON II does not pass MVS Subsystem Interface messages to the automation interface routine because OMEGACENTER Gateway for MVS already has access to them.
Identifying I/CF messages in OMEGACENTER Gateway for MVS

The automation interface exit gives your OMEGACENTER Gateway for MVS automation routines the ability to distinguish between an MVS Subsystem Interface message and an I/CF console message.

All messages the system sends to OMEGACENTER Gateway for MVS from I/CF have a jobtype of **IMS**. You can find this value in the AOJTYPE global variable.

**Note:** You can find a description of global variables in the OMEGACENTER Gateway for MVS User’s Guide.

The system sets the AOCONNM global variable to the IMS console name (the VTAM ACB name). If this is an IMS DBCTL system, the system sets the console name equal to the IMSID.

The system then sets the AOJOBNM global variable to the IMSID. I/CF messages appear as WTO messages to OMEGACENTER Gateway for MVS.

**Note:** I/CF messages sent to the automation interface are not sent to the MVS Master Console.
Defining Automation for an I/CF Console

Overview

This unit describes how to specify that you want the system to send messages to the I/CF automation interface exit.

Automating an I/CF console

When you define an I/CF console, use the AUTO subparameter on the ICFCONSL command. See “ICFCONSL command” on page 107 for more information.
Providing an Automation Exit

Overview

This unit describes how to install the I/CF Automation Interface Exit (KI2AOSIM).

Assemble and link the automation interface exit

The I/CF Automation Interface Exit must have a load module name of KI2AOSIM. The system loads this module when the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space initializes.

See thilev.TKANSAM(KI2AOSIM) for a fully functioning sample interface module. This sample sends all messages to the first available OMEGACENTER Gateway for MVS address space.

If you are manually configuring I/CF, use the following procedure to make the automation interface functional:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Copy KI2AOSIM from your SMP/E target sample library, thilev.TKANSAM, to your runtime sample library, rhilev.midlev.RKANSAM.</td>
</tr>
<tr>
<td>2</td>
<td>Follow the instructions in rhilev.midlev.RKANSAM(KI2AOSIM) to assemble and link the sample module.</td>
</tr>
<tr>
<td>3</td>
<td>Start or restart the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space to make the automation interface functional.</td>
</tr>
</tbody>
</table>
Providing an Automation Exit
Chapter overview

This chapter tells you how to define an I/CF Remote Console Interface, which allows you to connect one or more I/CF Remote Consoles to a Master I/CF Console.

Chapter contents

Defining an I/CF Remote Console Interface ......................... 58
  Overview ........................................ 58
Using the I/CF Remote Console Interface ............................. 58
Changing the IMS system generation .............................. 59
Identifying the IMS Applid .................................. 59
Defining the VTAM Major Node for SYSA ..................... 60
Specifying the ICFCONSL command parameters .............. 61
Defining an I/CF Remote Console ................................ 62
  Overview ........................................ 62
Defining the VTAM Major Node for SYSB ..................... 62
Remote Console parameters .................................. 63
Security ............................................. 64
  I/CF Remote Console ................................ 64
Defining an I/CF Remote Console Interface

Overview

The I/CF Remote Console Interface is a bi-directional VTAM interface that allows you to access all I/CF Console messages. The Remote Console also can issue IMS, MVS, VTAM, and AFOPER commands to be executed by the I/CF Master Console. Responses to the commands are sent back to the I/CF Remote Console.

Using the I/CF Remote Console Interface

The following diagram shows the I/CF Remote Console Interface used to connect an I/CF Remote Console to an I/CF Master Console.

This example shows an IMS subsystem on SYSA, which can be an IMS DB/DC, DBCTL, or DCCTL system.

FIGURE 5. I/CF Remote Console Connected to an I/CF Master Console

To define an I/CF Remote Console Interface you must make system generation changes, define an IMS Applid, define a VTAM Major Node, and specify ICFCONSL command parameters. The next two pages provide details.
Changing the IMS system generation

The following is an example of system generation changes needed to define the IMS Master Terminal:

FIGURE 6. Sample IMS System Generation Changes

```
*** IMS MASTER TERMINAL DEFINITION FOR I/CF
***
TYPE         UNITYPE=SLUTYPE1
TERMINAL     NAME=IMSAMSTR,FBUF=256,OPTIONS=(TRANSRESP),
             COMPT1=(CONSOLE,BASIC-SCS1)
NAME          (xxxxxxxx,MASTER)
NAME          (xxxxxxxx)
```

This definition is required in order to allow the IMS and I/CF systems to connect. I/CF supports only an LU1 interface to a VTAM terminal. This example shows how to define the IMS Master Terminal as an LU1 device.

If I/CF is unable to connect to the IMS Master Terminal you may assign the second LTERM to another terminal definition within the IMS system, thereby ensuring a backup access to the IMS Master Terminal.

Identifying the IMS Applid

When defining a VTAM I/CF Console, you need to provide the IMS applid. This can be found in the APPLID subparameter of the COMM macro.

FIGURE 7. Sample IMS Applid

```
***DEFINE IMS APPLID USING SYSGEN PARAMETERS
***
COMM RECANY=....,
   APPLID=IMS610A,
   PASSWORD=....,
   OPTIONS=....,
   COPYLOG=....
```
Defining an I/CF Remote Console Interface

Defining the VTAM Major Node for SYSA

This example shows the VTAM Major Node parameters for SYSA.

The ACBNAME subparameter on the VTAM APPL statements below is not required. If you do not specify an ACBNAME, VTAM uses the VTAM Applid as a default.

FIGURE 8. Sample VTAM Major Node with a Remote Console Interface.

```
*** VTAM MAJOR NODE WITH A REMOTE CONSOLE INTERFACE
***
ICFMTO VBUILD TYPE=APPL
IMSAMSTR APPL AUTH=(ACQ,NVPACE),ACBNAME=R11I22SM
IMSARMOT APPL AUTH=(ACQ,NVPACE),ACBNAME=R11I2REM,PARSESS=YES,EAS=20
```

When defining a VTAM I/CF console, VTAM must be notified of the interface to I/CF. This is accomplished by defining the VTAM ACBs and APPLIDs in a major node. Typically, the ACBNAME defaults to the APPLID (columns 1-8 on the APPL statement.) Also, the major node name is the same as the member name within your SYS1.VTAMLST dataset where these parameters are stored.

I/CF opens the VTAM ACBs and this notifies VTAM of the APPLIDs that will be processed by I/CF. When other applications, (that is, IMS) want to connect to I/CF, they do so by requesting a connection to the VTAM APPLID. For this reason, I/CF and the VTAM major node need to be activated on the same system. When an IMS system on another MVS image wants to connect to I/CF, it makes the connection request to its local VTAM which is then sent to the VTAM which is local to I/CF (This is known as a Cross-domain request.)

To summarize, an application requests a session with a VTAM APPLID but processes session requests through a VTAM ACB. I/CF requests a session with the IMS APPLID (as specified on the COMM macro) and IMS requests a session with the I/CF Console VTAM APPLID. VTAM sends session requests to I/CF through the VTAM ACB.
Specifying the ICFCONSL command parameters

The following example creates an I/CF Master Console on SYSA in Figure 9.

To provide an I/CF Remote Console Interface, you must define a second VTAM applid by specifying the REMOTEACBNAME subparameter of the ICFCONSL command, as shown below. In this case, the REMOTEACBNAME (Master Terminal) is R11I2REM.

Here, the APPLID of the IMS system on SYSA in Figure 9 is IMS610A.

FIGURE 9. Sample Parameters for I/CF Remote Console Interface

```
*** I/CF MASTER CONSOLE WITH I/CF REMOTE CONSOLE INTERFACE
***
ICFCONSL -
  ACB(R11I22SM) -
  DATEFORMAT(2) -
  EXCEPTIONUSERID(USER1) -
  IMSAPPL(IMS610A) -
  IMSID(INSA) -
  LOGCLASS(X) -
  LOGDEST(ARCY) -
  LOG MASTER VIEW SUBSYSCONSOLE AUTO
  REMOTEACBNAME(R11I2REM) -
  SESSNAME(SP11 IMS PRODUCTION) -
  VIEWSIZE(25000) -
```

If you want to issue commands from a Remote Console to be executed at the I/CF Master Console, you must specify the MASTER subparameter, as shown in the example above.

For more information on the ICFCONSL command syntax, see “ICFCONSL command” on page 107.
Defining an I/CF Remote Console

Overview

This unit describes how to define an I/CF Remote Console. You must specify certain subparameters as shown in the following examples.

Defining the VTAM Major Node for SYSB

This example shows the VTAM Major Node subparameters required to define the I/CF Remote Console on SYSB. SYSB is the Remote Console in Figure 9 on page 61. To connect to an I/CF Remote Console Interface, you must specify the DLOGMOD=SCS (or other LU1 VTAM logmode) subparameter on the VTAM Applid for the I/CF Remote Console, as shown below.

FIGURE 10. Sample VTAM Major Node for the I/CF Remote Console Interface

```
***
*** VTAM MAJOR NODE FOR I/CF REMOTE CONSOLE INTERFACE
***
ICFREMOT    VBUILD   TYPE=APPL
IMSAREM     APPL     AUTH=(ACQ,NVPACE),DLOGMOD=SCS
```
Remote Console parameters

When you create an I/CF Remote Console, it adopts many of the attributes of the I/CF Master Console:

- Because all the IMS, MVS, VTAM, and AFOPER commands are sent to the I/CF Master Console, you need not specify the SUBSYSCONSOLE (subsystem consoles) or AUTO (automation) parameters of the ICFCONSL command.

- Messages received at the I/CF Remote Console carry a Date/Time Stamp format, as specified at the I/CF Master Console via the DATEFORMAT parameter of the ICFCONSL command.

The following example shows the ICFCONSL command parameters required to define the I/CF Remote Console on SYSB. The ICFCONSL command is found in the KI2START member of rhilev.midlev.RKANCMD.

**FIGURE 11. Sample Parameters for I/CF Remote Console**

```
***  I/CF REMOTE CONSOLE PARAMETERS
***  ICFCONSL -
    ACB(IMSAREM)       -
    IMSAPPL(IMSARMOT)  -
    IMSID(IMSA)        -
    LOGCLASS(A)        -
    LOGDEST(TONY)      -
    LOG VIEW MASTER    -
    REMOTE             -
    SESSNAME(SP11 IMS PRODUCTION) -
    VIEWSIZE(25000)    -
```

The REMOTE subparameter defines this console as an ICF Remote Console.
I/CF Remote Console

Command Entry Authorization occurs at the I/CF Remote Console. The I/CF Master Console does not validate commands received through the I/CF Remote Console Interface. See “Set Up Logon Security” on page 84 for more information on security.
Chapter overview

This chapter tells you how to use I/CF. It includes information on logon methods, navigation tools, entering commands, and switching logs.

Chapter contents

Logon Methods ......................................................... 67
  Overview ......................................................... 67
  Direct logon ..................................................... 67
  Indirect logon .................................................. 68
  Integrated logon ............................................... 69
I/CF Features .......................................................... 70
  Overview ......................................................... 70
  4-way scrolling ............................................... 70
  Using the multi-directional FIND facility .................... 71
  Using the REPEAT-FIND facility ............................... 72
  Remote transfer ................................................ 72
  Viewing other consoles ....................................... 73
Changing the Way the System Displays Information .............. 74
  Overview ......................................................... 74
  Changing the date format on the date/time stamp ............ 74
  Changing color highlighting ................................... 75
  Implementing message suppression ............................ 76
Entering Commands .................................................... 77
  Overview ......................................................... 77
  Entering I/CF commands ....................................... 77
  Entering IMS commands ....................................... 77
  Entering VTAM commands ..................................... 77
  Entering MVS commands ....................................... 78
  Verifying commands .......................................... 78
Logging Data .......................................................... 79
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>79</td>
</tr>
<tr>
<td>Specifying sysout logging</td>
<td>79</td>
</tr>
<tr>
<td>Specifying dataset logging</td>
<td>79</td>
</tr>
<tr>
<td>User message logging</td>
<td>80</td>
</tr>
<tr>
<td>Exception logging</td>
<td>80</td>
</tr>
<tr>
<td>Switching the Logs</td>
<td>81</td>
</tr>
<tr>
<td>Overview</td>
<td>81</td>
</tr>
<tr>
<td>Switching logs</td>
<td>81</td>
</tr>
<tr>
<td>Results</td>
<td>81</td>
</tr>
</tbody>
</table>
Logon Methods

Overview

There are three logon methods you can use to access I/CF. These are:

- Direct
- Indirect
- Integrated

This unit describes these methods.

Direct logon

Use the following procedure to log on directly to I/CF.

**Note:** You must define a direct VTAM interface to perform this procedure. See “Defining a Direct VTAM Interface” on page 44 for more information.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log on to the IMS Console Facility by typing the logon applid for I/CF.</td>
</tr>
</tbody>
</table>
| 2    | Press Enter.  
**Result:** The system displays the Candle Logo screen. |
| 3    | On the Candle Logo panel, press Enter.  
**Result:** The system displays the IMS Console Facility Sign On Panel. See Figure 13 on page 135. |
| 4    | At the IMS Console Facility Sign On Panel, type your userid, password, group, and account information, as required. |
| 5    | Press Enter.  
**Result:** The system displays the IMS Console Selection pop-up. See Figure 14 on page 137. |
| 6    | At the IMS Console Selection pop-up, select an IMS console that you want to monitor. |
| 7    | Press Enter.  
**Result:** The system displays the I/CF console. See Figure 15 on page 138. |
### Indirect logon

Use the following procedure to indirectly log on to I/CF.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log on to OMEGAMON II for IMS or OMEGAMON II for DBCTL as usual.</td>
</tr>
<tr>
<td>2</td>
<td>When the Candle logo screen appears, press Enter. <strong>Result:</strong> The system displays the CUA Sign On Panel. See Figure 12 on page 134.</td>
</tr>
<tr>
<td>3</td>
<td>Press PF11. <strong>Result:</strong> The system displays the IMS Console Facility Sign On Panel. See Figure 13 on page 135.</td>
</tr>
<tr>
<td>4</td>
<td>At the IMS Console Facility Sign On Panel, type your userid, password, group, and account information, as required.</td>
</tr>
<tr>
<td>5</td>
<td>Press Enter. <strong>Result:</strong> The system displays the IMS Console Selection pop-up. See Figure 14 on page 137.</td>
</tr>
<tr>
<td>6</td>
<td>At the IMS Console Selection pop-up, select an IMS console that you want to monitor.</td>
</tr>
<tr>
<td>7</td>
<td>Press Enter. <strong>Result:</strong> The system displays the I/CF console. See Figure 15 on page 138.</td>
</tr>
</tbody>
</table>
## Integrated logon

If you want to access an I/CF console while in an OMEGAMON II for IMS or OMEGAMON II for DBCTL session, use the integrated logon procedure.

To use the integrated logon procedure, the system must meet the following conditions:

- You must have defined the I/CF console as a Master Console using the ICFCONSL command.
- You must have defined the I/CF console as a viewable console using the ICFCONSL command.
- The IMSID on the ICFCONSL command must match the IMSID of the current OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA session.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log on to OMEGAMON II for IMS or OMEGAMON II for DBCTL as usual.</td>
</tr>
<tr>
<td>2</td>
<td>When the Candle logo screen appears, press Enter. <strong>Result:</strong> The system displays the CUA Sign On Panel. See Figure 12 on page 134.</td>
</tr>
<tr>
<td>3</td>
<td>In the appropriate fields, type your userid, password, group, and account information, as required.</td>
</tr>
<tr>
<td>4</td>
<td>Press Enter. <strong>Result:</strong> The system displays the System Overview panel.</td>
</tr>
<tr>
<td>5</td>
<td>At the System Overview panel, press PF6. <strong>Result:</strong> The system displays the I/CF console. See Figure 15 on page 138. You can use the PF6 function key from any OMEGAMON II panel to access I/CF.</td>
</tr>
</tbody>
</table>
I/CF Features

Overview

There are a number of tools available to you for navigation purposes. For example:

- 4-way scrolling
- IMS, VTAM, and MVS command entry
- Multi-directional FIND
- REPEAT-FIND facility

This unit explains each of these navigational features. This unit also explains remote transfer capabilities and viewing other I/CF consoles.

4-way scrolling

You can scroll in the I/CF console display area left, right, up, or down using your scrolling PFKeys.

You can scroll to a specific place on the display area any of the following ways:

<table>
<thead>
<tr>
<th>You can ...</th>
<th>Press ...</th>
<th>The system scrolls ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>place the cursor in the display area where you want to scroll.</td>
<td>one of the scrolling PFKeys.</td>
<td>to the position you specified with the cursor.</td>
</tr>
<tr>
<td>enter a numeric value on the Command line.</td>
<td>one of the scrolling PFKeys.</td>
<td>the number of positions you specified.</td>
</tr>
<tr>
<td>type MAX or M on the Command line.</td>
<td>one of the scrolling PFKeys.</td>
<td>to the maximum row or column.</td>
</tr>
</tbody>
</table>
Using the multi-directional FIND facility

You can search for specific text strings by typing FIND on the command line. The syntax for this command is as follows:

```
FIND text_string FIRST|LAST|PREV|NEXT
```

where

- **text_string**: Any text string, with or without quotes. The text string cannot be longer than a console line. A string with imbedded blanks requires single or double quotes.
- **FIRST**: I/CF starts the scan at the first available console line and scans forward through the console lines until the system finds the text or it reaches the last console line.
- **LAST**: I/CF starts the scan at the last available console line and scans backward through the console lines until the system finds the text or it reaches the first console line.
- **PREV**: I/CF starts the scan at the console line prior to the top line in the current console display area and scans backward through the console lines until the system finds the text or it reaches the first console line.
- **NEXT**: I/CF starts the scan at the console line after the top line in the current console display area and scans forward through the console lines until the system finds the text or it reaches the last console line.

<table>
<thead>
<tr>
<th>IF the system ...</th>
<th>THEN the system displays ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>finds the specified text</td>
<td>CHAR$ \text{xxxxxxx} \text{FOUND} $</td>
</tr>
<tr>
<td>does not find the specified text</td>
<td>TOP$</td>
</tr>
</tbody>
</table>
Using the REPEAT-FIND facility

The REPEAT-FIND facility allows you to re-execute the last FIND command you entered. The messages described in “Using the multi-directional FIND facility” on page 71 also apply to the REPEAT-FIND facility.

If you press PF5, the REPEAT-FIND function key, the system responds as follows:

<table>
<thead>
<tr>
<th>IF you specified ...</th>
<th>THEN the system assumes the REPEAT-FIND modifier to be ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST as a modifier</td>
<td>NEXT</td>
</tr>
<tr>
<td>LAST as a modifier</td>
<td>PREV</td>
</tr>
</tbody>
</table>

If you continue to press PF5 (REPEAT-FIND), the system responds as follows:

<table>
<thead>
<tr>
<th>IF you press the REPEAT-FIND PFKey after reaching the ...</th>
<th>THEN the scan wraps the console lines and restarts at the ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>first console line</td>
<td>last console line</td>
</tr>
<tr>
<td>last console line</td>
<td>first console line</td>
</tr>
</tbody>
</table>

Remote transfer

Transplexing is only available when you use the integrated I/CF Console logon method with OMEGAVIEW Version 120 and above. See “Integrated logon” on page 69 for more information.
Viewing other consoles

To view other I/CF consoles that you have defined, use the following procedure:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the I/CF Console panel, place your cursor on the promptable title line.</td>
</tr>
</tbody>
</table>
| 2    | Press PF4.  
**Result:** The IMS Console Selection panel lists all the ICF consoles defined. |
| 3    | Select another I/CF console. |
| 4    | Press Enter.  
**Result:** The system displays the I/CF console for the console you selected. |
### Overview

You can specify how the system displays information on the screen using the following I/CF features:

- Date format on the Date/Time Stamp
- Color highlighting
- Message suppression

### Changing the date format on the date/time stamp

At one minute intervals, I/CF displays a date and time stamp on the console and adds an entry into the audit log. At midnight, I/CF records a change-of-day timestamp into the audit log.

See “Messages” on page 125 for the format of the one minute date/time stamp and the change-of-day date/time stamp.

**Note:** You cannot modify individual console messages to contain a date or a time stamp.

The format of the date/time stamp is as follows:

<table>
<thead>
<tr>
<th>Option</th>
<th>Format</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MM/DD/YY (Default)</td>
<td>10/29/96</td>
</tr>
<tr>
<td>2</td>
<td>YY/MM/DD</td>
<td>96/10/29</td>
</tr>
<tr>
<td>3</td>
<td>MMM DD,YYYY</td>
<td>OCT 29,1996</td>
</tr>
<tr>
<td>4</td>
<td>MMMMMMMMMM DD,YYYY</td>
<td>OCTOBER 29,1996</td>
</tr>
<tr>
<td>5</td>
<td>DD.MM.YY</td>
<td>29.10.96</td>
</tr>
<tr>
<td>6</td>
<td>YYYY/DDD</td>
<td>1996/303</td>
</tr>
</tbody>
</table>

Note: You cannot change the time format.
Changing color highlighting

I/CF uses 4 basic colors for lines in the console display area.

Use the ICFTRAP command to change the default color scheme. See “ICFTRAP command” on page 115 for more information.

The following chart illustrates the default color scheme:

Table 9. Default Color Scheme

<table>
<thead>
<tr>
<th>Color</th>
<th>Message Type</th>
</tr>
</thead>
</table>
| **Red** | Red indicates one of two types of messages:  
- Exception messages from OMEGAMON II for IMS or OMEGAMON II for DBCTL  
- I/CF error messages |
| **Blue** | IMS, MVS, and VTAM messages |
| **Green** | Green indicates one of two types of messages:  
- Date/time stamp messages  
- I/CF informational and warning messages |
| **White** | Command Entry Audit messages |
Implementing message suppression

You can specify any contiguous text to identify a console line you want to suppress from the display. Use the ICFTRAP command to define a message suppression trap. See “ICFTRAP command” on page 115 for more information.

Note: Message suppression is not available for the I/CF console logging facilities.

<table>
<thead>
<tr>
<th>IF you ...</th>
<th>THEN the console ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>suppress a message</td>
<td>does not display any messages with the text you specified from this point forward.</td>
</tr>
<tr>
<td></td>
<td><em>Note:</em> Messages with the specified text received prior to the entry of the message</td>
</tr>
<tr>
<td></td>
<td>suppression command continue to display on the I/CF console.</td>
</tr>
<tr>
<td>remove message suppression</td>
<td>begins to display messages with the text you specified from this point forward.</td>
</tr>
<tr>
<td></td>
<td><em>Note:</em> Messages you suppressed prior to the entry of this command continue to be</td>
</tr>
<tr>
<td></td>
<td>suppressed.</td>
</tr>
</tbody>
</table>

Note: Message suppression is not available for the I/CF console logging facilities.
Entering Commands

Overview
You can enter I/CF, IMS, VTAM, and MVS commands from the I/CF console. This unit tells you how to enter each of these types of commands.

Entering I/CF commands
You can type the following I/CF commands directly on the console Command line with no preceding characters:

- AFOPER
- CLOSE
- MSG
- OPEN
- RESTART
- RECYCLE
- SWITCH

For more information about these commands, see “Command Reference” on page 103.

Entering IMS commands
Begin each IMS command with a forward slash (/) on:

- the I/CF console Command line, and
- the IMS Command Entry pull-down.

Entering VTAM commands
On the I/CF console Command line, begin each VTAM command with a period (.)

For example,

.D NET,ID=R11I2CUA,E

Note: This is only available if you defined a VTAM command entry APPLID. See “Defining an Interface for Entering VTAM Commands” on page 46 for more information.
Entering Commands

**Entering MVS commands**

On the I/CF console Command line, begin each MVS command with a dash (-).

For example,

-D R,L

**Note:** You must specify the SUBSYSCONSOLE subparameter on the ICFCONSL command for the system to display responses to MVS commands.

**Verifying commands**

When you enter a command on the I/CF console, you can view messages indicating whether or not the command was issued. Whenever I/CF actually issues any MVS, VTAM, or IMS command, a message is passed to the automation interface. The message ID is ICFCQ212 and appears as a WTO in AF/Operator.

When the I/CF VTAM connection is successfully established, you will see an ICFVR003 message.

When the I/CF connection is terminated, you will see an ICFVR005 message.
Logging Data

Overview

I/CF logs all messages that appear on the I/CF console. Message suppression does not suppress messages from the I/CF console log.

This unit describes sysout and dataset logging, user message logging, and exception logging.

Specifying sysout logging

Use the ICFCONSL command to specify JES sysout logging.

When you specify sysout logging, you supply the following information:

- Sysout class
- Destination id
- Destination userid

I/CF closes and reallocates the sysout log at midnight. At this time, you can use any mechanism to remove the dataset from the JES spool. Closing the log at midnight avoids the risk of running out of JES spool space due to an IMS subsystem that is available for extended periods of time.

Specifying dataset logging

You specify the datasets for logging using the LOGDSN{n} subparameter of the ICFCONSL command.

There is no pre-set time for closing dataset logs. When a log dataset fills up, I/CF switches to the second specified dataset. You can control the switch interval by controlling the size of the log dataset. When a switch occurs, I/CF submits a job to the JES internal reader for execution.
User message logging

You can enter a message into the I/CF console. Anyone who is logged on to the I/CF console will see the message you entered. Use this procedure to enter a message:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the Command line of the I/CF console, type <strong>MSG any text</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> You do not have to type quotes around the message. The message is not case sensitive.</td>
</tr>
<tr>
<td>2</td>
<td>Press Enter. <strong>Result:</strong> I/CF displays the message on the I/CF console and writes the message to the console log in upper-case letters.</td>
</tr>
</tbody>
</table>

Exception logging

I/CF displays exception messages on the I/CF console and writes them to the I/CF console log.

OMEGAMON II for IMS and OMEGAMON II for DBCTL base exception processing on an individual user profile. Therefore, you need to specify which userid will provide exception messages.

Use the EXCEPTIONUSERID subparameter to the ICFCONSL command to specify the userid. See “ICFCONSL command” on page 107 for more information. This userid must be logged on in order to establish the exception profile and start sending exception messages to I/CF.

Candle recommends that the userid match the one you use for the OMEGAVIEW connection to OMEGAMON II for IMS or OMEGAMON II for DBCTL.
Switching the Logs

Overview

This unit tells you how to switch logs and what happens based on the type of log you are using.

Switching logs

You can force a log to switch by issuing the SWITCH command directly into the I/CF console or as an MVS modify command.

Results

How I/CF responds to the SWITCH command depends on whether you are using sysout or dataset logging, as follows:

<table>
<thead>
<tr>
<th>IF you specified ...</th>
<th>THEN I/CF ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>sysout logging</td>
<td>closes the current sysout log and re-allocates it.</td>
</tr>
<tr>
<td>dataset logging</td>
<td>closes the current dataset log, opens the alternate dataset log, and submits the appropriate archive job.</td>
</tr>
</tbody>
</table>
Switching the Logs
Chapter overview

This chapter tells you how to set up logon security for OMEGAMON II and how to implement security for I/CF.

Chapter contents

Set Up Logon Security ................................................. 84
  Overview .......................................................... 84
  Using Network Access Manager (NAM) ...................... 84
  Using SAF ......................................................... 86
  Using RACF ....................................................... 87
  Using CA-ACF2 .................................................. 87
  Using CA-TOP SECRET ......................................... 88
  Using a user-coded exit ........................................ 90

Command Entry Security ........................................... 91
  Overview .......................................................... 91
  Prerequisite ...................................................... 91
  How I/CF converts commands to resources .................. 92
  Securing I/CF commands ...................................... 93
  Changing the resource access list ......................... 94
  Defining RACF resources ...................................... 94
  Defining CA-ACF2 resources .................................. 95
  Defining CA-TOP SECRET resources (Version 4.1 and earlier) .... 95
  Defining CA-TOP SECRET resources (Version 4.2 and later) .... 95
  Specifying a user exit ......................................... 96

Command Entry Audit ............................................... 97
  Overview .......................................................... 97
  How the Command Entry Audit works ...................... 97
Set Up Logon Security

Overview

You must choose security for user logon to the OMEGAMON II CUA system. The types of security available are:

- Network Access Manager (NAM) for internal security
- System Authorization Facility (SAF) for external security
- RACF external security
- CA-ACF2 external security
- CA-TOP SECRET external security
- User-Coded Exit

Note: To bypass logon security, skip this section and go to “Command Entry Security” on page 91.

Using Network Access Manager (NAM)

The OMEGAMON II system provides an internal security system, NAM, which uses a VSAM dataset to store the userids and passwords of the users you authorize to access your CUA system.

To use NAM, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>If you did not use CICAT, you must copy KI2DFNAM from the target library and then modify it.</td>
</tr>
<tr>
<td>2</td>
<td>Create the NAM VSAM dataset. We provide a sample JCL in rhilev.midlev.RKANPAR(KI2DFNAM). Follow the instructions in KI2DFNAM to modify the member.</td>
</tr>
</tbody>
</table>
| 3    | Set the parameters in rhilev.midlev.RKANPAR(KI2INNAM) as follows:  

```plaintext
DEFAULT DSNAME(-RVHILEV-.NAM)  
EXIT=xxxxxxxx  
NORACF  
NODB
```

where `xxxxxxxx` is the user-coded exit module name the CUA uses for resource access validation. |
Create the NAM SET commands to define the userids and passwords of users you authorize for your OMEGAMON II CUA system. You can find a sample of these commands in `rhilev.RKANCMD(KI2CMNAM)`.

You can execute the NAM SET commands using one of three methods:

1. After starting the CUA system, issue the commands through the MVS console as modify commands to the CUA system. The format is:
   
   ```
   F jobname,NAM SET userid PASSWORD=password
   ```
   
   where `jobname` is the name of the CUA interface job or started task.

2. After starting the CUA system and editing a member in your `rhilev.RKANCMD` dataset, execute all commands in that member through the MVS console as a modify command to the CUA system. The format is:
   
   ```
   F jobname,member
   ```
   
   where `jobname` is the name of the CUA interface job or started task, and `member` is the member name of the member you edited in your `rhilev.RKANCMD` dataset.

3. After editing a member in your `rhilev.RKANCMD` dataset, add that member name as another command to the KI2START member in your `rhilev.RKANCMD` dataset. You will only use this method under the following conditions:
   
   - You are initializing the NAM dataset. Normally, this only occurs the first time you start your CUA system.
   - You need to add more users to the database.
Using SAF

The System Authorization Facility (SAF) provides an installation with centralized control over system security processing through a system service called the MVS router. The MVS router provides a focal point for all products that provide resource management. The resource management components and subsystems call the MVS router as part of security decision-making functions in their processing, such as access control checking and authorization-related checking. These functions are called control points. SAF supports the use of common control points across products and across systems.

SAF is the preferred security interface for CT/Engine and can be used by installations that have CA-ACF2 or CA-TOP SECRET, as well as with RACF, without the need to have any NAM exits installed. See your security product documentation for information regarding the use of SAF.

To use SAF as the security system for one or more control points, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure all libraries in the RKANMODL concatenation are APF-authorized. IBM’s Initialization and Tuning Reference has information about APF authorization.</td>
</tr>
</tbody>
</table>
| 2    | For each control point that you want to use SAF, make the following changes in member `rhilev.midlev.RKANPAR(KLVINNAM)`.  
  a. Change `DB` to `NODB`.  
  b. Add `SAF` to the control point definition.  
  If you have not added any control points, the member will look like this when you finish:  
  
  `DEFAULT DSNAMERhilev Nam) NORACF NODB SAF`
| 3    | You may need to increase the value assigned to the `RESERVE` parameter of member `rhilev.midlev.RKANPAR(KLV SYSIN)`. |
| 4    | Restart CT/Engine to activate the change. |
Using RACF

To use RACF external security:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Make sure you have Control access to the VSAM files that the CUA system defines for use.</td>
</tr>
</tbody>
</table>
| 2    | Set the parameters in the `rhilev.midlev.RKANPAR(KI2INNAM)` dataset, as follows:  
  - DEFAULT
  - SAF
  - NODB |

Using CA-ACF2

To use CA-ACF2 external security:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Assemble and link the Candle-supplied CA-ACF2 security validation exit module KLVA2NEV.  
You will find the JCL to assemble and link KLVA2NEV in your `rhilev.RKANSAM(KI2ASM)` dataset. You must link KLVA2NEV into the `rhilev.RKANMODL` dataset by setting AC=0, AMODE=31, and RMODE=24.  
Follow the instructions in the sample JCL to assemble and link KLVA2NEV. |
| 2    | Set the parameters in the `rhilev.midlev.RKANPAR(KI2INNAM)` dataset, as follows.  
  - DEFAULT
  - EXIT=KLVA2NEV
  - NORACF
  - NODB |
| 3    | Define the CUA system as a multi-user address space to CA-ACF2. From the TSO Ready prompt:  
  1. Type `ACF` and press Enter.  
  2. At the ACF prompt, type `SET LID` and press Enter.  
  3. At the LID prompt, type `CH jobname MUSASS` and press Enter, where:  
     - `jobname` is the name of the OMEGAMON II address space.  
  4. At the LID prompt, type `END` and press Enter. |
## Using CA-TOP SECRET

To use CA-TOP SECRET external security:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assemble and link the Candle-supplied CA-TOP SECRET security validation exit module KLVTSNEV. You will find the JCL to assemble and link KLVTSNEV in your rhilev.midlev.RKANSAM(KI2ASM) dataset. You must link KLVTSNEV into the rhilev.RKANMODL dataset by setting AC=1, AMODE=31, and RMODE=24. Follow the instructions in the sample JCL to assemble and link KLVTSNEV.</td>
</tr>
<tr>
<td>2</td>
<td>Set the parameters in the rhilev.midlev.RKANPAR(KI2INNAM) dataset as follows: <code>DEFAULT EXIT=KLVTSNEV NORACF NODB</code></td>
</tr>
<tr>
<td>3</td>
<td>Define the CUA address space as a started task in the STC record and relate the CUA address space to a Master Facility Accessor ID. For example: <code>TSS ADD(STC) PROC(jobname) ACID(master facility acid)</code> where <code>jobname</code> is the name of the OMEGAMON II started task.</td>
</tr>
<tr>
<td>4</td>
<td>Define <code>jobname</code> as a facility to CA-TOP SECRET in the Facility Matrix table. To use the same Facility name across multiple CUA started task names, the Facility name must match at least one of the started task names in each address space. See the example at the end of this procedure.</td>
</tr>
</tbody>
</table>
Example:
The following example shows **FACILITY** statements from a production installation using the CA-TOP SECRET security system. Some statements may not be relevant to your CUA system, so you may need to modify the statements to fit your standards and configuration.

```plaintext
FACILITY(USER3=NAME=jobname)
FACILITY(jobname=MODE=FAIL,ACTIVE,SHRPRF)
FACILITY(jobname=PGM=KLV,NOASUBM,NOABEND,NOXDEF)
FACILITY(jobname=ID=3,MULTIUSER,RES,LUMSG,STMSG,
          WARNPW,SIGN(M))
FACILITY(jobname=NOINSTDATA,NORNDPW,AUTHINIT,
          NOPROMPT,NOAUDIT,NOMRO)
FACILITY(jobname=NOTSOC,LOG(INIT,SMF,MSG,SEC9))
```

**Caution**
Specify the sign parameter on the **FACILITY** statement as SIGN(M). Otherwise, CA-TOP SECRET produces a message stating that the system has revoked user access.

Also, verify that you set **MODE=FAIL**.
Using a user-coded exit

To use user-coded exit security:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Modify the Candle-supplied sample security validation exit routine to meet your specific security needs. This validation exit is in `rhilev.midlev.RKANSAM(KI2ICFX1)`. If you use this exit as is, you allow users to:  
  - Log onto I/CF using any userid with a password that matches the userid  
  - Use all display commands  
  Modify the sample user validation routines to validate userids for access to all commands except display. |
| 2    | Assemble and link the Candle-supplied user-coded security validation exit module KI2ICFX1. You will find the JCL to assemble and link KI2ICFX1 in your `rhilev.midlev.RKANSAM(KI2ASM)` dataset. You must link KI2ICFX1 into the `rhilev.midlev.RKANMODL` dataset by setting AC=1, AMODE=31, and RMODE=24. Follow the instructions in the sample JCL to assemble and link KI2ICFX1. |
| 3    | Set the parameters in the `rhilev.midlev.RKANPAR(KI2INNAM)` dataset, as follows.  
  ```
  DEFAULT
  EXIT=KI2ICFX1
  NORACF
  NODB
  ``` |
Command Entry Security

Overview

I/CF provides you with the ability to secure specific IMS, MVS, and VTAM commands to specific users and user groups. I/CF does this by converting the commands you enter through an I/CF console to a resource name. It then passes the resource name to an external security system or to the Candle-supplied user-coded security validation exit.

This unit provides you with an outline of how to secure resources to either RACF, CA-ACF2 or CA-TOP SECRET.

Note: This is not a complete or specific task list.

For more information

Consult your security administrator for product-specific requirements.

Prerequisite

To use any of the available external security system interfaces, you must define a Command Resource Class to the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space. See “Defining a Command Resource Class” on page 48 for more information.
How I/CF converts commands to resources

I/CF takes the command you enter and converts it to a resource name as follows:

**high-level node**

The internal I/CF command recognition character converts to the high-level node. For example:

<table>
<thead>
<tr>
<th>IF the first character of the command is ...</th>
<th>THEN I/CF converts it to ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dash (-)</td>
<td>MVS</td>
</tr>
<tr>
<td>Slash (/)</td>
<td>IMS</td>
</tr>
<tr>
<td>Period (.)</td>
<td>VTAM</td>
</tr>
</tbody>
</table>

**second node** The system name

**third node** The command

**fourth node** VTAM VARY command only: The element name (the ID= subparameter)

The following table shows examples of commands and the I/CF converted resource name.

**Table 10. Command Conversion Examples**

<table>
<thead>
<tr>
<th>Command</th>
<th>Resource Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>-R 104,/ERE OVERRIDE.</td>
<td>MVS.SP11.R</td>
</tr>
<tr>
<td>-104/ERE OVERRIDE.</td>
<td>MVS.SP11.R</td>
</tr>
<tr>
<td>-D R,L</td>
<td>MVS.SP11.D</td>
</tr>
<tr>
<td>-P TDOIS25</td>
<td>MVS.SP11.P</td>
</tr>
<tr>
<td>-F TDOIS25,STOP</td>
<td>MVS.SP11.F</td>
</tr>
<tr>
<td>-V NET,INACT,ID=R11I225M,F</td>
<td>VTAM.SP11.VR11I225M</td>
</tr>
<tr>
<td>-V 1C1,OFTLINE</td>
<td>MVS.SP11.V</td>
</tr>
<tr>
<td>/STA DB DI21PART</td>
<td>IMS.I51A.STA</td>
</tr>
<tr>
<td>/CHE DUMPQ</td>
<td>IMS.I51A.CHE</td>
</tr>
<tr>
<td>.D NET, ID=R11I225M,E</td>
<td>VTAM.SP11.D</td>
</tr>
<tr>
<td>.V NET,INACT,ID=R11I225M,F</td>
<td>VTAM.SP11.VR11I225M</td>
</tr>
</tbody>
</table>
Securing I/CF commands

You can also secure the following I/CF commands:

- AFOPER
- CLOSE
- MSG
- OPEN
- RECYCLE
- RESTART
- SWITCH

These commands do not require a command recognition character.

**Note:** When you use these commands as parameters on the ICFCMD, the system does not secure them.

The resulting resource name uses the following syntax:

- **high-level node**
  - ICF
- **second node** the IMSID
- **third node** the I/CF command

The following table shows I/CF command examples and their converted resource names:

**Table 11. I/CF Command Conversion Examples**

<table>
<thead>
<tr>
<th>Command</th>
<th>Resource Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECYCLE</td>
<td>ICF:I51A.RECYCLE</td>
</tr>
<tr>
<td>RESTART</td>
<td>ICF:I51A.RESTART</td>
</tr>
<tr>
<td>SWITCH</td>
<td>ICF:I51A.SWITCH</td>
</tr>
<tr>
<td>MSG</td>
<td>ICF:I51A.MSG</td>
</tr>
<tr>
<td>AFOPER</td>
<td>ICF:I51A.AFOPER</td>
</tr>
</tbody>
</table>
Changing the resource access list

If you change the resource access list by defining additional resources or modifying access to defined resources, do one of the following:

- Issue the following MVS modify command to the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space:

  ```
  F jobname,NAM RACLIST
  ```

  where `jobname` is the MVS jobname or started task name of the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.

- Stop/re-start the OMEGAMON II for IMS or OMEGAMON II for DBCTL CUA address space.

Defining RACF resources

Use the following procedure to define RACF resources. Contact your RACF administrator if you need assistance. Also see the *RACF Macros and Interfaces* manual.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Define a new Resource Class to RACF by using the ICHERCDE macro in the ICHRRCDE Class Descriptor Table.  

  **Note:** The ICHERCDE macro sets RACLIST=DISALLOWED as a default. If you code RACLIST=ALLOWED, use the ICHRFRTB macro to create a router table entry for the class. |
| 2    | If you define a new resource class in the RACF Class Descriptor Table, IPL your system with a CLPA option. |
| 3    | Issue the SETROPTS command to activate your new resource class. |
| 4    | Issue RACF RDEF commands to define the resources. |
| 5    | Issue RACF PERMIT commands to authorize user access to the resources you defined. |
Defining CA-ACF2 resources

Use the following procedure to define CA-ACF2 resources.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Define R-APL in ACF2 and associate it with ACF2 resource names.</td>
</tr>
<tr>
<td>2</td>
<td>Determine the access rights for each resource using a resource rule in ACF2. Use $KEY statements to specify the resource and UID statements to allow user access to the resource.</td>
</tr>
</tbody>
</table>

Defining CA-TOP SECRET resources (Version 4.1 and earlier)

Use the following procedure to define resources for CA-TOP SECRET Version 4.1 and earlier.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In each user’s TOP SECRET access ID, specify access to the FACILITY named task, where task is the CUA started task name.</td>
</tr>
<tr>
<td>2</td>
<td>Allow user’s access to each resource through the Limited Command Facility (LCF) under the FACILITY using TSS ADD statements.</td>
</tr>
</tbody>
</table>

Defining CA-TOP SECRET resources (Version 4.2 and later)

Use the following procedure to define resources for CA-TOP SECRET Version 4.2 and later.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Review the discussion of the Resource Definition Table (RDT) in the CA-TOP SECRET Command Function Guide.</td>
</tr>
<tr>
<td>2</td>
<td>Define an RDT class using the TSS ADD statement.</td>
</tr>
<tr>
<td>3</td>
<td>Set violation threshold (VTHRESH) to NOTIFY.</td>
</tr>
<tr>
<td>4</td>
<td>Specify user access to the resources using TSS ADD statements.</td>
</tr>
</tbody>
</table>
## Specifying a user exit

Use the following procedure to specify a user exit.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Modify the Candle-supplied sample security validation exit routine to meet your specific security needs. This validation exit is in `rhilev.midlev.RKANSAM(KI2ICFX1)`. If you use this exit as is, you allow users to:  
  - Log onto I/CF using any userid with a password that matches the userid  
  - Use all display commands  
Modify the sample user validation routines to validate userids for access to all commands except display. |
| 2    | Assemble and link the Candle-supplied user-coded security validation exit module `KI2ICFX1`.  
The JCL to assemble and link `KI2ICFX1` is in `rhilev.midlev.RKANSAM(KI2ASM)`. Follow the instructions in the sample JCL.  
Link the module into the `rhilev.midlev.RKANMODL` dataset setting AC=1, AMODE=31, and RMODE=24. |
| 3    | Set the parameters in the `rhilev.midlev.RKANPAR(KI2INNAM)` dataset as follows:  

```  
DEFAULT  
EXIT=KI2ICFX1  
NORACF  
NODB  
``` |
Command Entry Audit

Overview

This unit describes the Command Entry Audit.

How the Command Entry Audit works

Whenever an I/CF user issues a command, the following happens:

- The command displays on the I/CF Master Console with the date, time, and userid of the person who issued the command.
- The system highlights the command on the display console.
- I/CF writes the command to the sysout or dataset log.
Command Entry Audit
Chapter overview

This chapter tells you about I/CF’s automated and manual console recovery facilities.

Chapter contents

Automatic Console Recovery Facilities .......................... 100
  Overview .......................................................... 100
  Automatic recovery ............................................. 100
Manual Console Recovery Facilities ............................. 101
  Overview .......................................................... 101
  The RECYCLE facility .......................................... 101
  The RESTART facility .......................................... 101
  Using the I/CF console ........................................... 101
  Using the MVS Master Console ................................. 101
ICFX Exception .................................................... 102
  Overview .......................................................... 102
  ICFX exception description ..................................... 102
  Turning ICFX on or off ......................................... 102
  Exception control panel for IMS status ....................... 102
Automatic Console Recovery Facilities

Overview

This unit describes I/CF’s automatic console recovery facilities.

Automatic recovery

If I/CF disconnects from the IMS subsystem, I/CF attempts to connect to IMS as often as the interval you have defined with the RETRY INTERVAL command. See “ICFCONSL command” on page 107.

<table>
<thead>
<tr>
<th>IF the attempt is ...</th>
<th>THEN ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>successful</td>
<td>I/CF accepts a connection request from IMS.</td>
</tr>
<tr>
<td>unsuccessful</td>
<td>I/CF automatically attempts to re-connect to IMS. The system displays these attempts in the RLVLOG, but not on the I/CF console.</td>
</tr>
</tbody>
</table>
Manual Console Recovery Facilities

Overview
This unit tells you about the manual RECYCLE and RESTART facilities. It also tells you how to recycle or restart the connection to IMS manually from either the I/CF console or the MVS System Console.

The RECYCLE facility
Use RECYCLE if the ACB is stopped. The RECYCLE facility allows you to close the VTAM ACB and terminate the active session with IMS. Once stopped, I/CF automatically reopens the VTAM ACB and attempts to reestablish the VTAM session.

The RESTART facility
Use RESTART if the ICF console is stopped. The RESTART facility allows you to terminate a VTAM session with IMS. Once stopped, I/CF attempts to reestablish the VTAM session.

Using the I/CF console
You can manually reconnect I/CF to the IMS subsystem from the I/CF console where you are logged on.

Note: You cannot recycle or restart an I/CF console with an ACTIVE status.

On the I/CF console Command line, issue either a RECYCLE or a RESTART command.

Using the MVS Master Console
You can manually reconnect I/CF to the IMS subsystem from the MVS Master Console.

On the MVS Master Console command line, issue the ICFCMD command with the appropriate subparameters. See “ICFCMD - MVS Console Command” on page 104 for more information.

Commands that you enter from the MVS Master Console ignore the status of the I/CF console and force either the restart or recycle processing to occur.
ICFX Exception

Overview

ICFX is a new exception for OMEGAMON II for IMS. This unit describes ICFX.

*Note:* ICFX does not apply to OMEGAMON II for DBCTL.

ICFX exception description

ICFX notifies you that I/CF is not connected to the monitored IMS. The exception only trips when you have defined an I/CF console as an I/CF Master Console for the monitored IMS ID.

Turning ICFX on or off

You can turn ICFX on or off from the OMEGAMON II for IMS Exceptions panel under the Options pull-down. Default: ON

Exception control panel for IMS status

The ICFX exception is on the IMS Status - Alerts Exceptions pop-up panel. You access this pop-up panel by selecting Customize Exceptions from the Options pull-down and then selecting IMS Status - Alerts from the list of exception groups.
Chapter overview

This chapter defines the commands associated with I/CF.

Chapter contents

ICFCMD - MVS Console Command ......................... 104
ICFCONSL command ........................................ 107
ICFTRAP command ........................................... 115
MSG Command ................................................. 118
AFOPER Command ............................................. 119
RECYCLE Command ........................................... 120
RESTART Command ........................................... 121
OPEN Command ............................................... 122
CLOSE Command .............................................. 123
SWITCH Command ............................................. 124
ICFCMD - MVS Console Command

Overview
You issue the ICFCMD command as a modify command from the MVS Console. The system then sends a message to the RLVLOG and to the MVS System Console.

This unit describes the syntax and subparameters of the ICFCMD command. The ICFCMD interface to ICF is an unsecured interface; anyone with MVS console access may issue these commands.

Command syntax
The following is the syntax for the ICFCMD command.

```
ICFCMD -
    ACB(xxxxxxxx) -
    CLOSE -
    OPEN -
    RECYCLE -
    RESTART -
    SWITCH -
```

Subparameter descriptions
The following chart describes each of the subparameters for the ICFCMD command.

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Length</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACB</td>
<td>8</td>
<td>None</td>
<td>The VTAM ACB name or the DBCTL IMSID you defined for the I/CF console. See “Defining a VTAM APPLID” on page 43 for more information.</td>
</tr>
</tbody>
</table>

**Note:** This subparameter matches the ACB subparameter on the ICFCONSL command. If this is a DBCTL subsystem, the value of this subparameter is the IMSID you specified on the ICFCONSL command.
CLOSE

This command is issued from the MVS Console command line as an MVS modify command to the started task or job. For example:

```
F jobname,ICFCMD
   ACB(xxxxxxxx) CLOSE
```

where:

- `jobname` is the OMEGAMON II for IMS or OMEGAMON II for DBCTL MVS started task name or MVS jobname.

The CLOSE subparameter inhibits I/CF or IMS from reestablishing the VTAM connection. The ICFX exception notifies you that I/CF is not connected to IMS. The ICFX exception remains tripped as long as there is no VTAM connection between I/CF and IMS.

OPEN

This command is issued from the MVS Console command line as an MVS modify command to the started task or job. For example:

```
F jobname,ICFCMD
   ACB(xxxxxxxx) OPEN
```

where:

- `jobname` is the OMEGAMON II for IMS or OMEGAMON II for DBCTL MVS started task name or MVS jobname. The OPEN command is required to allow IMS and I/CF to connect to one another after a CLOSE command.

RECYCLE

Closes the VTAM ACB and terminates the active session with IMS. See “Manual Console Recovery Facilities” on page 101 for more information.

RESTART

Terminates a VTAM session with IMS. See “Manual Console Recovery Facilities” on page 101 for more information.
### Using the ICFCMD command to switch logs

The following example causes the logs to switch.

```
F jobname,ICFCMD SWITCH ACB(I61C)
```

where:

- **jobname**

  is the OMEGAMON II for IMS or OMEGAMON II for DBCTL MVS started task name or MVS jobname.

### Using the ICFCMD command to recycle a subsystem

The following example causes the I/CF console R11I225M to recycle.

```
F jobname,ICFCMD ACB(R11I225M) RECYCLE
```

where:

- **jobname**

  is the OMEGAMON II for IMS or OMEGAMON II for DBCTL MVS started task name or MVS jobname.

---

**Table 12. ICFCMD Command Subparameter Descriptions**

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Length</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWITCH</td>
<td>0</td>
<td>None</td>
<td>Forces a log to switch. How I/CF responds to this command depends on whether you are using sysout or dataset logging. See “Switching the Logs” on page 81 for more information.</td>
</tr>
</tbody>
</table>
ICFCONSL command

Overview

This unit describes the ICFCONSL command, which defines an I/CF console and its characteristics. You can specify the ICFCONSL command in your KI2START member, rhilev.midlev.RKANCMD.

Command syntax

The following is the syntax for the ICFCONSL command.

```
ICFCONSL -
   ACB(xxxxxxxx) -
   AUTO -
   DATEFORMAT(x) -
   DBCTL -
   EXCEPTIONUSERID(xxxxxxxx) -
   IMSAPPL(xxxxxxxx) -
   IMSID(xxxxxxxx) -
   LOG -
   LOGARCH1(xxxxxxxx) -
   LOGARCH2(xxxxxxxx) -
   LOGCLASS(x) -
   LOGDEST(xxxxxxxx) -
   LOGDESTU(xxxxxxxx) -
   LOGDSN1(xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx) -
   LOGDSN2(xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx) -
   MASTER -
   REMOTE -
   REMOTEACBNAME(xxxxxxxx) -
   RETRYINTERVAL(nn:nn:nn) -
   SESSNAME(xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx) -
   SUBSYSconsole -
   VIEW -
   VIEWSIZE(xxxxxx) -
```
### Subparameter descriptions

The following chart describes each of the subparameters for the ICFCONSL command:

**Table 13. ICFCONSL Command Subparameter Descriptions**

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Maximum Length of Parameter Value</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
</table>
| ACB          | 8                                | None    | The VTAM ACB name you defined for the IMS Master Console. See “Defining a VTAM APPLID” on page 43 for more information.  
*Note:* A DBCTL subsystem does not require this subparameter.  
This field appears as **ACBID** on the Configure I/CF Console Commands CICAT panel. |
| AUTO         | None                             | Off     | Sends IMS Master Terminal, I/CF, and exception messages to OMEGACENTER Gateway for MVS. Requires the OMEGACENTER Gateway for MVS automation interface exit. See “Providing an Automation Exit” on page 55 for more information.  
This field appears as **A** on the Configure I/CF Console Commands CICAT panel. |
### Table 13. ICFCONSL Command Subparameter Descriptions

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Maximum Length of Parameter Value</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
</table>
| DATEFORMAT   | 1                                 | 1       | Specifies the date format for the date stamp. The following shows the code for each format: 1  MM/DD/YY  
|              |                                   |         | 2  YY/MM/DD  
|              |                                   |         | 3  MMM DD, YYYY  
|              |                                   |         | 4  MMMMMMMMM DD, YYYY  
|              |                                   |         | 5  DD.MM,YY  
|              |                                   |         | 6  YYYY/DDD  
|              |                                   |         | This field appears as **FMT** on the Configure I/CF Console Commands CICAT panel. |
| DBCTL        | None                              | Off     | Indicates that this is an IMS Master Console for a DBCTL subsystem.  
|              |                                   |         | **Note:** If you have not defined the IMS ID as a DBCTL subsystem, I/CF issues an error message on the RLVLOG dataset and does not create the I/CF console.  
|              |                                   |         | This field appears as **CT** on the Configure I/CF Console Commands CICAT panel.  
|              |                                   |         | Valid codes are:  
|              |                                   |         | **M** - Master  
|              |                                   |         | **D** - DBCTL  |
### Table 13. ICFCONSL Command Subparameter Descriptions

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Maximum Length of Parameter Value</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCEPTIONUSERID</td>
<td>8</td>
<td>None</td>
<td>The OMEGAMON II for IMS or OMEGAMON II for DBCTL userid that I/CF uses to log exception messages from the OMEGAMON II Realtime Performance Monitor. Candle recommends that this userid match the OMEGAVIEW userid which connects to OMEGAMON II for IMS or OMEGAMON II for DBCTL. This field appears as <strong>EUSER</strong> on the Configure I/CF Console Commands CICAT panel.</td>
</tr>
<tr>
<td>IMSAPPL</td>
<td>8</td>
<td>None</td>
<td>The VTAM APPLID you defined for the IMS DB/DC subsystem at IMSGEN time. <strong>Note:</strong> A DBCTL subsystem does not require this subparameter. This field appears as <strong>V-APPL</strong> on the Configure I/CF Console Commands CICAT panel.</td>
</tr>
<tr>
<td>IMSID</td>
<td>8</td>
<td>None</td>
<td>The IMSID specified at IMSGEN time. This field appears as <strong>IMS ID</strong> on the Configure I/CF Console Commands CICAT panel.</td>
</tr>
</tbody>
</table>
| LOG               | None                              | Off     | Indicates that the system is to log the information from this console. This field appears as **LOG** on the Configure I/CF Console Commands CICAT panel. 
\[D = \text{Log via dataset} \]
\[S = \text{Log via sysout} \]
\[N = \text{No logging} \]
## Table 13. ICFCONSL Command Subparameter Descriptions

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Maximum Length of Parameter Value</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGARCHn</td>
<td>8</td>
<td>None</td>
<td>Specifies the member name in the rhilev.midlev.RKANPAR dataset that the system submits when a log dataset switch occurs. This field appears as <strong>LOG1</strong> in the Configure I/CF Console Commands CICAT panel.</td>
</tr>
<tr>
<td>LOGCLASS</td>
<td>A</td>
<td>None</td>
<td>Specifies the JES sysout class for the system to use when writing the log. <strong>Note:</strong> You must specify the LOG subparameter. I/CF uses LOGCLASS in conjunction with the LOGDEST and LOGDESTU subparameter. This field appears as <strong>LOGCLASS</strong> on the Configure I/CF Console Commands CICAT panel.</td>
</tr>
<tr>
<td>LOGDEST</td>
<td>8</td>
<td>None</td>
<td>Specifies the JES sysout destination id. This field appears as <strong>LOGDEST</strong> on the Configure I/CF Console Commands CICAT panel.</td>
</tr>
<tr>
<td>LOGDESTU</td>
<td>8</td>
<td>None</td>
<td>Specifies the JES sysout destination userid. This field appears as <strong>LOGDEST USER</strong> on the Configure I/CF Console Commands CICAT panel.</td>
</tr>
</tbody>
</table>
LOGDSN

When you specify a LOGDSN1 and LOGDSN2, you can send a complete copy of all the console lines for this console, to a dataset. When the dataset is full, I/CF switches to the other dataset and continues logging.

**Note:** You must specify the **LOG** subparameter to use the **LOGDSNn** subparameter.

This field appears as **LOG2** on the Configure I/CF Console Commands CICAT panel.

MASTER

Indicates that you can enter IMS, MVS, and VTAM commands through this console. This field is an option for the **CT** field on the Configure I/CF Console Commands CICAT panel. Valid codes are:

- **M** - Master
- **D** - DBCTL

REMOTE

Defines this I/CF console as a remote console to a Master I/CF console. This field appears as **RCON** on the Configure I/CF Console Commands CICAT panel.

REMOTEACBNMEN

The VTAM ACBNAME you specified on your remote connection VTAM APPLID. See Figure 5 on page 58 for more information. This field appears as **IMS R-ACB** on the Configure I/CF Console Commands CICAT panel.
ICFCONSL command

Table 13. ICFCONSL Command Subparameter Descriptions

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Maximum Length of Parameter Value</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RETRYINTERVAL</td>
<td>6</td>
<td>None</td>
<td>The parameter value is assumed to be seconds. The numeric format is <strong>HH:MM:SS</strong>. For example, you can enter: <strong>RETRY INTERVAL(00:00:90)</strong>. This can also be entered as: <strong>RETRY INTERVAL(00:01:30)</strong>. See page “Automatic recovery” on page 100 for more information.</td>
</tr>
<tr>
<td>SUBSYSCONSOLE</td>
<td>None</td>
<td>Off</td>
<td>Dynamically allocates a subsystem console which allows you to receive responses to your MVS commands on your I/CF console. <em>Note:</em> Check with your MVS system administrator to ensure an adequate number of subsystem consoles are available for this I/CF console. This field appears as <strong>SC</strong> on the Configure I/CF Console Commands CICAT panel.</td>
</tr>
<tr>
<td>VIEW</td>
<td>None</td>
<td>Off</td>
<td>Lets you view this console through I/CF. This field appears as <strong>VW</strong> on the Configure I/CF Console Commands CICAT panel. Valid codes are: <strong>Y</strong> - Yes <strong>N</strong> - No</td>
</tr>
<tr>
<td>VIEWSIZE</td>
<td>6</td>
<td>25,000</td>
<td>The number of lines you can view from the I/CF console. This field appears as <strong>Count</strong> on the Configure I/CF Console Commands CICAT panel.</td>
</tr>
</tbody>
</table>
ICFCONSL command

Defining an I/CF console for an IMS DB/DC region

The following example defines an I/CF console for an IMS DB/DC region. Here, the APPLID of the IMS system is IMS610A and the IMS Master Terminal is R11I225M.

This console sends the IMS Master Terminal, I/CF, and exception messages to the OMEGACENTER Gateway for MVS automation interface exit.

ICFCONSL -

ACB(R11I225M) -
DATEFORMAT(2) -
EXCEPTIONUSERID(MVUSER1) -
IMSAPPL(IMs610A) -
IMSID(I61A) -
LOGCLASS(X) -
LOGDEST(PR11) -
LOG MASTER VIEW SUBSYSCONSOLE AUTO
SESSNAME(IMS V6.1 DB/DC SP11) -
VIEWSIZE(25000) -

Defining an I/CF console for an IMS DBCTL region

The following example defines an I/CF console for an IMS DBCTL region. As you can see, there is no ACB or IMSAPPL subparameter. I/CF consoles for IMS DBCTL subsystems automatically assume that this is a command-enterable I/CF Master Console. Therefore, this example does not require a MASTER subparameter.

ICFCONSL -

DATEFORMAT(4) -
DBCTL SUBSYSCONSOLE -
EXCEPTIONUSERID(MVUSER1)
IMSID(I61C) -
LOG -
LOGCLASS(X) -
LOGDEST(PR11) -
SESSNAME(IMS V6.1 DBCTL SP22) -
VIEW -
VIEWSIZE(25000) -
ICFTRAP command

Overview
This unit describes the ICFTRAP command. You can specify this command in your KI2START member in rhilev.midlev.RKANCMD.

Command syntax
The following is the syntax for the ICFTRAP command.

```
ICFTRAP -

MASTER CONSOLE ACB(xxxxxxxxx) -
MESSAGE COLOR(x)
DELETE MESSAGE -
CONTINUOUS TEXT(xxxxxxxxxxxxxx...) -
VIEW MESSAGE -
```

Subparameter descriptions
The following chart describes each of the subparameters for the ICFTRAP command:

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Maximum Length of Parameter Value</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASTER CONSOLE ACB</td>
<td>8</td>
<td>None</td>
<td>The VTAM ACB name you defined for the IMS Master Console. See “Defining a VTAM APPLID” on page 43 for more information. If you omit the MASTER CONSOLE ACB subparameter, this trap applies to all I/CF consoles you defined to this OMEGAMON II address space.</td>
</tr>
</tbody>
</table>
Changing the color of an IMS message

The following example is a message trap that changes the color of the IMS DFS810A message on a specific terminal. This trap is for a specific I/CF console.

ICFTRAP -
   ACB(R11I225M) -
   COLOR(R)
   TEXT(DFS810A) -
   VIEW

Table 14. ICFTRAP Command Subparameter Descriptions

<table>
<thead>
<tr>
<th>Subparameter</th>
<th>Maximum Length of Parameter Value</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MESSAGE COLOR</td>
<td>1</td>
<td>B</td>
<td>Specifies the color of the message as it appears on the I/CF console. The options are as follows: R Red G Green W White B Blue Note: If you specify an invalid color, I/CF sets the color to Red. If you do not specify any color, I/CF sets the color to Blue.</td>
</tr>
<tr>
<td>DELETE MESSAGE</td>
<td>0</td>
<td>None</td>
<td>Tells I/CF to delete a previously entered Message Suppression trap, with the same ACB and TEXT subparameter values.</td>
</tr>
<tr>
<td>CONTIGUOUS TEXT</td>
<td>132</td>
<td>None</td>
<td>Any contiguous text (including spaces) which you want matched to each message received from the IMS subsystem.</td>
</tr>
<tr>
<td>VIEW MESSAGE</td>
<td>0</td>
<td>View</td>
<td>Specifies whether or not you can view the message on the I/CF console. Valid codes are: Y = Yes N = No</td>
</tr>
</tbody>
</table>

Changing the color of an IMS message

The following example is a message trap that changes the color of the IMS DFS810A message on a specific terminal. This trap is for a specific I/CF console.

ICFTRAP -
   ACB(R11I225M) -
   COLOR(R)
   TEXT(DFS810A) -
   VIEW
Changing the color of a IMS DBCTL message

The following example is a message trap that changes the color of the DFS989I message from an IMS DBCTL subsystem. This trap is for a specific I/CF console.

ICFTRAP -
   ACB(I61C) -
   COLOR(R) -
   TEXT(DFS989I)
   VIEW

Example of message suppression

The following example is a message trap that suppresses the display of the DFS000I messages from any I/CF console. An IMS DBCTL subsystem produces this particular format of the DFS000I for each command response line.

ICFTRAP- TEXT('DFS000I MESSAGE(S) FROM ID=')-NOVIEW
Overview

Use the MSG command to transmit messages to other I/CF consoles. You can only enter this command on the I/CF console Command line.

**Note:** The system does not send these user messages to the OMEGACENTER Gateway for MVS automated interface exit.

Command syntax

On the Command line of the I/CF console, type

```markdown
MSG xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

where:

```markdown
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

is your message text.
AFOPER Command

Overview

Use the AFOPER command to trigger OMEGACENTER Gateway for MVS automation traps.

**Note:** Unlike the MSG command, the system sends these user messages to the OMEGACENTER Gateway for MVS automated interface exit.

Command syntax

On the Command line of the I/CF console, type:

```
AFOPER xxxxxxx
```

where:

```
xxxxxxx
```

is your OMEGACENTER Gateway for MVS automation trigger. See the OMEGACENTER Gateway for MVS manual.
RECYCLE Command

Overview
Use the RECYCLE command to close the VTAM ACB and terminate the active session with IMS. For more information, see “Manual Console Recovery Facilities” on page 101.

Command syntax
On the Command line of the I/CF console, type:

RECYCLE

**Note:** You can also enter this command from the MVS console. See “ICFCMD - MVS Console Command” on page 104 for more information.
RESTART Command

Overview
Use the RESTART command to terminate a VTAM session with IMS. For more information, see “Manual Console Recovery Facilities” on page 101.

Command syntax
On the Command line of the I/CF console, type:

```
RESTART
```

*Note:* You can also enter this command from the MVS console. See “ICFCMD - MVS Console Command” on page 104 for more information.
OPEN Command

Overview

Use the OPEN command to open the I/CF console after a CLOSE command.

Command syntax

On the Command line of the I/CF console, type:

```
OPEN
```

*Note:* You can also enter this command from the MVS console. See “ICFCMD - MVS Console Command” on page 104 for more information.
CLOSE Command

Overview

Use the CLOSE command to close the I/CF console.

Command syntax

On the Command line of the I/CF console, type:

CLOSE

You can also enter this command from the MVS console. See “ICFCMD - MVS Console Command” on page 104 for more information.
SWITCH Command

Overview

Use the SWITCH command to switch logs. For more information, see “Switching the Logs” on page 81.

Command syntax

On the Command line of the I/CF console, type

```
SWITCH
```

**Note:** You can also enter this command from the MVS console. See “ICFCMD - MVS Console Command” on page 104 for more information.
Chapter overview

This chapter contains new messages for I/CF.

Chapter contents

I/CF Date/Time Stamp Messages .............................. 126
I/CF Messages ..................................................... 127
Overview

This unit describes the formats for the I/CF date/time stamp messages.

One minute date/time stamp

I/CF DATE/TIME IS: xxxxxxxxxxxxxxxxxx HH:MM:SS

Explanation: This highlighted message date/time stamps the console and the audit log at one minute intervals.

xxxxxxxxxxxxxxxx

The date format you specified using the ICFCONSL command. See “ICFCONSL command” on page 107 for more information.

You can use the FIND facility to locate a specific date/time stamp.

System Action: I/CF displays the message on the console and writes an entry in the audit log.
User Response: None

Change-of-day date/time stamp

I/CF CHANGE-OF-DAY PROCESSING COMPLETE.

aaaaaaaa, xxxxxxxxxxxxxxxxxx HH:MM:SS

Explanation: This highlighted message tells when a change of day has occurred.

aaaaaaaa The day of the week, such as SATURDAY.

xxxxxxxxxxxxxxxx

The date format you specified using the ICFCONSL command. See “ICFCONSL command” on page 107 for more information.

You can use the FIND facility to locate a specific change-of-day stamp.

System Action: :sysact.I/CF displays the message on the console and writes an entry in the audit log.
User Response: None
I/CF Messages

Overview

This unit describes the new messages in I/CF.

Messages

ICFCC001 I/CF VECTOR TABLE NOT FOUND.
Explanation:  I/CF could not initialize.
System Action:  The system does not create the I/CF console.
User Response:  Review the RLVLOG for other error messages.

ICFCC002 I/CF IN SHUTDOWN MODE
Explanation:  Someone has started to shutdown the CUA address space while attempting to define an I/CF console.
System Action:  The CUA address space will shut down.
User Response:  None.

ICFCC003 I/CF CONSOLE ALLOCATION FAILURE. SIZE= ########
Explanation:  Unable to obtain storage for the console definition. This occurs when trying to acquire 1600 bytes of extended private storage.
System Action:  The system does not create the I/CF console.
User Response:  Restart the job with a larger region size.

ICFCC007 I/CF UNABLE TO CREATE VIEW QUEUE FOR CONSOLE xxxxxxxx
Explanation:  An internal error occurred while trying to create a viewable console.
System Action:  I/CF console is not viewable.
User Response:  Contact the Candle Customer Support

ICFCC009 I/CF UNABLE TO CREATE LOG QUEUE FOR CONSOLE xxxxxxxx
Explanation:  The system specified logging, but an internal error occurred.
System Action:  Logging is not available for the I/CF console.
User Response:  Contact the Candle Customer Support

ICFCC039 I/CF ICFCONSL COMMAND FORMAT ERROR
Explanation:  This is a user definition error.
System Action:  The system does not create the I/CF console.
User Response:  Review the I/CF console definition and correct any errors. Resubmit.
ICFCC041  I/CF DATASET LOGGING REQUIRES LOGDSN1 AND LOGDSN2 DATASETS BE DEFINED.
Explanation: You specified dataset logging, but did not define either LOGDSN1 or LOGDSN2.
System Action: The system does not create the I/CF console.
User Response: Verify the LOGDSN1 and LOGDSN2 dataset definition. Resubmit.

ICFCC042  I/CF DATASET LOGGING REQUIRES LOGARCH1 AND LOGARCH2 ARCHIVING JOBS BE DEFINED.
Explanation: You specified dataset logging, but did not define either LOGARCH1 or LOGARCH2 (archiving jobs).
System Action: The system does not create the I/CF console.
User Response: Verify the LOGARCH1 and LOGARCH2 archiving jobs definition. Resubmit.

ICFCC044  I/CF REQUIRES IMSID OR ACBNAME
Explanation: You did not specify either the IMSID or the ACB name.
System Action: The system does not create the I/CF console.
User Response: Specify the IMSID or the ACB name. Resubmit.

ICFCC047  I/CF REQUIRES IMS VTAM APPLID
Explanation: The system did not find the VTAM APPLID.
System Action: The system does not create an I/CF console.
User Response: Specify the VTAM APPLID and resubmit.

ICFCC089  I/CF UNABLE TO CREATE COMMAND QUEUE FOR CONSOLE xxxxxxxx
Explanation: The system defined the console as a Master, but an internal error occurred.
System Action: The system does not accept commands from the I/CF console.
User Response: Contact the Candle Customer Support

ICFIM001  I/CF VECTOR TABLE NOT FOUND.
Explanation: I/CF could not initialize.
System Action: The system does not create the I/CF consoles.
User Response: Review the rLVLOG for other error messages.

ICFIM002  I2DC VECTOR TABLE NOT FOUND.
Explanation: I2DC could not initialize.
System Action: Subsystem interface is not available. DBCTL I/CF consoles will not be created. MVS responses will not be provided.
User Response: Review the RLVLOG for other error messages.

ICFIM020  IMS CONTROL REGION FOR IMSID zzzzzzzz IS NOT FOUND OR IMS SCD NOT VALID
Explanation: The IMS subsystem is not active.
System Action: I/CF attempts to connect to IMS at 10 second intervals until it is successful.
User Response: Investigate why IMS is not active.
ICFIM024 I/CF WILL NOT PROVIDE ANY CONSOLE FOR xxxxxxxx
Explanation: This is an informational message xxxxxxxx is the console ACB name.
System Action: The system did not create the specified I/CF console.
User Response: Review the RLVLOG for other error messages.

ICFIM095 I/CF WILL RETRY EVERY 10 SECONDS
Explanation: I/CF is not connected to the IMS subsystem.
System Action: I/CF attempts to connect to IMS at 10 second intervals until it is successful.
User Response: Investigate why IMS is not active.

ICFJB001 I/CF VECTOR TABLE NOT FOUND.
Explanation: I/CF could not initialize.
System Action: The system does not create the I/CF consoles.
User Response: Review the RLVLOG for other error messages.

ICFJB002 I2DC VECTOR TABLE NOT FOUND.
Explanation: I2DC could not initialize.
System Action: Subsystem interface is not available. DBCTL I/CF consoles will not be created. MVS responses will not be provided.
User Response: Review the RLVLOG for other error messages.

ICFJB020 JOB ADDRESS SPACE FOR zzzzzzzz IS NOT FOUND.
Explanation: The system did not start the job.
System Action: I/CF attempts to connect to the address space at 10 second intervals until successfully connected.
User Response: Investigate why the system did not start the job.

ICFJB024 I/CF WILL NOT PROVIDE ANY CONSOLE FOR xxxxxxxx
Explanation: This is an informational message xxxxxxxx is the console ACB name.
System Action: The system did not create the specified I/CF console.
User Response: Review the RLVLOG for other error messages.

ICFJB038 I/CF JOB zzzzzzzz CONSOLE IS UNABLE TO START. NO SYSTEM BLOCKS AVAILABLE.
Explanation: The system defined more than 16 I/CF consoles to the CUA address space zzzzzzzz is the job name.
System Action: The system does not create DBCTL I/CF consoles nor does it provide MVS responses.
User Response: Contact Candle Customer Support

ICFJB095 I/CF WILL RETRY EVERY 10 SECONDS
Explanation: I/CF is not connected to the address space.
System Action: I/CF attempts to connect to the address space at 10 second intervals until successfully connected.
User Response: Investigate why the system did not start the job.

ICFSC005 I/CF COMMAND NOT PROCESSED. CONSOLE xxxxxxxx IS NOT ACTIVE.
Explanation: You issued the command to an inactive console.
System Action: The system does not execute the command.
**ICFSC016**

**COMMAND CHARACTER (X) NOT RECOGNIZED. VALID CHARACTERS ARE (I) = IMS, (.) = VTAM, (-) = MVS.**

**Explanation:** You entered an invalid command character.

**System Action:** The system does not execute the command.

**User Response:** Select the appropriate command character. Re-issue the command.

**ICFSC017**

**COMMAND AUTHORIZATION FOR USER xxxxxxxx FAILED.**

**Explanation:** You are not authorized to issue the command you entered xxxxxxxx is the userid.

**System Action:** The system does not execute the command.

**User Response:** Contact your system administrator to gain the appropriate authorization.

**ICFSC018**

**cccccccc COMMAND AUTHORIZATION FOR USER xxxxxxxx FAILED.**

**Explanation:** You are not authorized to issue the ICF command you entered. xxxxxxxx is the userid.

**System Action:** The system does not execute the command.

**User Response:** Contact your system administrator to gain the appropriate authorization.

**ICFSC117**

**COMMAND ENTRY NOT AVAILABLE FOR THIS CONSOLE**

**Explanation:** You cannot enter commands from this console. You can only enter commands from an I/CF Master Console.

**System Action:** The system does not execute the command.

**User Response:** None

**ICFSF001**

**I/CF VECTOR TABLE NOT FOUND.**

**Explanation:** I/CF could not initialize.

**System Action:** The system does not create the I/CF consoles.

**User Response:** Review the RLVLOG for other error messages.

**ICFSF121**

**I/CF UNABLE TO OBTAIN COMMAND ENTRY VALIDATION STORAGE. COMMAND FAILED. CCB ADDRESS = yyyyyy**

**Explanation:** The system could not get 56 bytes of extended private storage for an internal command validation control block.

**System Action:** The system does not validate the command. Command authorization fails.

**User Response:** Restart the address space with a larger region size.

**ICFVR001**

**I/CF VECTOR TABLE NOT FOUND.**

**Explanation:** I/CF could not initialize.

**System Action:** The system does not create I/CF consoles.

**User Response:** Review RLVLOG for other error messages.

**ICFVR003**

**I/CF VTAM RECEIVE PROCESSING STARTED FOR CONSOLE xxxxxxxx**
ICFVR005  I/CF VTAM RECEIVE PROCESSING TERMINATED FOR CONSOLE xxxxxxxx CCB ADDRESS yyyyyyy
Explanation:  This is an informational message xxxxxxxx is the console ACB name yyyyyyy is the CCB address.
System Action:  I/CF console is put in a waiting status. I/CF attempts to reconnect to IMS.
User Response:  Investigate the cause of the disconnection.

ICFWT001  I/CF VECTOR TABLE NOT FOUND.
Explanation:  I/CF could not initialize.
System Action:  The system does not create I/CF consoles.
User Response:  Review the RLVLOG for other error messages.

ICFWT002  I2DC VECTOR TABLE NOT FOUND.
Explanation:  I2DC could not initialize.
System Action:  Subsystem interface is not available. DBCTL I/CF consoles will not be created. MVS responses will not be provided.
User Response:  Review the RLVLOG for other error messages.

ICFWT003  I/CF WTO RECEIVE PROCESSING STARTED FOR CONSOLE xxxxxxxx CCB ADDRESS yyyyyyy
Explanation:  This is an informational message xxxxxxxx is the console ACB name yyyyyyy is the CCB address.
System Action:  None.
User Response:  None.

ICFWT005  I/CF WTO RECEIVE PROCESSING TERMINATED FOR CONSOLE xxxxxxxx CCB ADDRESS yyyyyyy
Explanation:  This is an informational message xxxxxxxx is the console ACB name yyyyyyy is the CCB address.
System Action:  I/CF console is put in a pending status. I/CF attempts to reconnect to IMS.
User Response:  Investigate the cause of the disconnection.
Panel References

Chapter overview
This chapter shows examples of each of the new panels and modifications to OMEGAMON II panels for I/CF.

Chapter contents
- CUA Sign On Panel ................................................................. 134
- IMS Console Facility Sign On Panel ........................................ 135
- IMS Console Selection Pop-up ............................................... 136
- IMS Console Facility Panel ..................................................... 138
- CUA Operator Assist Panels .................................................. 140
- Set Controls Pop-up .............................................................. 141
- IMS Status - Alerts Exceptions Pop-up .................................... 142
Overview

I/CF adds the F11 function key to the CUA Sign On Panel, so you can access the IMS Console Facility without first signing on to OMEGAMON II for IMS or OMEGAMON II for DBCTL.

Example

This example shows you the modifications to the CUA Sign On Panel.

FIGURE 12. CUA Sign On Panel

Type the requested information, then press Enter.

Identification
Userid . . . . . . ________
Password . . . . .
Change Password . No + Yes/No

Additional Information
Group . . . . . . ________
Account . . . . . _______________________________________________

F1=Help  F3=Exit  F4=Prompt  F6=Panel ID  F11=IMS Console Facility
IMS Console Facility Sign On Panel

Overview

I/CF includes the new IMS Console Facility Sign On Panel that you can use to sign on to the IMS Console Facility.

**Note:** If you enter I/CF after signing on to OMEGAMON II for IMS or OMEGAMON II for DBCTL, the IMS Console Facility Sign On Panel does not display.

Example

This example shows you the new IMS Console Facility Sign On Panel.

FIGURE 13. IMS Console Facility Sign On Panel

```
OMEGAMON II for IMS  IMS Console Facility
                        Sign On Panel

Type the requested information, then press Enter.

Identification
  Userid . . . . .   
  Password . . . .
  Change Password . No + Yes/No

Additional Information
  Group . . . . .
  Account . . . .  ___________________________________________

F1=Help  F3=Exit  F4=Prompt  F6=Panel ID
```
**IMS Console Selection Pop-up**

**Overview**

I/CF includes the new IMS Console Selection pop-up where you choose the IMS console that you want to monitor.

The STATUS field shows the current status of the I/CF connection to a specific IMS. The possible values for the STATUS field are as follows:

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVE</td>
<td>I/CF has an active VTAM connection to the IMS Master Console or the DBCTL subsystem is active.</td>
</tr>
<tr>
<td>CLOSED</td>
<td>An authorized user has issued a CLOSE command to this console.</td>
</tr>
<tr>
<td>CONNECTING</td>
<td>This is a transient state where I/CF is attempting to establish a VTAM connection to the IMS Master Console or attempting to locate the DBCTL subsystem.</td>
</tr>
<tr>
<td>INACTIVE</td>
<td>I/CF has determined that there is an unrecoverable error with the connection.</td>
</tr>
<tr>
<td>PENDING</td>
<td>I/CF is waiting for the 10 second restart interval to expire.</td>
</tr>
<tr>
<td></td>
<td>Review the RLVLOG for problem resolution information.</td>
</tr>
<tr>
<td>STARTING</td>
<td>I/CF has a successful VTAM connection to the IMS Master Console or the DBCTL subsystem.</td>
</tr>
<tr>
<td></td>
<td>I/CF is validating the connection and initializing the logging and viewing options.</td>
</tr>
</tbody>
</table>

**Example**

This example shows you the new IMS Console Selection pop-up panel.
FIGURE 14. IMS Console Selection Pop-up

<table>
<thead>
<tr>
<th>IMSID</th>
<th>SESSION NAME</th>
<th>CONSOLE</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I61A</td>
<td>IMS V6.1 MASTER CONSOLE</td>
<td>R11I225M</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>I61A</td>
<td>IMS V6.1 MASTER CONSOLE</td>
<td>RGI225M</td>
<td>PENDING</td>
</tr>
<tr>
<td>I61A</td>
<td>IMS V6.1 SECONDARY CONSOLE</td>
<td>RGI225M</td>
<td>PENDING</td>
</tr>
</tbody>
</table>

KI2PICF IMS Console Selection

Move cursor to selection, then press Enter.

F1=Help  F12=Cancel
IMS Console Facility Panel

Overview

I/CF includes the new IMS Console Facility panel, where you can issue commands and see responses. It replaces the previous Operator Console (KI2PC147) panel.

Example when using integrated logon

This example shows you the new IMS Console Facility panel that you see when you use the integrated logon.

FIGURE 15. IMS Console Facility Panel - Integrated Logon
Example when using direct and indirect logon

This example shows you the new IMS Console Facility panel that you see when you use direct and indirect logon.

FIGURE 16. IMS Console Facility Panel - Direct/Indirect Logon
Overview

I/CF removes the mini-console from all the Operator Assist panels, allowing more resources to display at one time on the screen.

The operator Assist panels include Programs, Regions, Databases, Transactions, Network, Conversation, and Logging.

Note: Press PF6 from any of the Operator Assist panels, to verify the console command or its response.

Example

Here is an example of the modification to the Operator Assist panel for Programs.

FIGURE 17. CUA Operator Assist Panels
Set Controls Pop-up

Overview

I/CF includes modifications to the Controls pop-up to include a new option, \textit{Automatically go to Console}.

The option default is off.

If you turn this option on, the I/CF Console appears:

- after each action against a resource on any of the Operator Assist panels
- when you press PF12 after entering commands from the IMS Command Entry pull-down

\textit{Note: } You access the Controls pop-up by selecting \textit{Set controls} from the Options pull-down.

Example

Here is an example of the Controls pop-up with the new option.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{set_controls_pop-up.png}
\caption{Set Controls Pop-up}
\end{figure}
## IMS Status - Alerts Exceptions Pop-up

### Overview

I/CF includes a modification to the IMS Status - Alerts Exceptions pop-up to include the new ICFX exception.

### Example

Here is an example of the IMS Status - Alerts Exceptions pop-up with the new exception.

**FIGURE 19. IMS Status Alerts Exceptions Panel**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSVC</td>
<td>IMS control task waiting in SVC code.</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>DISP</td>
<td>OI dispatching priority &lt;= than in IMS.</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>:hp2.ICFX</td>
<td>I/CF not connected to IMS.</td>
<td>On + On/Off:ehp2</td>
</tr>
<tr>
<td>IMAC</td>
<td>IMS inactive</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>MSGE</td>
<td>ICNS command not issued.</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>NFDL</td>
<td>No parallel Dl/I</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>NSDC</td>
<td>Start DC not performed</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>ONLC</td>
<td>Online change in progress</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>ONLO</td>
<td>Online change occurred</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>RZBV</td>
<td>No VTAM connection to RSR Tracking System</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>SAPW</td>
<td>ITASKs IWAITing for dynamic SAPs</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>SDSF</td>
<td>Selective dispatching active</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>TCOI</td>
<td>TCO inactive</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>TMSI</td>
<td>Transport Manager Subsystem not active</td>
<td>On + On/Off</td>
</tr>
<tr>
<td>VROQ</td>
<td>LTERM unable to receive output</td>
<td>On + On/Off</td>
</tr>
</tbody>
</table>

Exceptions Group Monitor: On + On/Off

Enter F1=Help  F3=Exit  F4=Prompt  F12=Cancel
Introduction

Candle Corporation is committed to producing top-quality software products and services. To assist you with making effective use of our products in your business environment, Candle is also committed to providing easy-to-use, responsive customer support.

Precision, speed, availability, predictability—these terms describe our products and Customer Support services.

Included in this Guide to Candle Customer Support is information about the following:

Base Maintenance Plan ................................................................. 144
  – Telephone Support
  – eSupport
  – Description of Severity Levels
  – Service-level objectives
  – Recording and monitoring calls for quality purposes
  – Customer Support Escalations
  – Above and Beyond

Enhanced Support Services ......................................................... 148
  – Assigned Support Center Representative (ASCR)
  – Maintenance Assessment Services (MAS)
  – Multi-Services Manager (MSM)

Customer Support Contact Information ....................................... 149
  – Link to Worldwide Support Telephone and E-mail information
Base Maintenance Plan

Overview

Candle offers a comprehensive Base Maintenance Plan to ensure that you realize the greatest value possible from your Candle software investments. We have more than 200 technicians providing support worldwide, committed to being responsive and to providing expedient resolutions to support requests. Technicians are available worldwide at all times during the local business day. In the event of an after-hours or weekend emergency, our computerized call management and forwarding system will ensure that a technician responds to Severity One situations within one hour. For customers outside of North America, after-hours and weekend support is provided in English language only by Candle Customer Support technicians located in the United States.

Telephone support

Candle provides consistently reliable levels of service—thanks to our worldwide support network of dedicated experts trained for specific products and operating systems. You will always work with a professional who truly understands your problem.

We use an online interactive problem management system to log and track all customer-reported support requests. We give your support request immediate attention by routing the issue to the appropriate technical resource, regardless of geographic location.

**Level 0 Support** is where your call to Candle Customer Support is first handled. Your support request is recorded in our problem management system, then transferred to the appropriate Level 1 support team. We provide Level 0 manual interaction with our customers because we support more than 170 products. We feel our customers would prefer personal interaction to a complex VRU or IVR selection menu.

**Level 1 Support** is the service provided for initial support requests. Our Level 1 team offers problem determination assistance, problem analysis, problem resolutions, installation assistance, and preventative and corrective service information. They also provide product usage assistance.

**Level 2 Support** is engaged if Level 1 cannot provide a resolution to your problem. Our Level 2 technicians are equipped to analyze and reproduce errors or to determine that an error is not reproducible. Problems that cannot be resolved by Level 2 are escalated to Candle’s Level 3 R&D support team.

**Level 3 Support** is engaged if a problem is identified in Candle product code. At Level 3, efforts are made to provide error correction, circumvention or notification that a correction or circumvention is not available. Level 3 support provides available maintenance modifications and maintenance delivery to correct appropriate documentation or product code errors.
**eSupport**

In order to facilitate the support process, Candle also provides **eSupport**, an electronic full-service information and customer support facility, using the World Wide Web at [www.candle.com/support/](http://www.candle.com/support/). **eSupport** allows you to open a new service request and update existing service requests, as well as update information in your customer profile. New and updated service requests are queued to a support technician for immediate action. And we can respond to your request electronically or by telephone—it is your choice.

**eSupport** also contains a continually expanding knowledge base that customers can tap into at any time for self-service access to product and maintenance information.

The Candle Web Site and **eSupport** can be accessed 24 hours a day, 7 days a week by using your authorized Candle user ID and password.

**Description of Candle severity levels**

Responses to customer-reported product issues and usage questions are prioritized within Candle according to Severity Code assignment. Customers set their own Severity Levels when contacting a support center. This ensures that we respond according to your individual business requirements.

- **Severity 1 Crisis**
  A crisis affects your ability to conduct business, and no procedural workaround exists. The system or application may be down.

- **Severity 2 High**
  A high-impact problem indicates significant business effect to you. The program is usable but severely limited.

- **Severity 3 Moderate**
  A moderate-impact problem involves partial, non-critical functionality loss or a reasonable workaround to the problem. A “fix” may be provided in a future release.

- **Severity 4 Low**
  A low-impact problem is a “how-to” or an advisory question.

- **Severity 5 Enhancement Request**
  This is a request for software or documentation enhancement. Our business units review all requests for possible incorporation into a future release of the product.
Candle has established the following service-level objectives:

<table>
<thead>
<tr>
<th>Call Status</th>
<th>Severity 1 Goal</th>
<th>Severity 2 Goal</th>
<th>Severity 3 Goal</th>
<th>Severity 4 Goal</th>
<th>Severity 5 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Call Time to Answer</td>
<td>90% within one minute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1 Response</td>
<td>90% within 5 minutes</td>
<td>90% within one hour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Normal Business Hours)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2 Response</td>
<td>Warm Transfer</td>
<td>90% within two hours</td>
<td>90% within eight hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Normal Business Hours)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheduled follow-up</td>
<td>Hourly or as agreed</td>
<td>Daily or as agreed</td>
<td>Weekly or as agreed</td>
<td>Notification is made when an enhancement is incorporated into a generally available product.</td>
<td>Notification is made when a fix is incorporated into a generally available product.</td>
</tr>
<tr>
<td>(status update)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above information is for guideline purposes only. Candle does not guarantee or warrant the above service levels. This information is valid as of October 1999 and is subject to change without prior notice.

Recording and Monitoring Calls for Quality Purposes

Candle is committed to customer satisfaction. To ensure that our customers receive high levels of service, quality and professionalism, we'll monitor and possibly record incoming and outgoing Customer Support calls. The information gleaned from these calls will help us serve you better. If you prefer that your telephone call with Candle Customer Support in North America not be monitored or recorded, please advise the representative when you call us at (800) 328-1811 or (310) 535-3636.

Customer Support Escalations

Candle Customer Support is committed to achieving high satisfaction ratings from our customers. However, we realize that you may occasionally have support issues that need to be escalated to Candle management. In those instances, we offer the following simple escalation procedure:

If you experience dissatisfaction with Candle Customer Support at any time, please escalate your concern by calling the Candle support location closest to you. Ask to speak to a Customer Support manager. During standard business hours, a Customer Support manager will be available to talk with you or will return your call. If you elect to hold for a manager, you will be connected with someone as soon as possible. If you wish a return call, please tell the Candle representative coordinating your call when you will be available. After contacting you, the Customer Support manager will develop an action plan to resolve your issue. All escalations or complaints received about support issues are logged and tracked to ensure responsiveness and closure.
Above and Beyond

What differentiates Candle’s support services from our competitors? We go the extra mile by offering the following as part of our Base Maintenance Plan:

- Unlimited multi-language defect, installation and operations support
- eSupport using the World Wide Web
- Regularly scheduled product updates and maintenance provided at no additional charge
- Over 200 specialized technicians providing expert support for your Candle products
Enhanced Support Services

Overview

Our Base Maintenance Plan provides a high level of software support in a packaged offering. However, in addition to this plan, we have additional fee-based support services to meet unique customer needs.

The following are some examples of our added-value support services:

- **Assigned Support Center Representative Services (ASCR)**
  - An assigned focal point for managing support escalation needs
  - Proactive notification of available software fixes
  - Proactive notification of product version updates
  - Weekly conference calls with your ASCR to review active problem records
  - Monthly performance reviews of Candle Customer Support service levels
  - Optional on-site visits (extra charges may apply)

- **Maintenance Assessment Service (MAS)**
  - On-site assessment services
  - Advice about product maintenance and implementation
  - Training your staff to develop efficient and focused procedures to reduce overall cost of ownership of your Candle software products
  - Analysis of your Candle product environment: versions, updates, code correction history, incident history and product configurations
  - Reviews to ensure that purchased Candle products and solutions are used effectively

- **Multi-Services Manager (MSM)**
  Multi-Services Manager provides highly valued services to customers requiring on-site full time expertise to complement their technical resources.
  - Dedicated on-site Candle resource (6 months or one year) at your site to help ensure maximum use and effectiveness of your Candle products
  - Liaison for all Candle product support activities, coordination and assistance with implementation of all product updates and maintenance releases
  - Works with your staff to understand business needs and systems requirements
  - Possesses technical and systems management skills to enhance your staff’s knowledge and expertise
  - Other projects as defined in Statement of Work for MSM services
Customer Support Contact Information

Link to Worldwide Support Telephone and E-mail information

To contact Customer Support, the current list of telephone numbers and e-mail addresses can be found on the Candle Web site, [www.candle.com/support/](http://www.candle.com/support/).

Select **Support Contacts** from the list on the left of the page.
Customer Support Contact Information
# Index

## Symbols
&OII. CUA interface
- external security
  - CA-ACF2 87
  - SAF 86

## Numerics
4-way scrolling 70

### A
ACB name
- defining a direct VTAM interface 44
  - example 45
- defining an SPO APPLID 46
- defining the I/CF console
  - example 43
- modifying start up parameters 47
- VTAM 43
  - using to identify messages 53
ACB subparameter 61, 104, 108, 115
- ICFCONSL command 61
  - requirements for ICFCONSL command 43
ACBNAME 60
- ACBNAME subparameter 60
  - remote console 60
acf.ACF2. See CA-ACF2
ACTIVE status 136
Adobe portable document format 16
AFOPER command 52, 77, 119
  - securing 93
  - syntax 119
AOI exit 52
AOJOBNM global variable 53
AOJTYPE global variable 53
AOSIM 52
APF authorization
  - datasets requiring authorization 50
  - requirements 50
  - SYS1.PARMLIB(IEAAPFx) 50
APPLID, SPO
  - defining
    - example 46
APPLID, VTAM
  - defining a direct VTAM interface 44
  - defining an SPO APPLID 46
  - defining the I/CF console

### C
CA-ACF2
  - resources
    - defining 95
  - security
    - CUA interface 87
CA-TOP SECRET
  - resources
    - defining 95
  - security
    - CUA interface 88
CICAT 31
  - support 25
CL/Engine 24
  - class descriptor table
    - ICHERCDE 94
CLOSE
  - command 77, 123
    - syntax 123
securing 93
subparameter 104
CLOSE command 77
CLOSED status 136
color
changing 116, 117
highlighting 25
changing the display 75
default values 75
command entry 46
audit 25, 97
IMS 25
interface, VTAM
defining 46
modifying start up parameters 47
MVS 25
security 25, 91
converting commands to resources 92
defining a command resource class 91
prerequisite 91
securing I/CF commands 93
VTAM 25
VTAM interface
defining 46
command resource class
creating a name table 48
defining 48
modifying NAM security parameters 48
prerequisite for command entry security 91
specifying the name table 49
commands
ACB subparameter requirements 43
AFOPER 52, 77, 119
syntax 119
CLOSE 77, 123
syntax 123
converting to resources 92
defining a direct VTAM interface 44
DIALOG 44
entering 77, 78
VTAM 46
entering I/CF 77
entering IMS 77
entering MVS 78
entering VTAM 77
FIND 71
ICFCMD 104
creating a command resource class name table 48
recycle a subsystem 106
switching logs 106
ICFCONSL 42, 43, 54, 107
for exception logging 80
requirement for entering MVS commands 78
specifying dataset logging 79
specifying sysout logging 79
ICFTRAP 115
for message suppression 76
issuing 78
MAX or M 70
MSG 77, 80, 118
syntax 118
MVS modify
changing the resource access list 94
OPEN 77, 122
syntax 122
PERMIT 94
RDEF 94
RDEF command 94
RECYCLE 77, 120
syntax 120
RESTART 77, 121
syntax 121
SETROPTS 94
SWITCH 77, 81, 124
syntax 124
verifying 78
what happens when issued 97
commands you can enter 112
configuration
manual 41
using CICAT 25
configuring I/CF 27
CONNECTING status 136
console 42, 58
I/CF
automating 51
automation interface 52
automation strategy 52
defining 107
defining automation 54
defining for an IMS DB/DC region 114
defining for an IMS DBCTL region 114
interface exit 52
remote 58, 64
requirements for automation 52
using the MSG command 118
using to reconnect I/CF to IMS 101
viewing 73
IM
message automation 52
IMS
choosing which to monitor 136
name used to identify messages 52
IMS Master
Index 153

specifying for DBCTL 109
log, date/time stamp 25
MVS master
messages sent to 52, 53
using to reconnect I/CF to IMS 101
recovery 99
automatic 100
facilities 25
manual 101
RECYCLE facility 101
RESTART facility 101
using the I/CF console 101
using the MVS Master Console 101
remote 57
support 25
Console Facility Sign On Panel
example 135
console support 24
CONTIGUOUS TEXT
subparameter 116
Conversation Operator Assist Panel 140
conversion, I/CF
commands to resources 92
CSA storage 26
CUA 24
external security
CA-ACF2 87
CA-TOP SECRET 88
RACF 87
SAF 86
Operator Assist Panels example 140
Sign On panel example 134
customer support
base maintenance plan 144
contact information 149
enhanced support services 148
eSupport 145
severity levels 145
telephone support 144
customization
manual 41
customizing I/CF 27

D

data, logging 79
dataset 79
    switching logs 81
exception messages 80
sysout 79
    switching logs 81
user message 80
Databases Operator Assist Panel 140
dataset
    log 25
    logging 79
        frequency 79
        specifying 79
        switching logs 81
    requiring authorization 50
    RKANCMMD(KI2CMNAM)
        setting up CUA interface security 84
date format
    specifying 109
date stamp
console log 25
messages 126
date/time stamp
    changing the display 74
    formats 74
DATEFORMAT subparameter 109
DB/DC
environment
    console support 24
IMS environment
    defining an I/CF console 114
IMS Master Terminal
    retrieving I/CF messages 52
DBCTL
environment
    providing an I/CF Console 24
IMS
    changing the color 117
IMS region
    defining an I/CF console 114
    subparameter 109
DC Master Terminal, IMS
    retrieving I/CF messages 52
defining
I/CF Remote Console 63
VTAM interface 46
defining an I/CF 42
defining an I/CF Remote Console 58
defining the I/CF console 42
KI2START 42
DELETE MESSAGE
    subparameter 116
direct logon 67
direct VTAM interface
defining 44
defining the VTAM APPLID
    example 45
logon 25
displayed information
    changing 74
    changing color highlighting 75
    changing the date/time stamp 74
message suppression 74
DLOGMOD=SCS subparameter  
remote console 62
documentation set information 16

E
entering commands 25
eSupport  
customer support 145
exception logging 25, 80
exception messages 52
automatically sending to IMS, I/CF and  
OMEGACENTER Gateway for MVS 108
logging 80
specifying the receiving userid 110
exceptions  
ICFX 102, 142
EXCEPTIONUSERID  
subparameter 110
EXCEPTIONUSERID subparameter 110
for exception logging 80
exit  
automation interface  
distinguishing between messages 53
KI2AOSIM 55
providing 55
user-coded 90, 96
Extended CSA storage 26
Extended Private storage 26

F
features of I/CF 25, 70
FIND command 71
FIND facility 71
FIRST modifier 71, 72
functions 25

H
highlighting 25
changing the display 75
default values 75

I
I/CF  
changing color highlighting 75
changing how the system displays information 74
changing the date/time stamp 74
features 25, 70
how to log on 67
how to use 65
master console 59
message suppression 76
navigation tools 70
remote console 58, 63
remote transfer 72
scrolling 70
subparameters  
DLOG 62
using the FIND facility 71
using the REPEAT-FIND facility 72
viewing other consoles 73
I/CF automation interface exit  
KI2AOSIM 55
providing 55
I/CF commands  
entering 77
securing 93
what happens when issued 97
I/CF Console 52
automation strategy 52
defining 42
defining automation 54
for a DB/DC environment 24
for a DBCTL environment 24
for a DC environment 24
remote 58
security 64
requirements for automation 52
I/CF console  
defining 107
for an IMS DB/DC environment 114
for an IMS DBCTL environment 114
defining for an IMS DB/DC region 114
messages  
using the MSG command 118
using to reconnect I/CF to IMS 101
I/CF messages  
identifying in OMEGACENTER Gateway for  
MVS 53
I/CF panel  
using direct logon  
example 139
using indirect logon  
example 139
using integrated logon  
example 138
I/CF Remote Console  
defining 63
security 64
I/CF remote console interface 57
I/CF security setup 83
ICFCMD command 104
creating a command resource class name table 48
recycle a subsystem 106
switching logs 106
syntax 104
ICFCONSL command 42
for remote console interface 58
ICFCONSL command 107
ACB subparameter requirements 43
defining automation 54
for exception logging 80
for remote console 61
remote console 63
REMOTE subparameter 63
requirement for entering MVS commands 78
specifying dataset logging 79
specifying sysout logging 79
subparameters 108
ACBFCONSL and IMSID 61
REMOTEACBNNAME 61
subparameters for remote console 63
syntax 107
ICFRTRAP command 115
for message suppression 76
subparameter 115
syntax 115
ICFX exception 102, 142
ICHERCDE macro 94
IEAAPFxx
APF authorization requirements 50
IMS changing the message color 116
choosing console to monitor 136
Console Facility Panel
  example of direct logon 139
  example of indirect logon 139
  example of integrated logon 138
calendar name
  using to identify messages 53
converting I/CF commands 92
DB/DC region
defining an I/CF console 114
DBCTL region
defining an I/CF console 114
DC environment
  console support 24
entering commands 77
jobtype 53
message automation 52
system generation, changing
deleting the I/CF console 43
terminating a VTAM session 101
terminating an active session 101, 120
using the I/CF console to reconnect 101
using the MVS Master Console console to reconnect 101
using the RECYCLE command 120
IMS Console Facility Sign On Panel
example 135
IMS Console Selection Pop-up
example 136
IMS Master Console
specifying for DBCTL 109
IMS Master Terminal 24
  changing the IMS system generation 43
defining 42
defining a VTAM APPLID 43
ICFCONSL command 42
retrieving I/CF messages 52
IMS Status-Alerts Exceptions Pop-up
example 142
IMS Terminal, IMS
  defining a VTAM APPLID 43
IMSAPPL subparameter 61, 110
ICFCONSL command 61
IMSID
  using to identify messages 53
IMSID subparameter 61, 110
ICFCONSL command 61
INACTIVE status 136
indirect logon 68
example of I/CF panel 139
installing I/CF 27
integrated logon 69
interface 24, 46
  automation 52
direct VTAM
defining 44
defining the VTAM APPLID 45
exit
  automating the I/CF Console 52
distinguishing between messages 53
  KI2AOSIM 55
  providing 55
IMS Master Terminal 24
MVS Subsystem
  messages 52
remote 58
remote console 57, 61
VTAM command entry
defining 46
  modifying start up parameters 47
with OMEGACENTER Gateway for MVS 52
internal security
  NAM 84
  ratio 13
  introduction to I/CF 23
J

JES sysout logging
frequency 79
specifying 79
JOBLIB
  datasets
    APF authorization requirements 50
jobtype
  IMS 53

K
K12AOSIM
  providing an automation interface exit 55
K12ASM 90, 96
K12CMNAM
  RKANCMOD(K12START)
    setting up CUA interface security 85
K12ICFCL
  creating a command resource class name table 48
K12ICFX1 90, 96
K12INNAM 90, 96
  specifying a command resource class name table 49
K12INVPO
  modifying start up parameters 47
K12PC147 panel 138
K12START
  defining a direct VTAM interface 44
  setting up CUA interface security 84

L
LAST modifier 71, 72
libraries
  RKANCMOD(K12CMNAM)
    setting up CUA interface security 84
RKANCMOD(K12START)
  setting up CUA interface security 84
log
  dataset 25
  names
    specifying 112
  syout 25
LOG subparameter 110
LOGARCH subparameter 111
LOGCLASS subparameter 111
LOGDEST subparameter 111
LOGDESTU subparameter 111
LOGDSN
  description 112
  specifying dataset logging 79
LOGDSN subparameter 112
logging
  exception 25
  support 25
  user message 25

logging data 79
  exception messages 80
  switching logs 81
  syout 79
  switching logs 81
  user message 80
Logging Operator Assist Panel 140
logon
  I/CF
    direct 67, 139
    indirect 68, 139
    integrated 69, 138
  VTAM direct 25
logon security 83
logs
  ICFCMD command to switch 106
  switching 81, 124
  using the SWITCH command to switch 81

M
M command 70
macros
  ICHERCDE 94
  TERMINAL
    requirements for subparameter 43
maintenance assessment service
  MAS 148
manual console recovery 101
MAS
  maintenance assessment service 148
Master Console
  IMS
    defining a physical device 24
  MVS
    messages sent to 53
MASTER CONSOLE ACB
  subparameter 115
MASTER subparameter 112
Master Terminal IMS, IMS
  changing the IMS system generation 43
  ICFCONSL command 42
retrieving I/CF messages 52
MAX command 70
message
  deleting 116
  IMS
    changing the color 116
  suppression
    deleting trap 116
    example 117
features 25
how to implement 76
MESSAGE COLOR
subparameter 116
messages
date/time stamp 126
distinguishing between 53
exception 52
logging 80
specifying the receiving userid 110
I/CF 125
identifying in OMEGACENTER Gateway for MVS 53
logging 79
logging user 80
MVS 24
MVS Subsystem Interface 52
sending to OMEGACENTER Gateway for MVS example 114
transmitting to other consoles
using the MSG command 118
user logging 25
WTO 53
modifiers
FIRST 71, 72
LAST 71, 72
NEXT 71
PREV 71
modify command
issuing the ICFCMD command 104
MSG command 77, 80, 118
securing 93
syntax 118
MSM
multi-services manager 148
multiple concurrent users 24
multi-services manager MS 148
MVS
console command 104
converting I/CF commands 92
entering commands 78
Master Console
messages sent to 53
using to reconnect I/CF to IMS 101
modify command 104
changing the resource access list 94
Subsystem Interface messages 52
requirements for TERMINAL macro 43
navigating in I/CF
4-way scrolling 70
multi-directional FIND facility 71
REPEAT-FIND facility 72
network access manager 84
Network Operator Assist Panel 140
NEXT modifier 71

O
OMEGACENTER Gateway for MVS
AOI exit 52
AOSIM 52
automation interface with I/CF 52
identifying I/CF messages 53
triggering automation traps
using the AFOPER command 119
OMEGAMON II CUA interface
external security
CA-TOP SECRET 88
RACF 87
OPEN
command 77, 122
syntax 122
securing 93
subparameter 104
OPEN command 77
Operator Console panel 138
options
Automatically go to Console 141
Set controls 141

P
panels
CUA Operator Assist 140
CUA Sign On panel 134
IMS Console Facility Panel 138
IMS Console Facility Sign On Panel 135
IMS Console Selection Pop-up 136
IMS Status-Alerts Exceptions Pop-up 142
Set Controls Pop-up 141
parameters, startup
modifying for VTAM command entry interface 47
PENDING status 136
PERMIT command 94
pop-up windows
IMS Console Selection Pop-up 136
IMS Status-Alerts Exceptions Pop-up 142
PREV modifier 71
printing problems 16
Private storage 26
profile, user
exception processing 80

N
NAM security parameters
modifying to define a command resource class 48
NAME subparameter
provide 61

R

RACF
- defining resources 94
- security
  - CUA interface 87
recovery
- automatic 100
- manual 101
- RECYCLE facility 101
- RESTART facility 101
- using the I/CF console 101
- using the MVS Master Console 101
RECYCLE
- command 77, 120
  - syntax 120
- facility
  - manual console recovery 101
  - securing 93
  - subparameter 104
recycling a subsystem
- ICFCMD command 106
region
- IMS DB/DC
  - defining an I/CF console 114
- IMS DBCTL
  - defining an I/CF console 114
Regions Operator Assist Panel 140
remote
- console 57
- remote console 61
  - defining 63
  - subparameters 61
- REMOTE subparameter 112
- remote transfer 72
- REMOTEACBNAME subparameter 61, 112
- ICFCONSL command 61
REPEAT-FIND facility 72
resource access list
  - changing 94
- resource class
  - defining to CA-ACF2 95
  - defining to CA-TOP SECRET 95
  - defining to RACF 94
resources
- converting from commands 92
- defining CA-ACF2 95
- defining CA-TOP SECRET 95
- defining RACF 94
RESTART
- command 121
- syntax 77
- facility
  - manual console recovery 101
  - securing 93
  - subparameter 104
- RETRYINTERVAL subparameter 113
RKANCMD
  - (KI2CMNAM) setting up CUA interface security 84
  - (KI2START) defining a direct VTAM interface 44
  - defining the I/CF console 42
  - setting up CUA interface security 84
RKANMOD
  - APF authorization requirements 50
  - RKANMOD dataset 90, 96
  - APF authorization requirements 50
RKANPAR
  - (KI2ICFCL) creating a command resource class name table 48
  - (KI2INNAM) 90, 96
    - specifying a command resource class name table 49
  - (KI2INVPO) modifying start up parameters 47
RKANSAM
  - (KI2AOSIM) providing an automation interface exit 55
  - (KI2ASM) 90, 96
  - (KI2ICFX1) 90, 96

S

SAF
  - security
    - CUA interface 86
scrolling in I/CF 70
security
  - available types 84
  - command entry 91
    - defining a command resource class 91
    - prerequisite 91
  - for remote console 64
  - I/CF 83
  - logon 83
    - using a user-coded exit 90
session
  - active
    - terminating with IMS 120
    - using the RECYCLE command 120
Set controls option 141
Set Controls Pop-up example 141
SETROPTS command 94
severity levels
customer support 145
sign on panel
CUA 134
I/CF 135
specifying the userid 80
SPO APPLID
defining
example 46
STARTING status 136
startup parameters
modifying for VTAM command entry interface 47
STATUS field 136
STEPLIB dataset(s)
APF authorization requirements 50
storage types
CSA 26
extended CSA 26
Extended Private 26
Private 26
subparameter
AUTO 54, 108
CONTIGUOUS TEXT 116
DATEFORMAT 109
DBCTL 109
DELETE MESSAGE 116
EXCEPTIONUSERID 110
ICFTRAP command 115
IMSAAPPL 110
IMSID 110
LOG 110
LOGARCH 110
LOGCDESTU 111
LOGCLASS 111
LOGDEST 111
LOGDSN 112
MASTER
command entry 112
MASTER CONSOLE ACB 115
MESSAGE COLOR 116
REMOTE 112
REMOTEACBNAME 112
RETRYINTERVAL 113
SUBSYSCONSOLE 113
VIEW 113
VIEW MESSAGE 116
VIEWSIZE 113
subparameters
ACB 104, 108
requirements for ICFCONSL command 43
CLOSE 104
EXCEPTIONUSERID
for exception logging 80
ICFCONSL command 108
ACB 61
IMSAAPPL 61
IMSID 61
REMOTEACBNAME 61
IMSAAPPL 61
LOGDSN
specifying dataset logging 79
NAME
requirements for TERMINAL macro 43
OPEN 104
RECYCLE 104
RESTART 104
SUBSYSCONSOLE
requirement for entering MVS commands 78
SWITCH 104
SUBSYSCONSOLE subparameter 113
requirement for entering MVS commands 78
subsystem
ICFCMD command to recycle 106
Subsystem Interface, MVS
messages 52
suppressing messages 25
SWITCH
command 77, 81
syntax 124
securing 93
subparameter 104
switching logs 81, 124
using the ICFCMD command 106
syntax
AFOPER command 119
CLOSE command 123
ICFCMD command 104
ICFCONSL command 107
ICFTRAP command 115
MSG command 118
OPEN command 122
RECYCLE command 120
RESTART command 121
SWITCH command 124
SYS1.PARMLIB(IEAAPFxx)
APF authorization requirements 50
sysout logging 25, 79
frequency 79
specifying 79
switching logs 81
system generation
remote console interface 59
system generation, changing
defining the I/CF console
example 43
table
class descriptor
  ICHERCDE  94
command resource class name  48
creating a command resource class name table  48
specifying a command resource class name table  49
telephone support
customer support  144
TERMINAL macro
  requirements for NAME subparameter  43
terminal, master
  changing the IMS system generation
    example  43
defining  42
defining a VTAM APPLID  43
ICFCONSL command  42
terminating a session
  using the RECYCLE command  120
time stamp
  changing the display  74
console log  25
  formats  74
  messages  126
TKANMOD
  APF authorization requirements  50
TKANMODL
  APF authorization requirements  50
TKANSAM(KI2AOSIM)
  providing an automation interface exit  55
Transactions Operator Assist Panel  140
transfer, remote  72
transplexing
  availability  72
traps
  message suppression
    deleting  116
    example  117
OMEGACENTER Gateway for MVS automation
  using the AFOPER command  119
troubleshooting  125

user message
logging  25, 80
user profile
  exception processing  80
user-coded exit
  security  90
specifying  96
userid
  specifying  111
specifying for exception logging  80
users, multiple concurrent
IMSMaster Console
  defining physical device  24
variables, global
  AOCONNM  53
  AOJOBNM  53
  AOJTYPE  53
verifying commands  78
VIEW MESSAGE
  subparameter  116
VIEW subparameter  113
viewing other consoles  73
VIEWSIZE subparameter  113
VTAM
  closing the ACB  120
  connection
    establish  78
    terminate  78
  converting I/CF commands  92
  defining direct interface  44
  direct logon interface  25
  entering commands  77
  terminating a session with IMS  121
  using the CLOSE command  123
  using the OPEN command  122
  using the RECYCLE command  120
VTAM ACB name
  closing  101
  defining an SPO APPLID  46
  defining the I/CF console
    example  43
    specifying  108, 115
  terminating IMS session  101
  using to identify messages  53
VTAM APPL  60
VTAM APPLID
  defining a direct VTAM interface
    example  44
  defining an SPO APPLID  46
  defining the I/CF console
    example  43
VTAM applid
  major node  60
  remote console  62
VTAM command entry
  defining an SPO APPLID  46
VTAM command entry interface
  defining  46
  defining an SPO APPLID  46
  modifying start up parameters  47
VTAM major node
   ACBNAME subparameter  60
   master console  60
   remote console  62
VTAM APPLID  110

W

WTO messages  53