

# **FUJITSU Software**

## **Interstage Information Integrator**

### **V11.0.0**

A decorative horizontal band with a red-to-dark-red gradient, featuring abstract, glowing white and red lines that swirl and intersect, creating a sense of motion and technology.

## **Command Reference**

Windows/Solaris/Linux

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# Preface

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This document deals with the following products:

- Interstage Information Integrator Standard Edition V11.0.0

Additionally, the optional products listed below are also included.

- Interstage Information Integrator Agent V11.0.0

## Purpose of This Document

This document explains the commands provided by Interstage Information Integrator (hereafter abbreviated as "Information Integrator").

## Intended Readers

This document is intended for the following readers:

- Users who use the Information Integrator commands

The following knowledge is required to read this document:

- General knowledge about operating systems
- General knowledge about the internet
- General knowledge about database functions and how to use them
- General knowledge about public clouds
- General knowledge about forms

## Structure of This Document

### Chapter 1: Command Overview

This chapter presents an overview of the commands provided in this product.

### Chapter 2: Operation Commands

This chapter explains the syntax of operation commands.

### Chapter 3: Utility Commands

This chapter explains the syntax of utility commands.

### Appendix A: Display Formats and Output Contents

This appendix explains the format and output content that is displayed when operation commands are executed.

### Appendix B: Supplementary Information on Character Code Conversion

This appendix provides supplementary information about character code conversion.

### Appendix C: Supplementary Information on Executing Remote System Jobs

This appendix provides supplementary information about executing remote system jobs.

## Positioning of This Document

### FUJITSU Software Interstage Information Integrator Structure and Overview of Manuals

This document lists the manual structure for Information Integrator, as well as which manuals should be referred to for different user purposes and objectives.

### FUJITSU Software Interstage Information Integrator System Design Guide

This document presents an overview of Information Integrator functions, as well as information about system configurations and design issues.

### FUJITSU Software Interstage Information Integrator Setup Guide

This document explains how to create an environment after Information Integrator has been installed.

FUJITSU Software Interstage Information Integrator Operation Guide

This document explains how to operate Information Integrator.

FUJITSU Software Interstage Information Integrator Command Reference [this document]

This document explains the commands provided by Information Integrator.

FUJITSU Software Interstage Information Integrator Transfer Accelerator Setup Guide

This document explains the outline, the environmental construction method, and operation procedure of III Transfer Accelerator.

FUJITSU Software Interstage Information Integrator Message Guide

This document lists the messages output by Information Integrator.

FUJITSU Software Interstage Information Integrator Glossary

This document is a glossary of the terms used in the Information Integrator manuals.

FUJITSU Software Symfoware Server Message Guide

This guide explains lists the messages output by Symfoware Server.

**Conventions Used in This Document**

Manual titles

The manual titles listed in this document are abbreviated as below.

Information Integrator manual

Abbreviation	Official title
Structure and Overview of Manuals	FUJITSU Software Interstage Information Integrator Structure and Overview of Manuals
System Design Guide	FUJITSU Software Interstage Information Integrator System Design Guide
Setup Guide	FUJITSU Software Interstage Information Integrator Setup Guide
Operation Guide	FUJITSU Software Interstage Information Integrator Operation Guide
Command Reference (This document)	FUJITSU Software Interstage Information Integrator Command Reference
Transfer Accelerator Setup Guide	FUJITSU Software Interstage Information Integrator Transfer Accelerator Setup Guide
Message Guide	FUJITSU Software Interstage Information Integrator Message Guide
Glossary	FUJITSU Software Interstage Information Integrator Glossary

Related manual

Abbreviation	Official title
Symfoware Message Guide	FUJITSU Software Symfoware Server Message Guide

Abbreviations

The product names listed in this document are abbreviated as below.

Note that system names and product names in this document are not followed by trademark symbols such as ¢ or ¢.

Abbreviation	Official title
Windows	Microsoft® Windows Server® 2012 Foundation
	Microsoft® Windows Server® 2012 Essentials
	Microsoft® Windows Server® 2012 Standard
	Microsoft® Windows Server® 2012 Datacenter

Abbreviation	Official title
	Microsoft Windows Server 2008 Foundation
	Microsoft Windows Server 2008 Standard
	Microsoft Windows Server 2008 Enterprise
	Microsoft Windows Server 2008 Datacenter
	Microsoft Windows Server 2008 Standard without Hyper-V
	Microsoft Windows Server 2008 Enterprise without Hyper-V
	Microsoft Windows Server 2008 Datacenter without Hyper-V
	Microsoft Windows Server 2008 R2 Foundation
	Microsoft Windows Server 2008 R2 Standard
	Microsoft Windows Server 2008 R2 Enterprise
	Microsoft Windows Server 2008 R2 Datacenter
	Microsoft Windows Server 2003, Standard Edition
	Microsoft Windows Server 2003, Enterprise Edition
	Microsoft Windows Server 2003, Datacenter Edition
	Microsoft Windows Server 2003, Standard x64 Edition
	Microsoft Windows Server 2003, Enterprise x64 Edition
	Microsoft Windows Server 2003, Datacenter x64 Edition
	Microsoft Windows Server 2003 R2, Standard Edition
	Microsoft Windows Server 2003 R2, Enterprise Edition
	Microsoft Windows Server 2003 R2, Datacenter Edition
	Microsoft Windows Server 2003 R2, Standard x64 Edition
	Microsoft Windows Server 2003 R2, Enterprise x64 Edition
	Microsoft Windows Server 2003 R2, Datacenter x64 Edition
	Windows®8
	Windows®8 Pro
	Windows®8 Enterprise
	Windows®7 Home Premium
	Windows®7 Professional
	Windows®7 Enterprise
	Windows®7 Ultimate
	Windows® Vista Home Basic
	Windows® Vista Home Premium
	Windows® Vista Business
	Windows® Vista Ultimate
	Windows® Vista Enterprise
	Windows® XP Home Edition
	Windows® XP Professional
	Windows® XP
Windows XP	Windows® XP Home Edition

Abbreviation	Official title
	Windows® XP Professional
Windows Vista	Windows® Vista Home Basic
	Windows® Vista Home Premium
	Windows® Vista Business
	Windows® Vista Ultimate
	Windows® Vista Enterprise
Windows 7	Windows®7 Home Premium
	Windows®7 Professional
	Windows®7 Enterprise
	Windows®7 Ultimate
Windows 8	Windows®8
	Windows®8 Pro
	Windows®8 Enterprise
Windows Server 2003	Microsoft Windows Server 2003, Standard Edition
	Microsoft Windows Server 2003, Enterprise Edition
	Microsoft Windows Server 2003, Datacenter Edition
	Microsoft Windows Server 2003, Standard x64 Edition
	Microsoft Windows Server 2003, Enterprise x64 Edition
	Microsoft Windows Server 2003, Datacenter x64 Edition
	Microsoft Windows Server 2003 R2, Standard Edition
	Microsoft Windows Server 2003 R2, Enterprise Edition
	Microsoft Windows Server 2003 R2, Datacenter Edition
	Microsoft Windows Server 2003 R2, Standard x64 Edition
	Microsoft Windows Server 2003 R2, Enterprise x64 Edition
	Microsoft Windows Server 2003 R2, Datacenter x64 Edition
Windows Server 2008	Microsoft Windows Server 2008 Foundation
	Microsoft Windows Server 2008 Standard
	Microsoft Windows Server 2008 Enterprise
	Microsoft Windows Server 2008 Datacenter
	Microsoft Windows Server 2008 Standard without Hyper-V
	Microsoft Windows Server 2008 Enterprise without Hyper-V
	Microsoft Windows Server 2008 Datacenter without Hyper-V
	Microsoft Windows Server 2008 R2 Foundation
	Microsoft Windows Server 2008 R2 Standard
	Microsoft Windows Server 2008 R2 Enterprise
	Microsoft Windows Server 2008 R2 Datacenter
Windows Server 2012	Microsoft Windows Server 2012 Foundation
	Microsoft Windows Server 2012 Essentials
	Microsoft Windows Server 2012 Standard

Abbreviation	Official title
	Microsoft Windows Server 2012 Datacenter
Failover Clusters	Windows Server 2008 Failover Clusters
	Microsoft Cluster Service
Excel	Microsoft® Excel
Word	Microsoft® Word
SQL Server	Microsoft® SQL Server™
Oracle	Oracle® Enterprise Edition
	Oracle® Database Standard Edition
	Oracle® Database Standard Edition One
	Oracle® Database Enterprise Edition
Solaris	Oracle Solaris
Linux	Red Hat Enterprise Linux
UNIX	Solaris
	Linux
XL-DATA/MV	XL DATA MOVER
	Softek XL DATA MOVER
	ETERNUS SF XL-DATA/MV
	OSIV MSP XL-DATA/MV
Interstage Application Server	Interstage® Application Server Standard-J Edition
	Interstage® Application Server Enterprise Edition
Shunsaku	Interstage® Shunsaku Data Manager Enterprise Edition
Data Effector	Interstage® Data Effector Standard Edition
Charset Manager	Interstage® Charset Manager
Linkexpress	Linkexpress
	Linkexpress Advanced Edition
	Linkexpress Standard Edition
	Linkexpress Enterprise Edition
Symfoware Server	Symfoware® Server Standard Edition
	Symfoware® Server Enterprise Edition
	Symfoware® Server Enterprise Extended Edition
DB2	IBM® DB2 9.7 for Linux, UNIX and Windows, Express Edition
	IBM® DB2 9.7 for Linux, UNIX and Windows, Workgroup Server Edition
	IBM® DB2 9.7 for Linux, UNIX and Windows, Enterprise Server Edition

## Note

In this manual, please read **Start** menu of Windows in a different way as **Start Window** or **All Apps Window** when you use Windows 8 or Windows Server 2012.

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# Contents

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Chapter 1 Command Overview.....	1
1.1 List of Commands.....	1
1.2 Description Format for Each Command.....	3
1.3 Notes on Using Commands.....	4
Chapter 2 Operation Commands.....	5
2.1 ificntlsch (Pausing and Restarting Scheduled Execution Command).....	5
2.2 ifidefbk (Backing Up Definition Resources Command).....	6
2.3 ifidefrt (Restoring Definition Resources Command).....	7
2.4 ifidisp (Status Display Command).....	7
2.5 ifiexepc (Process Flow Execution Command).....	11
2.6 ififcncl (Function Execution Cancellation Command).....	11
2.7 ififrst (Status Reset Command).....	12
2.8 ififrst (Function Restart Command).....	13
2.9 ifimks (Script Creation Command).....	14
2.10 ifirdelt (Data Deletion Command).....	14
2.11 ifirexct (Data Extraction Command).....	15
2.12 ifirstor (Data Store Command).....	16
2.13 ifistp (Information Integrator Stop Command).....	17
2.14 ifistr (Information Integrator Start Command).....	18
2.15 ifiuserctl (User Privilege Manipulation Command).....	19
2.16 ifisyssetup (Easy Setup for Information Integrator).....	20
2.17 ifisysunsetup (Environment Deletion for Information Integrator).....	24
2.18 ifiguisetup_j2ee (Operation Management Client (J2EE) Environment).....	25
2.19 ifiguisetup_j2ee (Operation Management Client (J2EE) Environment).....	26
2.20 ifiguisetup_javaee (Operation Management Client (JavaEE) Environment).....	26
2.21 ifiguisetup_javaee (Deletion of Operations Management Client (JavaEE) Environment).....	27
Chapter 3 Utility Commands.....	28
3.1 ificmcut (Simultaneously Importing Character Code Conversion Tables Command).....	28
3.2 ificnvdat (Converting Text Character Codes Command).....	29
3.3 ifiexejob (Remote System Job Execution Command).....	31
3.4 ifigenexec.cmd (Operating Simple Definition Command).....	34
3.5 ifirspjob (Job Result Notification Command).....	35
3.6 ifisetssl (SSL Communications Parameters Setting Command).....	36
3.7 Ifiroidx (Management Area Defragmentation Command).....	38
Appendix A Display Formats and Output Contents.....	39
A.1 Display Format for the ifidisp Command.....	39
A.2 CSV Format Output for the ifidisp Command.....	45
A.3 Display Format for the ificntlsch Command.....	45
A.4 Display Format for the ifiuserctl Command.....	46
Appendix B Supplementary Information on Character Code Conversion.....	48
B.1 Operating Environment Definitions for Character Code Conversion.....	48
B.1.1 Operating Environment Definitions for Character Code Conversion.....	48
B.1.2 General Format for the Operating Environment Definitions for Character Code Conversion.....	48
B.1.3 Keywords for the Operating Environment Definitions for Character Code Conversion.....	49
B.1.3.1 MESSAGE_LEVEL Keyword.....	49
B.1.3.2 CHARACTER_CONVERT_ERROR Keyword.....	50
B.1.3.3 ALTERNATE_CHARACTER1 Keyword.....	51
B.1.3.4 UNICODE_ALTERNATE_CHARACTER1 Keyword.....	51
B.2 Specifying Encoding Combinations and Conversion Behavior.....	52
Appendix C Supplementary Information on Executing Remote System Jobs.....	54
C.1 Extension Operand Specification File.....	54



C.1.1 Extension Operands for the Execute Remote Job Command.....54  
C.1.2 jobparam Operand.....54  
C.1.3 jobrsp Operand.....55  
C.1.4 jobtime Operand.....55  
C.1.5 prtsecur Operand.....55  
C.1.6 retry Operand.....56

# Chapter 1 Command Overview

## 1.1 List of Commands

This section explains the Information Integrator Server commands for each feature.

The Information Integrator Server commands are classified into the following types:

- Operation commands
  - [Information Integrator setup and environment deletion operations](#)
  - [Operations for starting and stopping Information Integrator](#)
  - [Recovery operations](#)
  - [Process Flow operations](#)
  - [Operational monitoring operations](#)
  - [DataBox operations](#)
  - [Maintenance operations](#)
  - [Operations for outputting the script files for creating a management area](#)
  - [User management operations](#)
- Utility commands
  - [Utilities](#)

### Information Integrator setup and environment deletion operations

The following table lists the commands that can be used for setup and environment deletion operations:

Table 1.1 List of commands used with setup and environment deletion operations

Command name	Outline of functions
<a href="#">ifsyssetup</a>	Performs easy setup for Information Integrator.
<a href="#">ifsysunsetup</a>	Deletes Information Integrator environment.
<a href="#">ifguisetup_j2ee</a>	Creates Operation Management Client (J2EE) environment.
<a href="#">ifguiunsetup_j2ee</a>	Deletes Operation Management Client (J2EE) environment.
<a href="#">ifguisetup_javaee</a>	Creates Operation Management Client (JavaEE) environment.
<a href="#">ifguiunsetup_javaee</a>	Deletes Operation Management Client (JavaEE) environment.

### Operations for starting and stopping Information Integrator

The following table lists the commands that can be used to start and stop Information Integrator:

Table 1.2 List of commands used with start and stop operations

Command name	Functional outline
<a href="#">ifistr</a>	Starts Information Integrator.
<a href="#">ifistp</a>	Stops Information Integrator.

### Recovery operations

The following table lists the commands that can be used with recovery operations when errors occur with Process Flow:

Table 1.3 List of commands used with recovery operations

Command name	Functional outline
<a href="#">ififrstr</a>	Restarts process functions that are waiting to restart.
<a href="#">ififcncl</a>	Cancels process functions with the status WAIT (waiting to start), EXEC (executing), or TWAT (interrupted).  Also, if the function sends or receives a file, any undelivered data held in the DataBox for delivery can be deleted, depending on the value specified for the "-dl" operand.
<a href="#">ififrset</a>	Changes the status of DataBoxes from "delivered" or "extracted" to "undelivered".

### Process Flow operations

The following table lists the commands that can be used with Process Flow operations:

Table 1.4 List of commands used with Process Flow operations

Command name	Functional outline
<a href="#">ifexeprc</a>	Executes Process Flow.

### Operational monitoring operations

The following table lists the commands that can be used with operational monitoring operations:

Table 1.5 List of commands used with operational monitoring operations

Command name	Functional outline
<a href="#">ifidisp</a>	Displays the status of Process Flow, functions and DataBoxes in the console, or outputs this status information to a file in CSV format.
<a href="#">ificntlsch</a>	Instructs schedule execution to pause or restart. This command also displays the schedule execution status of processes in the console.

### DataBox operations

The following table lists the commands that can be used with DataBox operations:

Table 1.6 List of commands used with DataBox operations

Command name	Functional outline
<a href="#">ifirstor</a>	Stores data in a DataBox. This command stores delivered data and extracted data.
<a href="#">ifirexct</a>	Extracts data from a DataBox. This command extracts collected data and stored data.
<a href="#">ifirdelt</a>	Deletes data from a DataBox. This command deletes sent/received data and stored/extracted data.

### Maintenance operations

The following table lists the commands that can be used with maintenance operations:

Table 1.7 List of commands used with maintenance operations

Command name	Functional outline
<a href="#">ifidefbk</a>	Backs up the definition resources for Information Integrator.
<a href="#">ifidefrt</a>	Restores the definition resources for Information Integrator.

## Operations for outputting the script files for creating a management area

The following table lists the commands that can be used with operations that output the script files for creating a management area:

Table 1.8 List of commands that can be used with operations that output the script files for creating a management area

Command name	Functional outline
<a href="#">ifimks</a>	Creates the script files for estimating the size of the management area and for creating the management area.

## User management operations

The following table lists the commands that can be used with user management operations:

Table 1.9 List of commands used with user management operations

Command name	Functional outline
<a href="#">ifuserctl</a>	Adds and removes users that belong to process groups, and looks up the status of the existing settings.

## Utilities

The following table lists the commands that can be used with utilities:

Table 1.10 List of commands used with utilities

Command name	Functional outline
<a href="#">ifexejob</a>	Starts the jobs on the remote system. * III Agent does not support this feature.
<a href="#">ifirspjob</a>	Notifies Information Integrator of job completion. * III Agent does not support this feature.
<a href="#">ificnvdat</a>	Converts the entire content of a file to another character encoding.
<a href="#">ificmcut</a>	Extracts and recreates all the character code conversion tables for Charset Manager at the same time.
<a href="#">ifigenexec.cmd</a>	Provides various definitions for the III Agent operation.
<a href="#">ifisetsssl</a>	Sets the SSL communication parameters required by Information Integrator whenever there are SSL communications.
<a href="#">ifiroidx</a>	Defragments the Information Integrator server management area.

## 1.2 Description Format for Each Command

---

### Description

This section presents an overview of the command.

### Cautions

This section explains important points to note when using the command.

### Synopsis

This section explains the entry format for the command.

|: Separates options.

\_: Indicates the default value for an option.

{ }: Used to enclose all of the options for an operand.

[ ]: Indicates that the parameter is optional.

### Operands

This section explains each operand.

### Return values

This section explains the return values for the command.

## 1.3 Notes on Using Commands

---

### Specifying files

Use the following format to specify a file name as an operand for a command unless otherwise instructed:

Type	Format
Filename and path	Use full path
Length	Up to 255 characters
Characters	Alphanumeric, space, and .,~, \(\)

# Chapter 2 Operation Commands

## 2.1 ificntlsch (Pausing and Restarting Scheduled Execution Command)

### Description

This command gives the following instructions to processes for which a schedule has been defined.

- Pausing scheduled execution
- Restarting scheduled execution that has been paused

This command also displays the scheduled execution status of processes ("paused" or not).

Refer to "[A.3 Display Format for the ificntlsch Command](#)" for information on the display format.

### Cautions

- Execute this command as a user with system administrator permissions.
- For Windows Server 2008, this command must be executed after promoting the end user to administrator permissions. Select **Run as administrator** when opening the command prompt. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- This command is effective for processes where a schedule (daily, weekly, monthly, interval repeat, and event monitoring) has been specified in the process definition. This command will return an error if it is executed on a process for which a schedule has not been specified in the process definition.
- Processes for which a scheduled pause instruction has been given will not be subject to scheduled execution until a scheduled restart instruction is given using either an operation command or the Operation Management Client. These processes are completely unaffected by starting and stopping Information Integrator or by the settings in the operating environment file (sch\_workingtime).
- Users can use the Operation Management Client or the ifiexecrc command to perform "Execute process" operations on processes for which a scheduled pause instruction has been given.

### Synopsis

```
ificntlsch  -i processID
             -m {h | r | g}
             [-b {n | w | e}]
             [-d]
```

### Operands

**-i processID**

Specify either the ID for the process to be executed or "\*". (Only Information Integrator privileged users can specify "\*".) If "\*" is specified, the command will be executed on all of the process IDs for which a schedule has been defined.

Specify the process ID using up to 31 alphanumeric characters.

For UNIX only, enclose the \* in double quotes ("").

**-m {h | r | g}**

Controls whether to pause or restart scheduled execution.

**h:** Pauses the specified schedule by temporarily excluding the process from scheduled execution. This option cannot be executed on processes whose schedule status is "paused".

**r:** Restarts a process whose schedule status is "paused" and makes the process subject to scheduled execution. This option cannot be executed on processes whose schedule status is "executable".

**g:** Displays the schedule status of the specified process on the standard output.

-b {n | w | e}

If either "h" or "r" has been specified for the "-m" operand, this operand specifies the behavior for inapplicable processes (processes where the control mode and the schedule status do not match). If this operand is omitted, "e" will be specified. This operand cannot be specified if "g" has been specified for the "-m" operand.

n: Ignores inapplicable process IDs and continues processing.

w: Outputs a warning message and continues processing if there is an inapplicable process ID.

e: Interrupts processing and terminates the command abnormally if there is an inapplicable process ID. If the command is operating on multiple process IDs, the operations performed up until the abnormality is detected will be valid.

-d

When either "h" or "r" has been specified for the "-m" operand, this operand displays the process IDs for which the operation has completed normally one line at a time in the standard output. (Only the process ID is displayed, with one process ID per line). This operand cannot be specified if "g" has been specified for the "-m" operand.

## Return Values

0: Normal termination

4: Warning

8: Abnormal termination

## 2.2 ifidefbk (Backing Up Definition Resources Command)

---

### Description

This command backs up the definition resources for Information Integrator.

This command backs up the latest definition resources for Information Integrator when the command is executed.

This command is used to back up the latest definitions and to migrate definitions.

### Cautions

- For Windows, execute this command using system administrator permissions.
- For UNIX, execute this command as a superuser.
- For Windows Server 2008, this command must be executed after promoting the end user to administrator permissions. Select **Run as administrator** when opening the command prompt. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- Do not back up definitions while they are being obtained or edited.
- This command can be executed even when Information Integrator is stopped.

### Synopsis

```
ifidefbk -d backupDirectory
```

### Operands

-d *backupDirectory*

Specify the name of the backup directory for Information Integrator definition resources. Definition resource files will be backed up to this directory. Create this directory beforehand.

Also, if the name of the backup directory is specified using a relative path, the directory where this command was executed will be positioned as the current directory.

### Return values

0: Normal termination

8: Abnormal termination

## 2.3 ifidefrt (Restoring Definition Resources Command)

---

### Description

This command restores the definition resources for Information Integrator.

This command replaces definitions with definition resources that have been backed up by the ifidefbk command.

This command is used to restore definitions to the state they were in when they were backed up, as well as to migrate definitions.

### Cautions

- For Windows, execute this command using system administrator permissions.
- For UNIX, execute this command as a superuser.
- For Windows Server 2008, this command must be executed after promoting the end user to administrator permissions. Select **Run as administrator** when opening the command prompt. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- Stop Information Integrator before executing this command.
- The Information Integrator definitions that were made before this command is executed will be overwritten and thus disabled.
- If definitions were backed up while they were still being edited, it will not be possible to restore the definitions to the updated state by restoring the definition resources.
- To use this command to migrate resources, the content of the definitions must be modified to match the new environment after this command has been executed.

### Synopsis

```
ifidefrt -d backupDirectory
```

### Operands

*-d backupDirectory*

Specify the name of the backup directory for Information Integrator definition resources. Specify the name of the backup directory that was specified with the ifidefbk command.

Also, if the name of the backup directory is specified using a relative path, the directory where this command was executed will be positioned as the current directory.

### Return values

- 0: Normal termination
- 8: Abnormal termination

## 2.4 ifidisp (Status Display Command)

---

### Description

This command displays the status of Process Flows, functions and DataBoxes in the console, or outputs this status information to a file in CSV format.

Refer to "[A.1 Display Format for the ifidisp Command](#)" for information on the display format.

Refer to "[A.2 CSV Format Output for the ifidisp Command](#)" for information on the CSV format.

### Cautions

- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Information Integrator must be running when using this command.



## Synopsis

To display the status of a Process Flow

```
ifidisp      -p
             {
             [-rs [YYYYMMDD]hhmm-[YYYYMMDD]hhmm]
             [-re [YYYYMMDD]hhmm-[YYYYMMDD]hhmm]
             [-st processFlowStatus]
             [-ps serviceNumber]
             [-pi processID]
             | -a
             }
             [-of resultOutputFilename]
```

To display the status of a function

```
ifidisp      -f
             {
             [-ss [YYYYMMDD]hhmm-[YYYYMMDD]hhmm]
             [-st functionStatus]
             [-sn processingNumber]
             [-fi functionID]
             [-ps serviceNumber]
             [-pi processID]
             [-ds remoteSystemID]
             [-da dataBox]
             | -a
             }
             [-of resultOutputFilename]
```

To display the status of DataBox storage

```
ifidisp      -d
             [-da dataBox]
             [-st storageStatus]
             [-ps serviceNumber]
             [-of resultOutputFilename]
             [-dn dataName]
```

## Operands

-p

To display the status of a Process Flow, specify this operand in combination with the following search keys:

If multiple search keys are specified, only information that meets all the search conditions will be displayed.

If neither '-rs', '-re', nor '-a' operand is specified, the current date with the time 0000-2359 is used as the search key.

**-rs [YYYYMMDD]hhmm-[YYYYMMDD]hhmm**

Uses the specified date and time (Year, Month, Day, Hour, and Minute) as the search key against the Process Flow execution date and time.

If the YYYYMMDD part is omitted, the time range for the current day will be used as a search key.

Those services that have ever started a Process Flow within the specified date/time range will be displayed.

**-re [YYYYMMDD]hhmm-[YYYYMMDD]hhmm**

Uses the specified date and time (Year, Month, Day, Hour, and Minute) as the search key against the Process Flow completion date and time.

If the YYYYMMDD part is omitted, the time range for the current day will be used as a search key.

The services, whose process completion date and time are within the specified range, are displayed.

**-st processFlowStatus**

Uses the specified Process Flow status as a search key.

The following table shows the states that can be specified and their descriptions:

**Table 2.1 States that can be specified and their descriptions**

State	Description	Remarks
WAIT	Waiting to start	The Process Flow is waiting to be started.
EXEC	Executing	-
CMPN	Normal completion	-
CMPE	Abnormal termination	The Process Flow has been canceled or has failed.

**-ps serviceNumber**

Uses the specified Process Flow service number (up to 32 alphanumeric characters that Information Integrator assigns when it executes the Process Flow) as a search key.

**-pi processID**

Uses the specified process ID as a search key.

**-a**

Outputs all information.

**-of resultOutputFilename**

Specify the name of the result output file using the absolute path.

**-f**

To display the status of a function, specify this operand in combination with the following search keys.

If multiple search keys are specified, only information that meets all the search conditions will be displayed.

If both '-ss' and '-a' operand are not specified, the current date with the time 0000-2359 is used as the search key.

**-ss [YYYYMMDD]hhmm-[YYYYMMDD]hhmm**

Uses the specified date/time range (year, month, day, hour and minute) as a search key.

If the YYYYMMDD part is omitted, the time range for the current day will be used as a search key.

Those services that started a function within the specified date/time range will be displayed.

**-st functionStatus**

Uses the specified function status as a search key.

The following table shows the states that can be specified and their descriptions:

**Table 2.2 States that can be specified and their descriptions**

State	Description	Remarks
WAIT	Waiting to start	The function is waiting to be started.
EXEC	Executing	-
CMPN	Normal completion	-
TRTY	Retrying	For error retries
TWAT	Suspended	The function is waiting to be restarted.
CMPE	Abnormal termination	The function has been canceled or has failed.

**-sn processingNumber**

Uses the specified processing number (up to nine digits that Information Integrator assigns when the function is processed) as a search key.

**-fi *functionID***

Uses the function ID (defined in III Studio or in the design sheet) as the search key. Specify a function ID on this operand. The function ID can be confirmed using ifidisp (display status) command with '-p' option. Additional information may be attached with the function ID. For example 'DbStorFunc.DB.1' may be displayed, by attaching additional information'.DB.1' after the function ID 'DbStorFunc'. Remove all additional information following the period when specifying a function ID on this operand, if any additional information is attached.

Refer to the "[A.1 Display Format for the ifidisp Command](#)" for details on additional information attached.

**-ps *serviceNumber***

Uses the specified Process Flow service number (up to 32 alphanumeric characters that Information Integrator assigns when it executes the Process Flow) as a search key.

**-pi *processID***

Uses the specified process ID as a search key.

**-ds *remoteSystemID***

Uses the specified remote system name as a search key.

**-da *dataBox***

Uses the specified DataBox as a search key.

**-a**

Outputs all information.

**-of *resultOutputFilename***

Specify the name of the result output file, using the absolute path.

**-d**

To display the storage status of a DataBox, specify this operand in combination with the following search keys. Specify one or more operands from '-da', '-st', and '-ps'.

**-da *dataBox***

Uses the specified DataBox as a search key.

**-st *storageStatus***

Uses the specified storage status as a search key.

The following table shows the storage statuses that can be specified and their descriptions:

**Table 2.3 Statuses that can be specified and their descriptions**

Storage status	Description	Remarks
STOR	Already stored	Data has been stored.
EXCT	Already extracted	Data has been extracted.
STRI	Being stored	Data is being stored.
EXCI	Being extracted	Data is being extracted.

**-ps *serviceNumber***

Uses the specified Process Flow service number (up to 32 alphanumeric characters that is assigned when the Process Flow is executed) as a search key.

**-of *resultOutputFilename***

Specify the name of the result output file, using the absolute path.

**-dn *dataName***

Uses a name for identifying data (a name with up to 64 alphanumeric characters that is specified when data is stored in DataBox) as a search key.

## Return values

- 0: Normal termination
- 4: Warning
- 8: Abnormal termination

## 2.5 ifiexepc (Process Flow Execution Command)

---

### Description

This command executes Process Flow.  
This command returns after the Process Flow completes.

### Cautions

- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Information Integrator must be running when using this command.
- Functions that wait for collection monitoring cannot be executed with this command. Process Flow that includes a function that waits for collection monitoring will be executed as a function following the function that waits for collection monitoring. However, if the status of the function that waits for collection monitoring is not "completed normally", this command will return an error because the function that follows cannot be executed.

### Synopsis

```
ifiexepc      -i processID
```

### Operands

*-i processID*

Specify the ID of the process to be executed that is defined by III studio or the design sheet. Specify the process ID using up to 31 alphanumeric characters.

### Return values

- 0: Normal termination
- 8: Abnormal termination

## 2.6 ififcncl (Function Execution Cancellation Command)

---

### Description

This command cancels process functions with the status WAIT (waiting to start), EXEC (executing), or TWAT (Suspended).  
Also, if the function sends or receives a file, any undelivered data held in the DataBox for delivery can be deleted, depending on the value specified for the "-dl" operand.

### Cautions

- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Information Integrator must be running when using this command.

### Synopsis

```
ififcncl      -sn processingNumber  
               [-dl {YES | NO} ]
```

[ -w {YES | NO} ]

## Operands

-sn *processingNumber*

Specify the processing number for the function. This operand cannot be omitted.

Specify a number between 1 and 999999999.

-dl {YES | NO}

When canceling a delivery function, specify whether or not to delete the undelivered data. If this operand is omitted, "NO" will be specified.

YES: Deletes the target files.

NO: Does not delete the target files.



If the function outputs a file and the communications protocol is HULFT, all services that are currently actively delivering data with the same path will be canceled.

-w {YES | NO}

Specify the trigger that causes the command to return. If this operand is omitted, "NO" will be specified.

YES: Causes the command to return after waiting for the function cancellation to complete.

NO: Causes the command to return as soon as it has executed.

## Return values

0: Normal termination

8: Abnormal termination

## 2.7 ififrst (Status Reset Command)

### Description

The status of the DataBox is changed from "delivered" to "stored" (enables further data delivery).

Or, the status of the DataBox is changed from "extracted" to "stored"(enables further data extraction).

### Cautions

- There must be a DataBox for the processing number in question. Moreover, if batch delivery has been performed for each DataBox, there must be at least one DataBox for the processing number in question.
- To change the delivered data status to "stored", specify the processing number.
- To change the data status from "extracted" to "stored", specify the data number. Note that this command can change the DataBox status only when the ifirext command is used to extract data.
- It is not possible to specify both the processing number and the data number at the same time.
- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Information Integrator must be running when using this command.

### Synopsis

To change delivered data to "undelivered"

```
ififrst      -sn processingNumber
```

To change extracted data to "unextracted"

```
ififrset      -tf dataNumber
```

### Operands

**-sn *processingNumber***

For delivered data, specify the processing number that was notified when the delivery request was made. This operand cannot be specified together with the "-tf" operand.

Specify a number between 1 and 999999999.

**-tf *dataNumber***

To reset the status of extracted data to "unextracted", specify the data number for the target data. This operand cannot be specified together with the "-sn" operand.

Specify a number between 1 and 999999999.

### Return values

0: Normal termination

8: Abnormal termination

## 2.8 ififrstr (Function Restart Command)

---

### Description

This command restarts functions with "Suspended" status.

### Cautions

- This command cannot restart functions with a status other than "processing interrupted".  
When it comes to recovering Process Flow for each function, there are two recovery procedures: recovering the function with this command and recovery by canceling the function and then executing the function again. The difference between the two procedures is that recovering the function with this command only applies to data that is waiting to restart.
- When resuming the distribution function that was sending batch data files, only data that was stored at the time of the interruption will be subject to the execution of the transfer. Accordingly, to include the transmission of new data (data that has been stored during the period from when the function was interrupted until the function was restarted), perform either of the following methods:
  - Cancel the function that was interrupted (by specifying "NO" for the "-dl" operand of the ififcnl command) and then execute the function again.
  - Restart the function and then execute the function again.
- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Information Integrator must be running when using this command.

### Synopsis

```
ififrstr      -sn processingNumber  
              [-w {YES | NO}]
```

### Operands

**-sn *processingNumber***

Specify the processing number for the function. This operand cannot be omitted.

Specify a number between 1 and 999999999.

-w {YES | NO}

Specify the trigger that causes the command to return. If this operand is omitted, "NO" will be specified.

YES: Causes the command to return after waiting for transmission to complete.

NO: Causes the command to return as soon as it has executed.

### Return values

0: Normal termination

8: Abnormal termination

## 2.9 ifimks (Script Creation Command)

---

### Description

This command creates the scripts for estimating the size of the management area and for creating the management area, based on the information in the tuning parameter file.

### Cautions

- For UNIX, execute this command as a superuser.

### Synopsis

```
ifimks      -m mode  
            -f tuningParameterFilename
```

### Operands

-m *mode*

Specify either of the following values for the operating mode:

CAL: Makes estimates for the environment and outputs the results to the standard output.

CRT: Outputs scripts for creating the management area.

-f *tuningParameterFilename*

Specify the tuning parameter file.

A sample tuning parameter file is stored in the following location:

- For Windows

```
InformationIntegratorServerInstallDirectory\sample\ifimksdef.ini
```

- For UNIX

```
/opt/FJSVifisv/sample/ifimksdef.ini
```

Refer to the *Setup Guide* for information on the key names and parameter values in the tuning parameter file.

### Return values

0: Normal termination

8: Abnormal termination

## 2.10 ifirdelt (Data Deletion Command)

---

### Description

Deletes sent/received data or stored/extracted data from a DataBox.

## Cautions

- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Information Integrator must be running when using this command.
- If a data number is specified, the specified file will be deleted when the transfer status of the transfer service corresponding to the file is either "CMPN" or "CMPE".
- If a DataBox is specified, files that have already been delivered or extracted will be deleted.

## Synopsis

```
ifirdelt      -tf dataNumber | -d dataBox
```

## Operands

### -tf *dataNumber*

Specify the data number for data that has accumulated during storing or collecting process. Either this operand or the "-d" operand must be specified (but not both).

Specify a number between 1 and 999999999.

### -d *dataBox*

Specify the DataBox to be deleted.

Either this operand or the "-tf" operand must be specified (but not both).

Specify the value using up to 64 characters. The following characters can be used:

First character: A to Z or a to z

Second and subsequent characters: Alphanumeric characters

Note that if the remote system is Global Server or PRIMEFORCE, lowercase letters, hyphens ("-") and underscores ("\_") cannot be used.

## Return values

0: Normal termination

8: Abnormal termination

## 2.11 ifirexct (Data Extraction Command)

---

### Description

Extracts collected data or stored data from a DataBox.

The data delivery feature stores a processed data in a DataBox. This command can extract the processed data from the DataBox to a local file.

### Cautions

- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Information Integrator must be running when using this command.

### Synopsis

```
ifirexct      -of localFilename  
              -d dataBox  
              [-on {1 | N}]  
              [-a {YES | NO}]  
              [-ci dataNumber]
```



## Operands

### -of *localFilename*

Specify the name of the local file where the data extracted from the DataBox will be output. This operand cannot be omitted.

### -d *dataBox*

Specify the target DataBox from which data will be extracted. This operand cannot be omitted. Specify the value using up to 64 characters.

Characters that can be used are as follows:

First character: A to Z, a to z

Subsequent characters: Alphanumeric

Note that lower case characters, -, and \_ cannot be used when remote system is global server / PRIMEFORCE.

### -on {1 | N}

If there are multiple files corresponding to the specified DataBox, use this parameter to specify whether to extract only one file or all of the files. If this operand is omitted, "N" will be specified.

1: Extracts the DataBox with the oldest storage time.

N: Consolidates all of the DataBoxes that can be extracted and outputs the data as a single file. In this case, data is stored in the local file by appending data in order, starting with the DataBox with the oldest storage time.

### -a {YES | NO}

Specify whether to replace the data (by storing the data at the beginning of the local file, overwriting the existing content) or to expand the data (by storing the data after the existing data in the local file) when the extracted data is stored in the collection file. If this operand is omitted, "NO" will be specified.

YES: Expands the data

NO: Replaces the data

### -ci *dataNumber*

This is the condition for extracting data without changing the storage status of the DataBox. Specify a data number between 1 and 999999999.

## Return values

0: Normal termination

8: Abnormal termination

## 2.12 ifirstor (Data Store Command)

---

### Description

Stores data in a DataBox.

This command stores a file on the local disk into a DataBox, and is equivalent to the file input function for data collection.

### Cautions

- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Information Integrator must be running when using this command.

### Synopsis

```
ifirstor    -d dataBox
             -of localFilename
             [-dn dataName]
```

## Operands

### -d *dataBox*

Specify the DataBox for the local file that will be stored in the DataBox. This operand cannot be omitted. Specify the value using up to 64 characters.

Characters that can be used are as follows:

First character: A to Z, a to z

Subsequent characters: Alphanumeric

Note that lower case characters, -, and \_ cannot be used when remote system is global server / PRIMEFORCE.

### -of *localFilename*

Specify the name of the local file that will be stored in the DataBox. This operand cannot be omitted.

### -dn *dataName*

Specify a name for identifying the data to be stored in the DataBox.

This data name will be the identifier for storing the data.

Specify the value using up to 64 alphanumeric characters.

## Return values

0: Normal termination

8: Abnormal termination

## 2.13 ifistp (Information Integrator Stop Command)

---

### Description

Stops Information Integrator.

### Cautions

- For Windows, execute this command using system administrator permissions.
- For UNIX, execute this command as a superuser.
- For Windows Server 2008, this command must be executed after promoting the end user to administrator permissions. Select **Run as administrator** when opening the command prompt. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- This command can stop Information Integrator that is started both with "-d" operand (starts only communication server feature to register Process Flow definitions) and without "-d" operand (starts normally).
- If the command is executed in normal stop mode while deleting the management ledger or stored data, shutdown may take some time. To avoid shutdown delays, re-execute this command in forced stop mode.

### Synopsis

```
ifistp [ -m { n | f } ]
```

### Operands

#### -m {n | f}

Specify the stop mode. If this operand is omitted, "n" will be adopted.

n: Stops Information Integrator in normal stop mode (a NORMAL stop). Information Integrator will stop after all of the Process Flows and process functions that are currently executing and queuing have completed.

f: Stops Information Integrator in forced stop mode (a FORCE stop). Requests for Process Flows and process functions that are executing will be terminated.

## Return values

- 0: Normal termination
- 8: Abnormal termination

## 2.14 ifistr (Information Integrator Start Command)

---

### Description

This command starts Information Integrator.

### Cautions

- For Windows, execute this command using system administrator permissions.
- For UNIX, execute this command as a superuser.
- For UNIX, move to a directory that will not be deleted while running this command before executing it.
- For Windows Server 2008, this command must be executed after promoting the end user to administrator permissions. Select **Run as administrator** when opening the command prompt. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- Start Symfoware Server before starting Information Integrator.
- If HULFT is used for the communications protocol, start HULFT beforehand.
- Execution information for the Process Flow and functions for which the time limit specified by the "recordterm" item in the operating environment file has passed will be deleted when Information Integrator starts. Moreover, any delivered data for which the time limit specified by the "exctterm" item has passed will also be deleted when Information Integrator starts.
- To register data source definitions that meet the following conditions, start the Information Integrator Server by specifying the "-d" operand.
  - When registering or deleting definitions for which either "SAN" or "HICS" has been specified for the "protocol" in the data source definitions
  - When registering a nonexistent protocol for the "protocol" for a data source definition that has already been registered
  - When deleting all data source definitions for which the same protocol has been specified (when deleting data source definitions that have already been registered)

### Synopsis

```
ifistr [ [ -m { w | c } ] | -d ]
```

### Operands

-m {w | c}

Specify the start mode. If this operand is omitted, "w" will be adopted.

w: Starts Information Integrator with a warm boot (WARM start). The status of the management files from the last time Information Integrator was stopped will be inherited when Information Integrator starts.

c: Starts Information Integrator with a cold boot (COLD start). Management files and DataBoxes will be initialized before Information Integrator starts. All of the execution statuses for processes and functions at the time when Information Integrator was stopped will be deleted, along with all of the data stored in DataBoxes.

-d

Specify this operand to reflect the operating environment for Information Integrator, or to obtain or reflect definitions for Process Flow using III Studio or Definition Management Client while Information Integrator is not running.

## Return values

- 0: Normal termination
- 8: Abnormal termination

## 2.15 ifuserctl (User Privilege Manipulation Command)

---

### Description

Adds and removes users that can use process groups, and looks up the status of the existing settings.

Refer to "[A.4 Display Format for the ifuserctl Command](#)" for information on the display format for the status of the existing settings.

### Cautions

- Execute this command using system administrator permissions.
- For Windows Server 2008, this command must be executed after promoting the end user to administrator permissions. Select **Run as administrator** when opening the command prompt. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- "Set mode" can only be executed by administrators.

### Synopsis

```
ifuserctl    -t PROCGRP
              -m {SET | DEL | GET}
              [-g processGroupID]
              [-u targetUserID]
              [-b {n | w | e}]
```

### Operands

**-t PROCGRP**

Specify this operand to manipulate the user permissions for a process group.

**-m {SET | DEL | GET}**

Specify the operating mode.

SET: Set mode

DEL: Deletion mode

GET: Displays the status of the settings

"SET" and "DEL" can only be executed by Information Integrator administrators. "GET" can be executed without administrator permissions, but only those process groups for which the user has permissions can be displayed.

**-g processGroupID**

Specify either the ID for the process group to be executed or "\*". ("\*" can be specified by only Information Integrator privileged users.)

If "\*" is specified, the command will target all process group IDs.

Specify the process group ID using up to 31 alphanumeric characters.

For UNIX only, enclose the \* in double quotes ("").

**-u targetUserID**

Specify the user ID for the user to be found or for which process operation permissions are to be set, using up to 20 characters. "\*" cannot be specified. The descriptions and specifications for "-g" and "-u" vary depending on the specification for the "-m" operand. The following table explains the descriptions of these specifications, as well as the operands that can be specified:

Table 2.4 Operands that can be specified

"-m" operand	Operation description	"-g" operand	"-u" operand	Remarks
SET	Adds a user to the specified process group.	Required	Required	Administrators only
DEL	Deletes a user from the specified process group.	Required	Required	Administrators only
GET	Checks the status of the settings with the conditions specified by the "-g" and "-u" operands.	Specify either operand. If neither operand is specified, the operation will apply to all users and process groups.		If the user is not an administrator, only those process groups for which the user has permissions will be displayed.

-b {n | w | e}

If either "SET" or "DEL" has been specified for the "-m" operand, this parameter specifies the behavior for inapplicable processes (processes where the target and the request do not match). If this operand is omitted, "e" will be specified. This operand cannot be specified if "GET" has been specified for the "-m" operand.

n: Ignores inapplicable process group IDs and continues processing.

w: If there is an inapplicable process group ID, outputs a warning message and continues processing.

e: If there is an inapplicable process group ID, immediately interrupts processing and terminates abnormally. If the command is operating on multiple process group IDs, the operations performed up until the point when the abnormality is detected will be valid.

## Return values

0: Normal termination

4: Warning

8: Abnormal termination

## 2.16 ifisyssetup (Easy Setup for Information Integrator)

### Description

This command performs basic setup of Information Integrity server and is used in the following instances:

- Where easy setup was not performed immediately after installation.
- Where easy setup ended with an error immediately after installation.
- Where easy setup is repeated due to operational changes, etc.

Delete the environment beforehand by executing ifisysunsetup.

Determine the following items before executing the command:

Table 2.5 Easy setup query items

Easy setup query items	Meaning
Number of tasks performed per day	The number of tasks performed per day (1 to 10000) is specified by numerals. A daily average number of tasks performed, based on the number of days of saved operational data, is specified in cases where there are monthly or weekly fluctuations.
Number of days of saved work data	The number of days generation-managed work data will be saved (1 to 31) is specified by numerals.

Easy setup query items	Meaning
Saved work data directory	<ul style="list-style-type: none"> <li>- An absolute path of up to 69 alphanumeric characters is specified for the directory where information related to generation-managed work data, or work data and services managed by the Information Integrator server, is stored. Network drives cannot be specified. Acceptable characters are A to Z (capitals), a to z (lowercase), 0 to 9 (numerals), and the characters: - @ _ , . However, you can also use # or \ in Windows, and / in UNIX.</li> <li>- Guidelines for the amount of disk space required for the storage directory is shown in the chart "Guidelines for disk space required for storage" shown below. Acquire sufficient free disk space beforehand.</li> </ul>

Table 2.6 Guidelines for disk space required for storage

Number of tasks performed per day	Number of days work data will be saved	Required capacity (*1)	
		Windows	UNIX
100	3	Approximately 5,694 MB	Approximately 5,694 MB
100	10	Approximately 6,756 MB	Approximately 6,756 MB
1000	3	Approximately 11,262 MB	Approximately 11,262 MB
1000	10	Approximately 19,412 MB	Approximately 19,412 MB
10000	3	Approximately 24,592 MB	Approximately 24,592 MB
10000	10	Approximately 65,962 MB	Approximately 67,114 MB

\*1: This is the space required assuming that one item of data is 100KB.

### Cautions

- Cannot be used with cluster systems.
- Execute this command using system administrator permissions on the Information Integrator server.
- For Windows Server 2008, this command must be executed as an administrator. Select **Run as administrator** when the command prompt is displayed. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- Execute in the environment that appears immediately after installing Information Integrator server. Also, note easy setup cannot be executed in an environment that has already been setup.
- When using Windows, only use the Symfoware Server that is bundled with Information Integrator.
- When using UNIX, a management area is created in the file system. Cannot be used if the management area is created in a RAW device.
- In the environment parameter RDBNAME, cannot be used if anything other than ifirdb is already specified.
- In order to execute easy setup, the Information Integrator server basic setup process, ensure that setups required for operations such as the sending and receiving of detailed tuning file environments, or the setup of Definition Management Client or Operation Management Client, etc. are performed separately. Refer to the *Setup Guide* for information on how to perform setup.
- Cannot be executed simultaneously.
- Execute while the Symfoware Server status is stopped.
- Process results are output into the files shown below. Ascertain the directories of tuning parameter files, and work database deletion batch files/scripts etc., by referring to this file.

- Windows

```
InformationIntegratorServerInstallDirectory\ifisetup\ifisetup.log
```

- UNIX

/opt/FJSVifisv/ifisetup/ifisetup.log

## Synopsis

ifisyssetup

## Return values

0: Normal termination

Other than 0: Abnormal termination

## Errors and actions

After checking the error message and resolving the error, re-execute the command.

Table 2.7 Causes and Actions for Error messages

Error message (Japanese/English) (*1)	Cause	Action
Information Integratorが正しくインストールされていません。	This may have been caused by the following: <ul style="list-style-type: none"><li>- Information Integrator was not installed correctly.</li><li>- The bundled Symfoware Server is not installed (Windows only)</li><li>- Information Integrator is installed in a cluster system.</li></ul>	Check whether Information Integrator was installed correctly.  Also, note that easy setup cannot be used in the following cases: <ul style="list-style-type: none"><li>- The bundled Symfoware Server is not installed (Windows only).</li><li>- Information Integrator is installed in a cluster system.</li></ul>
Information Integrator is not installed correctly.		
Information Integratorが不当な場所にインストールされています。	Information Integrator is installed in the wrong directory	Either an unacceptable character is included in the Information Integrator installation directory, or the directory name may be too long.  In this case, easy setup cannot be used.
Information Integrator is installed in the wrong directory.		
Information Integratorはすでに起動中です。	Information Integrator has already started.	Easy setup cannot be used.
Information Integrator has already started.		
Symfoware Serverはすでに起動中です。	Symfoware Server has already started.	Easy setup cannot be used.
Symfoware Server has already started.		
ディレクトリが作成できませんでした。	Failed in creating the directory.	Permissions may be required to create a directory. Use system administrator permissions.
Failed in creating the directory.		
RDBNAMEがifirdb以外の名前で設定されています。	A name other than ifirdb is specified for the environment variable RDBNAME.	Easy setup cannot be used.
Unreasonable value is specified in RDBNAME.		
RDBNAMEの値の設定中に異常が発生しました。	An error occurred while specifying the environment variable RDBNAME. Check the event log for messages.	Use system administrator permissions. If the error cannot be resolved, contact Fujitsu technical support.
An error occurred while specifying the value of RDBNAME.		

Error message (Japanese/English) (*1)	Cause	Action																						
Symfoware Serverで異常が発生しました。	<ul style="list-style-type: none"> <li>- This may have been caused by the following:</li> <li>- Symfoware Server commands were not executed normally.</li> <li>- The storage directory for the work data already exists.</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.																						
An error has occurred in the Symfoware Server.			ディレクトリの空き容量の見積りに失敗しました。	<ul style="list-style-type: none"> <li>- This may have been caused by the following:</li> <li>- Action was not performed with system administrator permissions.</li> <li>- A network drive was specified.</li> </ul>	Use system administrator permissions. If the error cannot be resolved, contact Fujitsu technical support.	Failed in estimating the amount of free space in the directory.	業務データの保存先のディレクトリ作成に失敗しました。	It is possible a non-existent drive or an unusable drive has been specified as the directory to archive work data.	Check the directory specified as the location to archive work data. If the error cannot be resolved, contact Fujitsu technical support.	Failed in creating the directory to save work data.	ファイルのコピーに失敗しました。	<ul style="list-style-type: none"> <li>- This may have been caused by the following:</li> <li>- Action was not performed with system administrator permissions.</li> <li>- You are using a Symfoware Server other than the Symfoware Server that is bundled with Information Integrator (Windows only).</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.	Failed in copying any files.	業務データの保存先が作成できませんでした。	<ul style="list-style-type: none"> <li>- This may have been caused by the following: Check the event log for messages.</li> <li>- Action was not performed with system administrator permissions.</li> <li>- The RDB dictionary environment was not created.</li> <li>- An error has occurred during registration of the RDB system (Windows only).</li> <li>- An error has occurred during creation of the database.</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.	Failed in creating the area to save work data.	Symfoware Serverが起動できませんでした。	An error has occurred with the Symfoware Server boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Symfoware Server.	Information Integratorが起動できませんでした。	An error has occurred with the Information Integrator boot up. Check the event log for messages.
ディレクトリの空き容量の見積りに失敗しました。	<ul style="list-style-type: none"> <li>- This may have been caused by the following:</li> <li>- Action was not performed with system administrator permissions.</li> <li>- A network drive was specified.</li> </ul>	Use system administrator permissions. If the error cannot be resolved, contact Fujitsu technical support.																						
Failed in estimating the amount of free space in the directory.			業務データの保存先のディレクトリ作成に失敗しました。	It is possible a non-existent drive or an unusable drive has been specified as the directory to archive work data.	Check the directory specified as the location to archive work data. If the error cannot be resolved, contact Fujitsu technical support.	Failed in creating the directory to save work data.	ファイルのコピーに失敗しました。	<ul style="list-style-type: none"> <li>- This may have been caused by the following:</li> <li>- Action was not performed with system administrator permissions.</li> <li>- You are using a Symfoware Server other than the Symfoware Server that is bundled with Information Integrator (Windows only).</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.	Failed in copying any files.	業務データの保存先が作成できませんでした。	<ul style="list-style-type: none"> <li>- This may have been caused by the following: Check the event log for messages.</li> <li>- Action was not performed with system administrator permissions.</li> <li>- The RDB dictionary environment was not created.</li> <li>- An error has occurred during registration of the RDB system (Windows only).</li> <li>- An error has occurred during creation of the database.</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.	Failed in creating the area to save work data.	Symfoware Serverが起動できませんでした。	An error has occurred with the Symfoware Server boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Symfoware Server.	Information Integratorが起動できませんでした。	An error has occurred with the Information Integrator boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Information Integrator service.		
業務データの保存先のディレクトリ作成に失敗しました。	It is possible a non-existent drive or an unusable drive has been specified as the directory to archive work data.	Check the directory specified as the location to archive work data. If the error cannot be resolved, contact Fujitsu technical support.																						
Failed in creating the directory to save work data.			ファイルのコピーに失敗しました。	<ul style="list-style-type: none"> <li>- This may have been caused by the following:</li> <li>- Action was not performed with system administrator permissions.</li> <li>- You are using a Symfoware Server other than the Symfoware Server that is bundled with Information Integrator (Windows only).</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.	Failed in copying any files.	業務データの保存先が作成できませんでした。	<ul style="list-style-type: none"> <li>- This may have been caused by the following: Check the event log for messages.</li> <li>- Action was not performed with system administrator permissions.</li> <li>- The RDB dictionary environment was not created.</li> <li>- An error has occurred during registration of the RDB system (Windows only).</li> <li>- An error has occurred during creation of the database.</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.	Failed in creating the area to save work data.	Symfoware Serverが起動できませんでした。	An error has occurred with the Symfoware Server boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Symfoware Server.	Information Integratorが起動できませんでした。	An error has occurred with the Information Integrator boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Information Integrator service.						
ファイルのコピーに失敗しました。	<ul style="list-style-type: none"> <li>- This may have been caused by the following:</li> <li>- Action was not performed with system administrator permissions.</li> <li>- You are using a Symfoware Server other than the Symfoware Server that is bundled with Information Integrator (Windows only).</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.																						
Failed in copying any files.			業務データの保存先が作成できませんでした。	<ul style="list-style-type: none"> <li>- This may have been caused by the following: Check the event log for messages.</li> <li>- Action was not performed with system administrator permissions.</li> <li>- The RDB dictionary environment was not created.</li> <li>- An error has occurred during registration of the RDB system (Windows only).</li> <li>- An error has occurred during creation of the database.</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.	Failed in creating the area to save work data.	Symfoware Serverが起動できませんでした。	An error has occurred with the Symfoware Server boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Symfoware Server.	Information Integratorが起動できませんでした。	An error has occurred with the Information Integrator boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Information Integrator service.										
業務データの保存先が作成できませんでした。	<ul style="list-style-type: none"> <li>- This may have been caused by the following: Check the event log for messages.</li> <li>- Action was not performed with system administrator permissions.</li> <li>- The RDB dictionary environment was not created.</li> <li>- An error has occurred during registration of the RDB system (Windows only).</li> <li>- An error has occurred during creation of the database.</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.																						
Failed in creating the area to save work data.			Symfoware Serverが起動できませんでした。	An error has occurred with the Symfoware Server boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Symfoware Server.	Information Integratorが起動できませんでした。	An error has occurred with the Information Integrator boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Information Integrator service.														
Symfoware Serverが起動できませんでした。	An error has occurred with the Symfoware Server boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.																						
Failed in starting of Symfoware Server.			Information Integratorが起動できませんでした。	An error has occurred with the Information Integrator boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.	Failed in starting of Information Integrator service.																		
Information Integratorが起動できませんでした。	An error has occurred with the Information Integrator boot up. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.																						
Failed in starting of Information Integrator service.																								

\*1: In cases where an English message does not exist, only messages in Japanese will be displayed.



## 2.17 ifisysunsetup (Environment Deletion for Information Integrator)

### Description

This command deletes the work data archive directory created by easy setup (database).

### Cautions

- Cannot be used with cluster systems.
- Execute this command using system administrator permissions on the Information Integrator server.
- For Windows Server 2008, this command must be executed as an administrator. Select **Run as administrator** when the command prompt is displayed. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- When using Windows, only use the Symfoware Server that is bundled with Information Integrator.
- In the environment parameter RDBNAME, cannot be used if anything other than ifirdb is already specified.
- Execute in an environment that was set up using easy setup.
- Execute when the Information Integrator server is stopped and the Symfoware Server is started.
- Cannot be executed simultaneously.
- Process results are output into the following files:

- Windows

```
InformationIntegratorServerInstallDirectory\ifisetup\ifisunsetup.log
```

- UNIX

```
/opt/FJSVifisv/ifisetup/ifisunsetup.log
```

### Synopsis

```
ifisysunsetup
```

### Return values

0: Normal termination

Other than 0: Abnormal termination

### Errors and actions

After checking the error message and resolving the error, re-execute the command.

Table 2.8 Causes and actions for error messages

Error message (Japanese/English (*1))	Cause	Action
Information Integratorが正しくインストールされていません。	This may have been caused by the following: <ul style="list-style-type: none"> <li>- Information Integrator was not installed correctly.</li> <li>- The bundled Symfoware Server is not installed (Windows only).</li> <li>- Information Integrator is installed in a cluster system.</li> </ul>	Check whether Information Integrator was installed correctly. Also, note that easy setup cannot be used in the following cases: <ul style="list-style-type: none"> <li>- The bundled Symfoware Server is not installed (Windows only).</li> <li>- Information Integrator is installed in a cluster system.</li> </ul>

Error message (Japanese/English (*1))	Cause	Action
Information Integrator is not installed correctly.		
簡易セットアップが正常完了していません。	<ul style="list-style-type: none"> <li>- This may have been caused by the following:</li> <li>- Easy setup shut down abnormally.</li> <li>- Set up was performed without using easy setup.</li> </ul>	In cases where set up was performed without using easy setup, easy unsetup cannot be used.
Setup of Information Integrator has not finished normally.		
Information Integratorはすでに起動中です。	This may have been caused by the following: <ul style="list-style-type: none"> <li>- Information Integrator was already running.</li> <li>- Action was not performed with system administrator permissions.</li> </ul>	Stop Information Integrator. Use system administrator permissions.
Information Integrator has already started.		
Symfoware Serverが起動していません。	This may have been caused by the following: Check the event log for messages. <ul style="list-style-type: none"> <li>- Symfoware Server has not started.</li> <li>- Action was not performed with system administrator permissions.</li> <li>- A name other than ifirdb is specified for the environment variable RDBNAME.</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.
Symfoware Server is not started.		
ファイルが存在しません。	A file required for unsetup does not exist	It is possible that setup was performed without using easy setup. In cases where set up was performed without using easy setup, Easy unsetup cannot be used.
Any files are not found.		
業務データの保存先の削除に失敗しました。	This may have been caused by the following: Check the event log for messages. <ul style="list-style-type: none"> <li>- Action was not performed with system administrator permissions.</li> <li>- Easy setup was not used at the environment structure stage.</li> <li>- The environment has been deleted.</li> </ul>	If the error cannot be resolved, contact Fujitsu technical support.
Failed in deleting the area to save work data.		
Symfoware Serverの停止に失敗しました。	Failed to shut down Symfoware Server. Check the event log for messages.	If the error cannot be resolved, contact Fujitsu technical support.
Failed to shut down Symfoware Server		

\*1: In cases where an English message does not exist, only messages in Japanese will be displayed.

## 2.18 ifiguissetup\_j2ee (Operation Management Client (J2EE) Environment)

---

## Description

This command creates the Operation Management Client (J2EE) environment.

## Cautions

- Execute this command using system administrator permissions.
- For Windows Server 2008, this command must be executed as an administrator. Select **Run as administrator** when the command prompt is displayed. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator
- The Interstage Application Server J2EE environment needs to be installed and running.

## Synopsis

```
ifiguissetup_j2ee
```

## Operands

There are no operands.

## Return values

- 0: Normal termination
- 8: Abnormal termination

## 2.19 ifiguiunsetup\_j2ee (Operation Management Client (J2EE) Environment).

---

### Description

This command deletes the Operation Management Client (J2EE) environment.

### Cautions

- Execute this command using system administrator permissions.
- For Windows Server 2008, this command must be executed as an administrator. Select **Run as administrator** when the command prompt is displayed. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.

### Synopsis

```
ifiguiunsetup_j2ee
```

### Operands

There are no operands.

### Return values

- 0: Normal termination
- 8: Abnormal termination

## 2.20 ifiguissetup\_javaee (Operation Management Client (JavaEE) Environment)

---

### Description

This command creates the Operation Management Client (JavaEE) environment.

## Cautions

- Execute this command using system administrator permissions.
- For Windows Server 2008, this command must be executed as an administrator. Select **Run as administrator** when the command prompt is displayed. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.
- The Interstage Application Server JavaEE environment must be installed and running to execute this command.
- If the incorrect port number is specified, JavaEE Setup will terminate abnormally.

## Synopsis

```
ifiguisetup_javaee [-p portNumber]
```

## Operands

*-p portNumber*

Specifies the port number for the Operation Management Client connection.

If this is omitted, the port number will be 8088.

## Return values

0: Normal termination

8: Abnormal termination

## 2.21 ifiguiunsetup\_javaee (Deletion of Operations Management Client (JavaEE) Environment)

---

### Description

This command deletes operation management client (JavaEE) environment.

### Cautions

- Execute this command using system administrator permissions.
- For Windows Server 2008, this command must be executed as administrator. Select **Run as administrator** when opening the command prompt. Refer to the *Windows Help and Support Center* for information on how to run commands as an administrator.

### Synopsis

```
ifiguiunsetup_javaee
```

### Operands

There are no operands.

### Return values

0: Normal termination

8: Abnormal termination

# Chapter 3 Utility Commands

## 3.1 ificmcut (Simultaneously Importing Character Code Conversion Tables Command)

### Description

This command batch loads and recreates the character code conversion table for Charset Manager. All of the character code conversion tables for Information Integrator are imported.

Note: Refer to "[B.2 Specifying Encoding Combinations and Conversion Behavior](#)" for information on the character code conversion tables that are recreated. However, this section does not include information about the IBM Japanese character set.

### Cautions

- To execute this command, the standard code conversion function for Charset Manager must be installed.
- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- The installation directory is as follows:
  - For Windows  
*InformationIntegratorServerInstallDirectory\HSCNV\table\*
  - For UNIX  
*/opt/FJSVifisv/hscnv/table/*
- The *charCodeConversionTablesBackupDir* must have at least 20 MB of free space. If the backup directory for character code conversion tables is not specified, there must be at least 20 MB of free space in the default directory.
- For UNIX, switch to the conversion support table if the character code conversion table used for character code conversion is a degeneration conversion table.
- If this command terminates abnormally, the character code conversion tables that are moved to the backup directory for character code conversion tables will not be restored to the original directory. Move the character code conversion tables from the backup directory manually.

### Synopsis

```
ificmcut charCodeConversionTablesBackupDir
```

### Operands

*charCodeConversionTablesBackupDir*

Specify the directory where the current character code conversion tables will be backed up. Note that the directory "\_tbl\_bk.dir\_" will be created in the specified directory. If this operand is omitted, the following directory will be created and character code conversion tables will be backed up to this directory:

- For Windows

```
driveWhereIficmcutCommandWasExecuted\_tbl\_bk.dir\_
```

- For UNIX

```
/var/opt/FJSVifisv/hscnv/\_tbl\_bk.dir_/
```

### Specification examples

#### Example 1

Windows:

Creating the directory "E:\hs\_bk.dir\\_tbl\_bk.dir\" and then backing up the character code conversion tables to this directory:

```
ificmcut E:\hs_bk.dir
```

UNIX:

Creating the directory "/tmp/\_tbl\_bk.dir/" and then backing up the character code conversion tables to this directory:

```
ificmcut /tmp
```

### Example 2

Windows:

If this operand is omitted, the directory "*driveWhereIficmcutCommandWasExecuted*\_tbl\_bk.dir\" will be created, and the character code conversion tables will be backed up to this directory:

```
ificmcut
```

UNIX:

If this operand is omitted, the platform-dependent default directory (for Linux, this will be "/var/opt/FJSVifisv/hscnv/\_tbl\_bk.dir/") will be created, and the character code conversion tables will be backed up to this directory:

```
ificmcut
```

### Return values

- 0: Normal termination
- 8: Abnormal termination

## 3.2 ificnvdat (Converting Text Character Codes Command)

---

### Description

This command converts the entire content of a file to another character encoding.

### Cautions

- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- Keywords for the operating environment definitions for character code conversion  
Specifying "MESSAGE\_LEVEL", "CHARACTER\_CONVERT\_ERROR", "ALTERNATE\_CHARACTER1" and "UNICODE\_ALTERNATE\_CHARACTER1" allows character code conversion processing to be continued. Refer to "[B.1.1 Operating Environment Definitions for Character Code Conversion](#)" for information on how to specify the operating environment definitions for character code conversion.
- The status of the conversion table immediately after installation is listed below.
  - Windows: Conversion support table with conversion for vendor-specific characters are not registered
  - Linux: Conversion support table with conversion for vendor-specific characters are not registered
  - Solaris: Conversion support table with conversion for vendor-specific characters are not registered

### Synopsis

```
ificnvdat  -f sourceCharCodeSet  
           -t destinationCharCodeSet  
           [-i sourceFilename]  
           [-o destinationFilename]  
           [-u]  
           [-b sourceSystemType]  
           [-a destinationSystemType]
```

## Operands

### **-f** *sourceCharCodeSet*

Specify one of the following as the encoding for the source data. This operand cannot be omitted.

Jefkana: JEF-EBCDIC (kana) encoding with font emphasis  
Jefcorekana: JEF-EBCDIC (kana) encoding with area emphasis  
Jefascii: JEF-EBCDIC(ASCII) encoding with font emphasis  
Jefcoreascii: JEF-EBCDIC(ASCII) encoding with area emphasis  
U90: EUC(U90) encoding  
S90: EUC(S90) encoding  
Euchp: EUC(HP) encoding  
Sjisms :Shift-JIS  
Idbcorekana: IBM Japanese character set - EBCDIC (kana) encoding  
Idbcoreascii: IBM Japanese character set - EBCDIC (lower-case letters) encoding  
Ucs2: Unicode UCS2 format (big endian)  
Ucs2ms: Unicode UCS2 format (little endian)  
Utf8: Unicode UTF8 format (up to three byte codes)  
Utf8\_4: Unicode UTF8 format (including four byte codes)  
Utf16: Unicode UTF16 format (big endian)  
Utf16ms: Unicode UTF16 format (little endian)

### **-f** *destinationCharCodeSet*

Specify one of the following as the encoding for the destination data. This operand cannot be omitted.

Jefkana: JEF-EBCDIC (kana) encoding with font emphasis  
Jefcorekana: JEF-EBCDIC (kana) encoding with area emphasis  
Jefascii: JEF-EBCDIC(ASCII) encoding with font emphasis  
Jefcoreascii: JEF-EBCDIC(ASCII) encoding with area emphasis  
U90: EUC(U90) encoding  
S90: EUC(S90) encoding  
Euchp: EUC(HP) encoding  
Sjisms: Shift-JIS  
Ucs2: Unicode UCS2 format (big endian)  
Ucs2ms: Unicode UCS2 format (little endian)  
Utf8: Unicode UTF8 format (up to three byte codes)  
Utf8\_4: Unicode UTF8 format (including four byte codes)  
Utf16: Unicode UTF16 format (big endian)  
Utf16ms: Unicode UTF16 format (little endian)

### **-i** *sourceFilename*

Specify the name of the source file to be converted, using an absolute path and no more than 255 bytes. If this operand is omitted, data will be entered from the standard input. The standard input can be closed via the following operations.

- For Windows

Press <Ctrl>+<Z> and then <Enter> after the last data (including the <Enter> key) has been input.

- For UNIX

Press <Ctrl>+<D> after the last data (including the <Enter> key) has been input.

### **-o** *destinationFilename*

Specify the name of the destination file to be converted, using an absolute path and no more than 255 bytes.

If the specified file does not exist, a file will be generated automatically.

If the file already exists, the behavior depends on whether the "-u" operand has been specified. If this operand is omitted, data will be output to the standard output.

### **-u**

If this operand is specified and the name of an existing file is specified for the target file name, the file will be overwritten. If the file does not exist, a file will be generated automatically. If the target file exists when this operand is omitted, the command will terminate

abnormally.

This operand cannot be specified if the "-o" operand has been omitted.

#### **-b *sourceSystemType***

To convert newline codes, specify the system type for the source system.

- PC: The source system is a Windows system
- UNIX: The source system is a UNIX system
- GS: The source system is Global Server/PRIMEFORCE

If this operand is omitted, the newline codes for the local system will be adopted.

#### **-a *destinationSystemType***

To convert newline codes, specify the system type for the destination system.

- PC: The destination system is a Windows system
- UNIX: The destination system is a UNIX system
- GS: The destination system is Global Server/PRIMEFORCE

If this operand is omitted, the newline codes for the local system will be adopted.

### **Return values**

- 0: Normal termination
- 4: Warning
- 8: Abnormal termination
- 12: Abnormal termination (system error)

Note: A system error occurs when some of the data that has been output is replaced by substitute characters, or when some of the data is truncated due to a character overflow. Note that this can occur if processing continuation has been specified in the operating environment definitions for character code conversion. The keywords for the operating environment definitions for character code conversion are "MESSAGE\_LEVEL", "CHARACTER\_CONVERT\_ERROR", "ALTERNATE\_CHARACTER1" and "UNICODE\_ALTERNATE\_CHARACTER1".

## **3.3 ifixejob (Remote System Job Execution Command)**

---

### **Description**

This command executes jobs for the remote system remotely.

### **Cautions**

- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.
- This command cannot be used if the remote system job is an interactive job.
- This command cannot be used if SAN or HULFT is used for the communications protocol.

Points to note for each remote system operating system are as follows:

- If the remote system is a Windows system
  - This command cannot be used if the job to be started on the remote system is one of the following jobs:
    - Jobs that have windows (such as Notepad)
    - Jobs that do not run correctly when executed by the AT command
    - Jobs that do not run correctly when executed by the schtasks
    - Shell scripts that have been created using Windows PowerShell
  - It is not possible to access resources such as network drives and printers from the program executed by the remote system job.



- If a remote system job is started by specifying "when the job results are received" as the timing for when the command returns, the job executed by this command must notify the job result to Information Integrator. If the job does not notify its result, the command will not return. Similarly, if a non-zero value is notified as the job result, the command will return "1" as its return value. In this case, the user should determine the execution results for the job based on the messages output for the command.
- When using this command, select either of the following options for the timing of when the command returns:
  - When a result notification for the remote system job executed by the command is received
  - When the remote system job is executed

To have this command return when a result notification for the job is received, ensure that the remote system returns the job result to Information Integrator. Refer to the manuals for Linkexpress for information on how to notify job results from the remote system to Information Integrator.

Note that the timing of when this command returns is specified using the "jobrsp" operand in the extension operand specification file. Refer to "[C.1.3 jobrsp Operand](#)" for information on the "jobrsp" operand.

- For Windows, users that execute remote system jobs must belong to the Administrators group. If the user does not belong to the Administrators group, the job may fail to start, with a TR10325, TR20325 or TR30325 message being output. Also, if a domain has been created the Administrators group must be made a Domain Admins group. Note that the job runs with the permissions of the user specified when the job was executed. However, when executing jobs on Windows Vista or Windows Server 2008, the jobs run with system administrator permissions.
 

Note that the remote system user name is specified using the "prtsecur" operand in the extension operand specification file. Refer to "[C.1.5 prtsecur Operand](#)" for details.
- The environment variables inherit the environment variables for the system. If custom environment variables for the job (such as the PATH environment variable) are required, change the environment variables within the job.

- If the remote system is a UNIX system

- This command cannot be used if the job on the remote system is one of the following jobs:
  - Commands that require a control terminal (such as "passwd")
  - Full screen commands (such as "vi")
- When using this command, select either of the following options for the timing of when the command returns:
  - When a job result for the remote system job is received
  - When the remote system job is executed

To have this command return when a job result for the remote system job is received, ensure that the remote system returns the job result to Information Integrator. Refer to the manuals for Linkexpress for information on how to notify job results from the remote system to Information Integrator.

Note that the timing of when this command returns is specified using the "jobrsp" operand in the extension operand specification file. Refer to "[C.1.3 jobrsp Operand](#)" for information on the "jobrsp" operand.

- For environment variables, the "umask" value, standard output, and the standard error, the environment (RC script, console or terminal) where the Information Integrator Server was started will be inherited. The user shell environment (such as ".profile" or ".chsrc") that is specified for starting the remote system job will not be inherited.
 

Also, for the environment variables that are required to execute the job and the "umask" value that is required in order to access files from the job, either set these environment variables and values within the job or set them for the execution environment (RC shell, console or terminal) that starts the Information Integrator Server.

For the standard output and standard error output for outputting from the job, output will be directed to the console or terminal that started the Information Integrator Server. If the terminal has been closed since the Information Integrator Server started, output may result in an EIO error. Accordingly, consider measures such as redirecting the standard output and standard error output for the job to a temporary file.

Note also that if the console or terminal freezes then the job will be unable to complete because standard output or standard error processing will be waiting for the console or terminal to unfreeze.

- To execute jobs on UNIX, execute the job using the permissions for the remote system user name that is specified when the job is executed. However, secondary groups for users are not supported.

Also, if the remote system is Information Integrator, specify either a superuser or a user that belongs to the group that was specified when Information Integrator was installed on the remote system as the remote system user name for when the job is executed.

Note that the remote system user name is specified using the "prtsecur" operand in the extension operand specification file. Refer to "[C.1.5 prtsecur Operand](#)" for details.

- When the remote system is Global Server/PRIMEFORCE

This command returns when the remote job is initiated (when this command is executed). Specify the timing for when this command returns using the "jobrsp" operand in the extension operand specification file. Be sure to specify "no" so that the command returns when the job starts. Refer to "[C.1.3 jobrsp Operand](#)" for information on the "jobrsp" operand.

## Synopsis

```
ifiexejob -p remoteSystemName
          -j jobName
          [-e extensionOperandSpecificationFilename]
```

## Operands

### -p remoteSystemName

Specify the name of the remote system where the job will be started using no more than 31 alphanumeric characters.

For the name of the remote system, specify the name that was specified as the remote system name in the data source definitions in the design sheet.

This operand cannot be omitted.

### -j jobName

Specify the name of the job to be executed on the remote system, using no more than 255 alphanumeric characters.

This operand cannot be omitted. If the directory where the job is stored has been set in the IFIVFLPATH environment variable then the job name can be specified using a relative path. However, files on network drives cannot be specified.

If the job name includes special characters that cannot be handled by the command (such as single byte spaces or parentheses), use the following method to specify the job name:

- For Windows, enclose the job name in double quotes ("").
- For UNIX, enclose the job name in single quotes (') or double quotes ("").

If the system where the job will execute is a Windows system, ensure that the total length of the string for specifying the job name and the job parameters is no more than 200 characters. Refer to "[C.1.1 Extension Operands for the Execute Remote Job Command](#)" for information on the job name and job parameters to be specified.

If the system where the job will execute is a Global Server/PRIMEFORCE system, handle the job name using the following format:

- Express the job name in a format that is not enclosed in single quotes (').
- For classification dataset jobs, express the job by enclosing the member name in parenthesis.

### -e extensionOperandSpecificationFilename

Specify the name of the extension operand specification file using no more than 255 alphanumeric characters. If the directory where the extension operand specification file is stored has been set in the IFIEFLPATH environment variable then the job name can be specified using a relative path.

Refer to "[C.1 Extension Operand Specification File](#)" for information on the name of the extension operand specification file.

Refer to "[C.1.1 Extension Operands for the Execute Remote Job Command](#)" for information on the execution operands that can be specified. If this operand is omitted, the command will run with the default values for the extension operands.

## Return values

0: Normal termination

1: The command terminated normally, but a non-zero value was notified for the completion code by the job result notification

- 8: The command terminated abnormally (An error occurred while starting the remote system job)
- 12: Abnormal termination (system error)

## 3.4 ifigenexec.cmd (Operating Simple Definition Command)

---

### Description

This command registers the definition delivery process (sample) used to deliver the definition from Information Integrator Server to the III Agent and define operation to configure the environment for the III Agent, when both Information Integrator Server and the III Agent are used.

### Cautions

- For Windows, run this command using system administrator permissions.
- For UNIX, run this command as a superuser.
- For Windows Server 2008, provide the administrator permissions to the user to run this command. Select "Run as administrator" on starting the command prompt. Refer to "Windows help and support" for information on "Run as administrator".
- Stop Information Integrator Server before starting this command.
- Use this command only when the III Agent is used.
- Do not use execution mode "ADD" and "EXP" on a server without the Information Integrator Server installed.
- Do not use execution mode "IMPF" on a server without III Agent installed.
- Do not execute this command on a server without the Information Integrator Server installed.

### Synopsis

- To register sample definition for a definition delivery process

Registers a sample definition for a definition delivery process on an Information Integrator Server with the Information Integrator Server installed. Run this command on the Information Integrator Server with the Information Integrator Server installed. Note that this should be specified only when the III Agent is executed for the first time.

```
ifigenexec.cmd ADD sampleDefinitionFilename
```

- To export a registered definition (For UNIX, and for environments that use different OS for the Information Integrator Server and the III Agent.)

Exports definitions registered on an Information Integrator Server with the Information Integrator Server installed. Run this command on the Information Integrator Server with the Information Integrator Server installed.

```
ifigenexec.cmd EXP none exportDefinitionFilename
```

- To import an exported definition (For UNIX, and for environments that use different OS for the Information Integrator Server and the III Agent.)

Imports a definition, which is exported from an Information Integrator Server with the Information Integrator Server installed, to a server with the III Agent installed. Run this command on the server with the III Agent installed.

```
ifigenexec.cmd IMPF exportDefinitionFilename processResultFilename
```

### Operands

- To register sample definition for a definition delivery process

*sampleDefinitionFilename*

Specify absolute path of the sample definition for the definition delivery process within 255 bytes. Sample definition file is stored in the following location:

- For Windows:

```
InformationIntegratorServerInstallDirectory\sample\defproc\defexecproc.xml
```

- For UNIX:

```
/opt/FJSVifisv/sample/defproc/defexecproc.xml
```

- To export a registered definition

*exportDefinitionFilename*

Specify the absolute path of the file to export the definition within 255 bytes.

- To import an exported definition

*exportDefinitionFilename*

Specify the absolute path of the file that contains the exported definition within 255 bytes.

*processResultFilename*

Specify the absolute path of the file to output the result of the import process within 255 bytes.

## Return values

0: Normal termination

8: Abnormal termination

## 3.5 ifirspjob (Job Result Notification Command)

---

### Description

This command notifies the results of a job to the remote system that started the job.

### Cautions

- If this command becomes abnormal, the job that it has started will not complete. Execute the command again after eliminating the cause of the problem.
- Specify this command within the job (such as a batch file or shell) that is started by a job start request from a remote system.  
This command cannot be executed manually because information notified from Information Integrator must be specified for the operands for this command.
- For UNIX, execute this command as either a superuser or a user belonging to the group that was specified during installation.  
For this reason, when requesting that the job be started from the startup system (the remote system), the user specified for the remote system user name operand should be either a superuser for the responder system (the local system) or a user that belongs to the group that was specified at installation time.
- For Windows, the permissions of a user that belongs to the Administrators group are required when a job start is requested, regardless of whether or not this command is executed.  
For this reason, when requesting that the job be started from the startup system (the remote system), the user specified for the remote system user name operand should be a user that belongs to the Administrators group in the responder system (the local system).

### Synopsis

```
ifirspjob  -n remoteSystemName
           -i jobIdNumber
           -c completionCode
           [-u detailedInfo]
```

## Operands

-n *remoteSystemName*

Specify the name of the remote system. The remote system name is notified to the job as the second placeholder parameter when Information Integrator starts the job. Refer to "Examples of issuing the ifirspjob command" for details.

-i *jobIdNumber*

Specify the job identification number. The job identification number is notified to the job as the fourth placeholder parameter when Information Integrator starts the job. Refer to "Examples of issuing the ifirspjob command" for details.

-c *completionCode*

Specify the completion code for a job. This operand cannot be omitted.

The following values can be specified:

0: Normal termination

1 to 255: Abnormal termination

-u *detailedInfo*

Specify the details of the job result, using no more than 256 bytes. A user can specify any value. If this operand is omitted, detailed information will not be notified to the source system that started the job.

If the detailed information is longer than 256 bytes, only the first 256 bytes will take effect.

## Examples of issuing the ifirspjob command

Refer to the following examples to see how to issue the ifirspjob command. When using these examples, copy the example to any directory before editing it.

- For Windows

```
InformationIntegratorServerInstallDirectory\sample\RSPJOB.BAT
```

- For UNIX

```
/opt/FJSVifisv/sample/rspjob.sh
```

To use this example, remove the hash symbol from the line for the PATH environment so that the line is not commented out. Also, be sure to add more paths if necessary.



.....  
The remote system name and the job identifier number can be looked up using the second parameter (\$2) and the fourth parameter (\$4).  
.....

## Return values

0: Normal termination

Value other than 0: Error

## 3.6 ifisetssl (SSL Communications Parameters Setting Command)

### Description

This command sets SSL communication parameters required by Information Integrator whenever there are SSL communications.

### Cautions

- This command cannot be executed if Information Integrator is running.
- The following permissions are required in order to execute this command:
  - Windows: Administrators group

- UNIX: Superuser
- The options used in the certificate management package command must be used as the options for this command and also the inputs for the interactives.
- SSL communication parameters set by this command are uniquely applied to each system (SSL communication parameters cannot be individually set for remote systems).

## Synopsis

```
ifisetssl -sd slotInformationDir
-cd certificateManagementDir
-tl tokenLabel

        [-sn siteCertificateNickname]
        [-sv {2|3}]
```

## Operands

**-sd *slotInformationDir***

Sets the slot information directory.

**-cd *certificateManagementDir***

Sets the certificate management directory.

**-tl *tokenLabel***

Specifies the token label specified by the certificate management package command.

**-sn *siteCertificateNickname***

Specifies the certificate nickname that was specified by the certificate management package command up to a maximum of 256 bytes. However, this is optional when operating as the startup system.

If operating as the responder system, this option cannot be omitted.

Note: If this option is omitted and the local system is operating as the initiator, then all certificates installed on the system will be regarded as having been specified.

**-sv {2|3}**

Specifies the SSL protocol version. If this option is omitted, SSL protocol version 3.0 will be used.

2: Uses SSL protocol version 2.0.

3: Uses SSL protocol version 3.0.

Note: The specified values for this option apply when operating as the initiator.

## Example of issuing the ifisetssl command

When this command is executed, dialog input to set the token password for private key access commences. At the certificate management package command, input the specified character string as the user PIN.

- UNIX

```
Example# ifisetssl -sd /home/slot -cd /home/sslcert -tl Token01

Setting USER-PIN (also used as Token-password).

USER-PIN:                                     <- Setting the user PIN

Retype:                                       <- Retyping the user PIN

Example#
```

## Return values

- 0: Normal termination
- 1: Abnormal termination (the user executing the command is not a superuser).
- 4: Abnormal termination (the specified option is incorrect).
- 8: Abnormal termination (the specified parameter value is incorrect).
- 12: Abnormal termination (a system error occurred).

## 3.7 Ifiroidx (Management Area Defragmentation Command)

---

### Description

This command defragments the Information Integrator server management area.

### Cautions

- Execute this command while the Information Integrator is not running. Executing this command while the Information Integrator server is running may have impact on any services that are running.
- Execute this command while Symfoware Server is running.
- The following permissions are required to execute this command:
  - Windows: Administrators group
  - UNIX: Superuser
- When this command is executed, a Symfoware Server message (message number: qdg12074i or qdg12075u) will be output to the active screen or to the event log (to the system log for UNIX).

### Synopsis

```
ifiroidx
```

### Return values

- 0: Normal termination
- 8: Abnormal termination

# Appendix A Display Formats and Output Contents

This appendix explains the display formats and output contents for the following command:

- ifidisp

This chapter also explains the display format for the following commands:

- ificntlsch
- ifiuserctl

## A.1 Display Format for the ifidisp Command

The information display formats for the following statuses as displayed by the ifidisp command are shown below.

- [Display format for Process Flow statuses](#)
- [Display format for Process Function statuses](#)
- [Display format for DataBox store statuses](#)

### Display format for Process Flow statuses

Process definition ID	=
Process group ID	=
Process Flow status	=
Schedule	=
Service number	=
Scheduled start date/time	=
Actual start date/time	=
Actual completion date/time	=
Error category	=
Error code	=
Error detail code	=

<Displayed content>

- Process definition ID

Displays a Process definition ID. No more than 31 alphanumeric characters.

- Process group ID

When a process group ID is defined, the process group ID is displayed. When it is not defined, "DefaultGroup" is displayed.

- Process Flow status

WAIT: Waiting to execute  
EXEC: Executing  
CMPN: Normal termination  
CMPE: Abnormal termination

- Schedule

No value is output.

- Service number

Displays the service number for the Process Flow. No more than 32 alphanumeric characters.

- Scheduled start Date and Time

Displays the date and time when the Process Flow is scheduled to start, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".



- Actual start Date and Time

Displays the date and time when the Process Flow was actually started, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Actual completion Date and Time

Displays the date and time when the Process Flow was actually completed, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Error category

Displays the error category. No more than 4 numeric characters.

- Error code

Displays the error code. No more than 4 numeric characters.

- Error detail code

Displays the detail code. No more than 8 numeric characters.

**Display format for Process Function statuses**

Function group ID	=
Function ID	=
Description	=
Data source ID	=
Processing number	=
Process Function status	=
Process group ID	=
Process definition ID	=
Service number	=
DataBox	=
Processing type	=
Operation type	=
Remote system ID	=
Path ID	=
Local system file type/file name	=
Remote system file type/file name	=
Reception date/time	=
Reception result	=
Start date/time	=
Termination date/time	=
Termination result	=
Completion date/time	=
Completion result	=
Date/time cancelation received	=
Data volume	=
User ID	=
Group name	=
Remote system user ID	=
Remote system group name	=
Error category	=
Error code	=
Error detail code	=
Linked product type	=
Linkage information	=

<Displayed content>

- Function group ID

Displays the function group ID. No more than 31 alphanumeric characters.

- Function ID

Displays the function ID. No more than 63 alphanumeric characters.

For data collection and data delivery Process Functions, the function ID is output using the following format:

- If the Process Function type is "store in database" or "extract from database":

*functionGroupID.DB.serialNumber*

- If the Process Function type is "send data" or "receive data":

*functionGroupID.FTRN.serialNumber*

- If the Process Function type is "store data" or "extract data":

*functionGroupID.DBOX.serialNumber*

- If the Process Function stores or extracts objects by linking to Salesforce:

*functionGroupID.SFDC.serialNumber*

- If the Process Function type is "convert data (conversion group)":

*functionGroupID.conversionGroupID.serialNumber*

- If BLOB collection / BLOB delivery linking to Azure Storage is performed:

*functionGroupID.AZR.serialNumber*

- Description

Displays the description defined in the Process Function definition. No more than 96 characters.

- Data source ID

Displays the data source ID. No more than 31 alphanumeric characters.

- Processing number

Displays the processing number of Process Function. No more than 9 numeric characters.

- Process Function status

WAIT: Waiting to execute

EXEC: Executing

CMFN: Normal termination

TRTY: Retrying

TWAT: Suspended

CMPE: Abnormal termination

- Process group ID

No value is output.

- Process definition ID

Displays the Process definition ID to which the Process Function belongs. No more than 31 alphanumeric characters.

- Service number

Displays the service number for the Process Flow that has been executed and to which the Process Function belongs. No more than 32 alphanumeric characters.

- DataBox

Displays the name of the DataBox handled by the function. No more than 63 alphanumeric characters.

- Processing type

Displays the following Process Function processing types:

STOR: Store data

EXCT: Extract data

SEND: Send data

RECV: Receive data

DSTORE: Store in database

DEXCT: Extract from database

DTRN: Conversion data/Convert using data conversion group

DIVD: Data filter

PLUG: Plug-in

- Operation type

If the function type is either "send data"/"receive data" or "store in database"/"extract form database", one of the following operation types will be displayed:

REQ: Initiator

IND: Responder

Other than above, "REQ: Initiator" is displayed.

- Remote system ID

If the Process Function type is either "send data"/"receive data" or "store in database"/"extract form database", the remote system ID and information about the accessed database will be displayed.

If the Process Function type is either "store data", "extract data", "convert data", "filter data", or "plug-in", the function ID will be displayed.

Additional information may be appended to a function ID. Any additional information will be appended following the period after the function ID.

For storing/extracting object linked to Salesfore, this displays the object name.

For BLOB collection / BLOB delivery linking to Azure Storage, this displays the container name.

Other than above, this displays the function ID. In any case, no more than 31 alphanumeric characters are displayed.

- Path ID

- Displays the path ID if the function type is "send data"/"receive data" and the communication protocol is HULFT. No more than 8 alphanumeric characters.

- When the function type is "send data" or "receive data" while the communication protocol is not HULFT, and operation type is "IND: Initiator", this displays "@\_APLK00".

- Other than the above, the path ID is not displayed.

- Local system file type/file name

If the Process Function type is "send data" or "receive data", the following will be displayed:

- Local system file type

URS: A general file

SRS: DataBox

Local system file name

Displays the name of the file on the local system. No more than 255 alphanumeric characters.

- Remote system file type/file name

If the Process Function type is "send data" or "receive data", the following will be displayed:

Remote system file type

URS: A general file

SRS: DataBox

Remote system file name

Displays the name of the file on the remote system. No more than 255 alphanumeric characters.

- Reception date/time

Displays the date/time when the Process Function was received, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Reception result

OK: Normal

NG: Abnormal termination

- Start date/time

Displays the date/time when the Process Function processing started, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Termination date/time

Displays the date/time when the Process Function processing finished, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Termination result

OK: Normal termination

NG: Abnormal termination

- Completion date/time

Displays the date/time when the Process Function processing completed, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Completion result

OK: Normal termination

NG: Abnormal termination

- Date/time cancellation received

Displays the date/time when the Process Function cancellation was received, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Data volume

For data transmission and data reception, this displays the amount of data transmitted. No more than 19 numeric characters.

- User ID

Displays the user ID for the user that executed the Process Function. No more than 20 alphanumeric characters.

- Group name

Displays the name of the group that executed the Process Function. No more than 8 alphanumeric characters.

- Remote system user ID

If the Process Function type is "send data"/"receive data", this displays the user ID for the remote system user linked by the data transmission/data reception. No more than 20 alphanumeric characters.

- Remote system group name

No value is output.

- Error category

Displays the error category. No more than 4 numeric characters.

- Error code

Displays the error code. No more than 4 numeric characters.

- Error detail code

Displays the detail code. No more than 8 numeric characters.

- Linked product type

Displays one of the following linked product types:

FILE: Collection or delivery using file input or output

LNK: Collection and delivery using FTP, FTP+, HTTP, HTTPS, HICS or SAN

HLT: Collection and delivery using HULFT

PLG: Plug-in

DB: Database store or extraction by linking to the database

CNV: Data conversion

DIV: Data filter

SFDC: Object store or extraction by linking to Salesforce

AZR: BLOB collection / delivery performed by linking to Azure Storage

- Linkage information

Displays information notified from linked products. May not always be displayed, depending on the linked product type.

### Display format for DataBox store statuses

Data number	=
File name	=
DataBox name	=
Store status	=
Initialized date/time	=
Stored date/time	=
Extracted date/time	=
Stored service number	=
Extracted service number	=
Delivery/forwarding number	=
Collection/forwarding number	=
Data size	=
Data name	=

#### <Displayed content>

- Data number

Displays the data number. No more than 9 numeric characters.

- File name

Displays the name of the file from which data was stored in the DataBox. No more than 255 alphanumeric characters.

- DataBox name

Displays the DataBox name. No more than 63 alphanumeric characters.

- Store status

STOR: Stored

EXCT: Extracted

STRI: Storing

EXCI: Extracting

- Initialized date/time

Displays the time when the DataBox was initialized, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Stored date/time

Displays the date/time when the data was stored, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Extracted date/time

Displays the date/time when the data was extracted, using YYYY/MM/DD hh:mm:ss format. One space character is inserted between the "D" and the "h".

- Stored service number

Displays the service number for the Process Flow that has been executed and to which the data store belongs. No more than 32 alphanumeric characters.

- Extracted service number

Displays the service number for the Process Flow that has been executed and to which the data extraction belongs. No more than 32 alphanumeric characters.

- Delivery/forwarding number

Displays the processing number for the Process Function to which the data store belongs. No more than 9 numeric characters.

- Collection/forwarding number

Displays the processing number for the Process Function to which the data extraction belongs. No more than 9 numeric characters.

- Data size

Displays the size of the data corresponding to the data number. No more than 19 numeric characters.

- Data name

Displays the data name. No more than 64 alphanumeric characters. When the processing type for the DataBox to be displayed is "receive data", this displays the link service number notified by the linked product. This may not always be displayed, depending on the linked product type.

## A.2 CSV Format Output for the ifidisp Command

---

By specifying file output for the ifidisp command, the following information can be output in CSV format. The output items and content are the same as for the display format for the ifidisp command.

### Outputting Process Flow status in CSV format

```
processFlowDefinitionID, processFlowStatus, schedule(*1), serviceNumber, scheduledStartDateTime,
actualStartDateTime, actualCompletionDateTime, description(*1), errorCategory, errorCode, detailedErrorCode
```

\*1: No value is output.

### Outputting Process Function status in CSV format

```
functionGroupID, functionID, description, dataSourceID, processingNumber, processFunctionStatus,
processFlowDefinitionID, serviceNumber, dataBox, processingType, operationType, remoteSystemID, pathID,
localSystemFileTypeOrName, remoteSystemFileTypeOrName, receptionDateTime, receptionResult,
startDateTime, terminationDateTime, terminationResult, completionDateTime, completionResult,
cancelationReceivedDateTime, dataVolume, userID, groupName, remoteSystemUserID, errorCategory,
errorCode, errorDetailCode, linkedProductType, linkageInformation
```

### CSV output for DataBox store statuses

```
dataNumber, filename, dataBoxName, storeStatus, initializedDateTime, storedDateTime, extractedDateTime,
storedServiceNumber, extractedServiceNumber, deliveryForwardingNumber, collectionForwardingNumber,
dataSize, dataName
```

## A.3 Display Format for the ificntlsch Command

---

The display formats for information about the schedule statuses as displayed by the ificntlsch command are shown below.

### Display format for schedule statuses

```
processDefinitionID    scheduleStatus
```

<Displayed content>

- *processDefinitionID*

Displays a Process definition ID. No more than 31 alphanumeric characters.

- *scheduleStatus*

The following statuses will be displayed:

[Executable]: Displayed during periods when the target Process Flow can be executed (this is what is normally displayed)

[Paused]: Displayed when the target Process Flow is paused

### Display example for schedule statuses

```
Process1                [Paused]
Process2                [Executable]
.
.
.
Process10               [Paused]
```

## A.4 Display Format for the ifuserctl Command

The display formats for information about the user permission setting statuses as displayed by the ifuserctl command are shown below.

### Display format for user permission settings statuses

- When the "-g" operand is specified or both the "-g" operand and the "-u" operand have been omitted

```
processGroupID = (userID, ...)
```

- When the "-u" operand is specified

```
userID = (processGroupID, ...)
```

<Displayed content>

- *processGroupID*

Displays the process group ID. No more than 31 alphanumeric characters.

- *userID*

Displays a user ID for which Process Flow operation permissions has been set up.

### Display example for the settings status for all process groups and all users (when both the "-g" operand and the "-u" operand have been omitted)

```
PROCESS_GROUP1=(user1,user2, ...)
PROCESS_GROUP2=(user1,user2, .....,
                user1025,user1026)
.
.
.
PROCESS_GROUP10=(user3,user4)
```

Information is output with one process group per line.

However, if a line contains more than 1024 bytes, a tab is output after the comma just before the 1024th byte, and then rest of the data are output in the new line.

Also, if this command is executed by a user other than an Information Integrator user, the output will be the same as for "Display example for the settings status when a user is specified (when the "-u" operand is specified)" below. Only those process groups for which the end user has the required permission will be output.

**Display example for the settings status for the process group specification (when the "-g" operand has been specified)**

```
PROCESS_GROUP1= (user1,user2, ...)
```

Information for the specified process group is output.

However, if a line contains more than 1024 bytes, a tab is output after the comma just before the 1024th byte, and then rest of the data are output in the new line.

Also, if this command is executed by a user other than an Information Integrator user, the output will be the same as for "Display example for the settings status when a user is specified (when the "-u" operand is specified)" below. Only those process groups for which the execution user has the required permission will be output.

**Display example for the settings status for the user specification (when the "-u" operand has been specified)**

```
user1=(PROCESS_GROUP1,PROCESS_GROUP2)
```

All of the process groups to which the specified user belongs are output.

However, if a line contains more than 1024 bytes, a tab is output after the comma just before the 1024th byte, and then rest of the data are output in the new line.



# Appendix B Supplementary Information on Character Code Conversion

## B.1 Operating Environment Definitions for Character Code Conversion

---

### B.1.1 Operating Environment Definitions for Character Code Conversion

---

The operating environment definitions for character code conversion can be used to customize the operating environment. This section explains the following aspects of the operating environment definitions for character code conversion:

#### Procedure for customizing operating environment definitions for character code conversion

The procedure for customizing the operating environment using a text editor is as follows:

- (1) Create the operating environment definitions for character code conversion. Enter the required keywords and values.
- (2) Specify the name of the character code conversion operating environment definitions file in the IFIDBENV environment variable.

#### General format for the operating environment definitions for character code conversion

Refer to "[B.1.2 General Format for the Operating Environment Definitions for Character Code Conversion](#)" for information on the general format for the operating environment definitions for character code conversion.

#### Keywords for the operating environment definitions for character code conversion

The keywords that can be specified in the operating environment definitions for character code conversion are as follows:

- [MESSAGE\\_LEVEL](#): Output type for messages
- [CHARACTER\\_CONVERT\\_ERROR](#): Behavior when character code conversion errors occur
- [ALTERNATE\\_CHARACTER1](#): Alternate characters used when character code conversion errors occur
- [UNICODE\\_ALTERNATE\\_CHARACTER1](#): Alternate characters used when Unicode character code conversion errors occur

#### Encodings for the operating environment definitions for character code conversion

For Windows, the only encoding that can be used to specify the operating environment definitions for character code conversion is Shift-JIS. If an encoding other than Shift-JIS (such as Unicode) is used to specify the definitions, the behavior of the ifcnvdat command is not guaranteed.

For UNIX, the only encoding that can be used to specify the operating environment definitions for character code conversion is the default locale for the operating system. If a different encoding is used to specify the definitions, the behavior of the ifcnvdat command is not guaranteed.

### B.1.2 General Format for the Operating Environment Definitions for Character Code Conversion

---

The general format for the operating environment definitions for character code conversion is as follows:

- Everything up to the newline symbol is counted as a single line.
- One and only one keyword can be specified per line.
- There must be a specification value corresponding to the each keyword.
- There must be a separator symbol between keywords and their values. The separator symbol is a colon (":").
- If there are multiple values specified for a single keyword then there must be a separator symbol (",") separating the values specified.
- Spaces and tabs cannot be specified before or after the separator symbols.

- Comment lines can be created by specifying a comment symbol in the first column of the line. The comment symbol is a hash symbol ("#").
- If the same keyword has been specified on multiple lines, only the first line specified will take effect.
- If a blank space is specified in a file name, only the part of the name up to the blank space will be recognized as the file name.

### Example

```
#<Comment>
CHARACTER_CONVERT_ERROR:CONTINUE
ALTERNATE_CHARACTER1:5f:a1b2
```

## B.1.3 Keywords for the Operating Environment Definitions for Character Code Conversion

---

### B.1.3.1 MESSAGE\_LEVEL Keyword

#### Meaning

Specify the type of messages to be output.

#### Values

- i: Outputs information, warning and error messages (the default value)
- w: Outputs warnings and error messages.
- e: Only outputs error messages.

#### Assumed keywords and values

None

#### Example of specification result

- If "i" is specified
  - For Windows

```
IFI:Information:DB27040:[*,736]Text conversion processing has started - D:\SV_test\temp\ifcnv__.txt D:\SV_test\temp\ifcnv2.txt
IFI:Warning:DB27049:[*,736] There is a character in the source data for which code conversion is not possible
IFI:Information:DB27041:[*,736]Text conversion processing has terminated normally
```

- For UNIX

```
IFI:Information:DB27040:[*,736]Text conversion processing has started - /SV_test/temp/ifcnv__.txt /SV_test/temp/ifcnv2.txt
IFI:Warning:DB27049:[*,736] There is a character in the source data for which code conversion is not possible
IFI:Information:DB27041:[*,736]Text conversion processing has terminated normally
```

- If "w" is specified

```
IFI:Warning:DB27049:[*,2880] There is a character in the source data for which code conversion is not possible
```

- If "e" is specified

IFI:Error:DB27050:[\*,1996] There is a character in the source data for which code conversion is not possible

## B.1.3.2 CHARACTER\_CONVERT\_ERROR Keyword

### Meaning

This keyword specifies the behavior when character code conversion errors occur for text attribute data.

### Values

**EXIT**: Terminate abnormally (the default value)

**CONTINUE**: Adopt the value specified for the **ALTERNATE\_CHARACTER1** keyword or the **UNICODE\_ALTERNATE\_CHARACTER1** keyword as an alternate value, and continue processing.

### Assumed keywords and values

None

### Example of specification result

- If "EXIT" is specified

- For Windows

```
IFI:Information:DB27040:[*,2692]Text conversion processing has started - D:\SV_test\temp
\ifcnv__.txt D:\SV_test\temp\ifcnv2.txt
IFI:Error:DB27050:[*,2692] There is a character in the source data for which code conversion is not
possible
IFI:Information:DB27042:[*,2692]Text conversion processing has terminated abnormally
```

- For UNIX

```
IFI:Information:DB27040:[*,2692]Text conversion processing has started - /SV_test/temp/ifcnv__.txt /
SV_test/temp/ifcnv2.txt
IFI:Error:DB27050:[*,2692] There is a character in the source data for which code conversion is not
possible
IFI:Information:DB27042:[*,2692]Text conversion processing has terminated abnormally
```

- If "CONTINUE" is specified

- For Windows

```
IFI:Information:DB27040:[*,2604]Text conversion processing has started - D:\SV_test\temp
\ifcnv__.txt D:\SV_test\temp\ifcnv2.txt
IFI:Warning:DB27049:[*,2604] There is a character in the source data for which code conversion is not
possible
IFI:Information:DB27041:[*,2604]Text conversion processing has terminated normally
```

- For UNIX

```
IFI:Information:DB27040:[*,2604]Text conversion processing has started - /SV_test/temp/ifcnv__.txt /
SV_test/temp/ifcnv2.txt
IFI:Warning:DB27049:[*,2604] There is a character in the source data for which code conversion is not
possible
IFI:Information:DB27041:[*,2604]Text conversion processing has terminated normally
```

### B.1.3.3 ALTERNATE\_CHARACTER1 Keyword

#### Meaning

This keyword specifies alternate characters for when character code conversion errors occur.

#### Values

Specify half-width and full-width alternate characters using the "XX:YYYY" format. If this keyword is omitted, the codes corresponding to the half-width and full-width underscore characters will be adopted respectively.

- The values specified for "XX" and "YYYY" are values that express the alternate character in hexadecimal notation for the character code used by the output data.
- The code specified for "XX" is the alternate character for alphanumeric attributes (such as CHAR), while the code specified for "YYYY" is the alternate character for Japanese attributes (such as NCHAR).

#### Assumed keywords and values

CHARACTER\_CONVERT\_ERROR:CONTINUE

#### Cautions

If a code corresponding to a control code is specified, there is a risk that the storage processing will either terminate abnormally or produce an unexpected result. We recommend specifying codes that correspond to either an underscore or a blank space. Take care regarding differences in expressions resulting from discrepancies between encodings.

For alternate characters for conversions where a Unicode encoding is the output encoding, use the UNICODE\_ALTERNATE\_CHARACTER1 keyword.

### B.1.3.4 UNICODE\_ALTERNATE\_CHARACTER1 Keyword

#### Meaning

This keyword specifies the alternate character for when character code conversion errors occur when a Unicode encoding is the output encoding.

#### Values

Specify the alternate characters for half-width and full-width characters by using the following format: "Unicode encoding format: alternate character for half-width characters: alternate character for full-width characters". If this keyword is omitted, the codes corresponding to the half-width and full-width underscore characters will be adopted respectively.

##### 1. UCS-2 or UTF-16

Specify half-width and full-width alternate characters using the "TYPE:XX:YYYY" format.

Specify "ucs2" for "TYPE"

The code specified for "XX" is the alternate character for alphanumeric attributes (such as CHAR). Specify only cells between 0x00 and 0x7f, using hexadecimal notation.

The code specified for "YYYY" is the alternate character for Japanese attributes (such as NCHAR). Specify a value between 0x0080 and 0xD7ff for the row, and a value between 0xE000 and 0xFFFF for the cell, in that order.

##### 2. UTF-8

Specify half-width and full-width alternate characters using the "TYPE:XX:TTMMBB" format.

Specify "utf8" for "TYPE"

The code specified for "XX" is the alternate character for alphanumeric attributes (such as CHAR). Specify a value between 0x00 and 0x7f in hexadecimal notation.

The code specified for "TTMMBB" is the alternate character for Japanese attributes (such as NCHAR).

a. Specifying full-width characters

- "TT": Specify a value between 0xC2 and 0xDF , using hexadecimal notation.
- "MM": Specify a value between 0x80 and 0xBF , using hexadecimal notation.
- "BB": Specify "00".

b. Specifying triple-byte characters

- "TT": Specify a value between 0xE0 and 0xEF, using hexadecimal notation.
- "MM": Specify a value between 0xA0 and 0xBF, using hexadecimal notation.
- "BB": Specify a value between 0x80 and 0xBF , using hexadecimal notation.

If the format of the Unicode encoding used by the data is not the same as the format specified by the keyword, the character will be converted to the character corresponding to the Unicode encoding type used by the data, and it will be the converted character that to be used.

Example: If the format for the output destination Unicode encoding is UCS-2 and "utf8:3F:C2BB00" has been specified for this keyword, both characters (0x3F and 0xC2BB00) will be converted to their equivalent UCS-2 codes before being used.

**Assumed keywords and values**

CHARACTER\_CONVERT\_ERROR:CONTINUE

**Cautions**

If a code corresponding to a control code is specified, there is a risk that the storage processing will either terminate abnormally or produce an unexpected result. We recommend specifying codes that correspond to either an underscore or a blank space. Take care regarding differences in expressions resulting from discrepancies between encodings.

**B.2 Specifying Encoding Combinations and Conversion Behavior**

**Combinations of encodings that can be specified**

The following table shows the encoding combinations that can be specified with the text character code conversion utilities:

Table B.1 Combinations of encodings for which conversion is possible

Input encodings		Output encodings														
		Shift-JIS	EUC			JEF-EBCDIC				Unicode						
			U90	S90	HP	Kana (font emphasis)	Kana (area emphasis)	ASCII (font emphasis)	ASCII (area emphasis)	UCS 2	UCS 2 (MS)	CFS D (*2)	UTF 8	UTF 8-4	UTF 16	UTF 16 (MS)
Shift-JIS		Y (*1)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
EUC	U90	Y	-	-	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	S90	Y	-	Y (*1)	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	HP	Y	-	-	-	Y	Y	Y	Y	-	-	-	-	-	-	-
JEF-EBCDIC	Kana (font emphasis)	Y	Y	Y	Y	-	-	-	-	Y	Y	Y	Y	Y	Y	Y
	Kana (area)	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-

Input encodings		Output encodings															
		Shift-JIS	EUC			JEF-EBCDIC				Unicode							
			U90	S90	HP	Kana (font emphasis)	Kana (area emphasis)	ASCII (font emphasis)	ASCII (area emphasis)	UCS 2	UCS 2 (MS)	CFS D (*2)	UTF 8	UTF 8-4	UTF 16	UTF 16 (MS)	
	emphasis)																
	ASCII (font emphasis)	Y	Y	Y	Y	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	
	ASCII (area emphasis)	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	
Unicode	UCS2	Y	Y	Y	-	Y	-	Y	-	Y (*1)	Y	Y	Y	Y	-	-	-
	UCS2(MS)	Y	Y	Y	-	Y	-	Y	-	Y	Y (*1)	Y	Y	-	-	-	
	CFS D (*2)	Y	Y	Y	-	Y	-	Y	-	Y	Y	Y (*1)	Y	-	-	-	
	UTF8	Y	Y	Y	-	Y	-	Y	-	Y	Y	Y	Y (*1)	-	-	-	
	UTF8-4	Y	Y	Y	-	Y	-	Y	-	Y	Y	Y	Y	Y (*1)	Y	Y	
	UTF16	Y	Y	Y	-	Y	-	Y	-	Y	Y	Y	Y	Y	Y (*1)	Y	
	UTF16(MS)	Y	Y	Y	-	Y	-	Y	-	Y	Y	Y	Y	Y	Y	Y (*1)	
IBM Japanese character set	Kana	Y	Y	Y	-	Y	Y	-	-	-	-	-	-	-	-	-	
	Lower case letters	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	

Y: Conversion possible. -: Combination for which conversion is not possible

\*1: These combinations can be specified when changing the expression format for numerical values.

\*2: This format cannot be specified with the ificnvdat command.

## Notes

- The command execution user must be granted read permission for the input file. The command execution user must be granted read and write permissions for the output file.
- If the input file has 0 bytes, the command will output a warning message before creating a 0 byte output file and terminating normally.

# Appendix C Supplementary Information on Executing Remote System Jobs

## C.1 Extension Operand Specification File

The extension operand specification file is used to specify the detailed behavior of the Execute Remote Job Command.

The extension operand specification file is specified with the "-e" operand of the command. Also, by specifying the storage directory for the file in the IFIEFLPATH environment variable, the file can be specified using a relative path when the command is executed.

### Synopsis

Enter instruction statements (which consist of operands and operand values) in the extension operand specification file. The syntax for extension operands is as follows:

```
operand=value  
  
[operand=value]  
  
. . . .
```

In this description the syntax is simplified via the following notation:

operand: Operands not enclosed in square brackets must be specified.

[operand]: Operands enclosed in square brackets can be omitted, or can be specified repeatedly.

Also, note the following points when specifying the operands:

- Enter one and only one extension operand per line, and be sure to end each line with a newline character.
- The values specified as operand values can be specified using either uppercase or lowercase characters, or a combination of both.

### Operands supported by the command

Refer to "[C.1.1 Extension Operands for the Execute Remote Job Command](#)" for information on the types of extension operands that can be used with this command. Note that if the "-e" operand is omitted when the command is executed, the command will run with the default values for the operands in the extension operand specification file.

## C.1.1 Extension Operands for the Execute Remote Job Command

### Syntax for extension operands

[C.1.6 [retry](#) Operand=(*numberOfRetries*, *retryInterval* [,*unit*])]

[C.1.2 [jobparam](#) Operand=" *userSpecifiedJobParameters*"]

[C.1.5 [prtsecur](#) Operand=(*remoteSystemUsername* [, [*remoteSystemPassword*] [, *remoteSystemGroupName*]])]

[C.1.3 [jobrsp](#) Operand=*waitForJobResults*]

[C.1.4 [jobtime](#) Operand=*jobResultsMonitoringTime*]

### Cautions

If the remote system is a Global Server/PRIMEFORCE system, "no" (do not receive job results) must be specified for the jobrsp operand.

## C.1.2 jobparam Operand

jobparam=" *userSpecifiedJobParameters* "

## Content

Specify the user-specified job parameters that are passed when jobs are executed. If this parameter is omitted, the only parameters passed to the job will be the job identification number and the remote system name.

## Format

For *userSpecifiedJobParameters* specify the user-specified job parameters, enclosed in double quotes and using no more than 255 alphanumeric characters. However, if the system where the job will be executed is a Windows system, the following restrictions also apply:

$lengthOfJobName + lengthOfParametersPassedToJob \leq 200$ characters
---

## C.1.3 jobrsp Operand

---

`jobrsp=waitForJobResults`

### Content

Specify whether the command should wait to receive the result of the job before returning.

If this operand is omitted, "yes" will be adopted.

If job results are received, the command will wait until the job result notification is received from the remote job before returning. If job results are not received, the command will return at the point when the remote job is started. Refer to the Linkexpress manual for information on job result notification. Note that the execution result for the job is not reflected to the return value for the command.

Also, if "yes" is specified for this operand, be sure to specify the monitoring time for job results with the `jobtime` operand. If job result notification fails, this command will freeze.

### Format

`yes`: Wait to receive job results.

`no`: Does not wait to receive job results.

## C.1.4 jobtime Operand

---

`jobtime=jobResultsMonitoringTime`

### Content

Specify the time that the command will wait for result notifications from the jobs that it executes. Note that if "0" is specified, Information Integrator will not perform timeout monitoring for job results. In this case, the command will continue to wait for job execution to finish.

### Format

For *jobResultsMonitoringTime* specify a value between 0 and 65535 (seconds). The default value is 0.

### Cautions

If timeout monitoring for job results is not performed, TRx3014 message will be output if a job result notification is not received within 30 minutes for the remote job executing. This message will not be output if a monitoring time for job result monitoring has been specified.

We recommend specifying a job result monitoring time to take into account cases where job results cannot be notified for some reason, such as when a job result notification is not issued. Consider the maximum time that job execution is likely to take when setting this time period.

## C.1.5 prtsecur Operand

---

`prtsecur=(remoteSystemUsername [,remoteSystemPassword][,remoteSystemGroupName])`



## Content

This operand specifies security information for the remote system. If this operand is omitted, the following default values will become the security information for the remote system, depending on the system type for the local system:

- Windows: User name "guest", no password
- UNIX: User name "lnkexp", password "lnkexp0"

For the security information specified by this operand, specify security information that matches the objective. Refer to the System Design Guide for information on security.

## Format

For *remoteSystemUsername* specify the user name for the remote side, using no more than 20 alphanumeric characters. For FNA (HICS), use no more than 8 characters. Also, use no more than 8 characters if the remote system is Global Server/PRIMEFORCE system.

For *remoteSystemPassword* specify the password for the remote side, using no more than 31 alphanumeric characters (the password is optional). For FNA (HICS), use no more than 8 characters. Also, use no more than 8 characters if the remote system is Global Server/PRIMEFORCE system.

For *remoteSystemGroupName* specify the group name for the remote side, using no more than 8 alphanumeric characters (the group name is optional).

The parameters that can be set vary depending on the remote system. The combination is as follows:

(Combinations)

- (1) prtsecur=(*remoteSystemUserID*)
- (2) prtsecur=(*remoteSystemUsername*, *remoteSystemPassword*)
- (3) prtsecur=(*remoteSystemUsername*, *remoteSystemPassword*, *remoteSystemGroupName*)
- (4) prtsecur=(*remoteSystemUsername*, *remoteSystemGroupName*)

Remote system	Formats that can be specified
Windows	(1), (2), (3), (4)
UNIX	(1), (2)
Global Server/PRIMEFORCE	(2), (3)

## Note

If the remote system is Linkexpress and the network definition in the Linkexpress specifies "yes" for the "logon" operand (i.e. user authentication is to be performed), the security information for the remote system needs to be defined on the local system. Note that if the "logon" operand specification has been omitted, security checks will be performed in the same way as if "yes" (implement user authentication) has been specified for the "logon" operand.

## C.1.6 retry Operand

---

retry=(*numberOfRetries*, *retryInterval*[, *unit*])

### Content

This operand specifies the number of automatic retries and the retry interval for operations that can be retried when errors occur.

### Format

*numberOfRetries*: 1 to 99

*retryInterval*: 1 to 9999 (minutes or seconds)

*unit*: Specify either "M" (minutes) or "S" (seconds) as the unit for the event retry interval. If the units are not specified, "M" (minutes) will be adopted.

## Example

Specifying one retry with a retry interval of one minute

retry=(1,1) or

retry=(1,1,M) or

retry=(1,60,S)

Table C.1 Errors for which retry processing is possible

Error category	Error code	Meaning
20	90	The specified file is being used.
40	10	A forced cancelation has been received from the remote system.
	30	A line error has occurred.
	40	A cancelation has been received from the remote system.
	50	An error has occurred with the remote system.
50	50	An error has occurred with TCP/IP.
	60	A timeout has occurred.
	80	Failed to establish a connection.
	100	Temporarily not enough resources.
	250	Too many concurrent transfers.

Refer to the *Message Guide* for more information on error categories and error types.