FUJITSU

FUJITSU Software
Interstage Information Integrator
V11.0.0

Transfer Accelerator Setup Guide

Windows

Preface

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 how to set up Interstage Information Integrator Transfer Accelerator (from now on, referred to as "III Transfer Accelerator"). This document also explains the functions and the operation methods of III Transfer Accelerator.

Intended Readers

This document is intended for the following readers:

- Users who want to learn about III Transfer Accelerator
- Users who will set up III Transfer Accelerator
- Users who will operate III Transfer Accelerator

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 Functions of III Transfer Accelerator

This chapter explains the functional overview and each functions of III Transfer Accelerator.

Chapter 2 System configuration

This chapter explains the composition of the data transfer system.

Chapter 3 System requirements

This chapter explains a necessary operating environment.

Chapter 4 Environment Settings

This chapter explains environment settings after installation.

Chapter 5 Start and stop III Transfer Accelerator

This chapter explains how to start and stop III Transfer Accelerator.

Chapter 6 Operation

This chapter explains how to handle trouble, and log or message output by III Transfer Accelerator.

Appendix A Notes concerning usage environment of III Transfer Accelerator

This appendix explains the notes concerning usage environment of III Transfer Accelerator.

Appendix B Android version III Transfer Accelerator operation guide

This appendix explains the manner of operation of the III Transfer Accelerator for Android.

Appendix C Speed up transferring file from Information Integrator Server

This appendix explains the method of speeding up the file transfer between Information Integrator Servers by using III Transfer Accelerator.

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 explains the commands provided by Information Integrator.

FUJITSU Software Interstage Information Integrator Transfer Accelerator Setup Guide [this document]

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	FUJITSU Software Interstage Information Integrator Command Reference
Transfer Accelerator Setup Guide (This document)	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

Product names referred to in this document have been abbreviated as shown in the table below.

Note that system names and product names in this document are not accompanied by trademark symbols such as Ô or Ò.

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

Abbreviation	Official title
	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
	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

Abbreviation	Official title
	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
	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

Abbreviation	Official title
	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

Chapter 1 Functions of III Transfer Accelerator

This chapter explains the flow of the functions of III Transfer Accelerator.

1.1 What is III Transfer Accelerator

III Transfer Accelerator is software of data transfer accelerator. It speeds up data communications of the data transfer tool and the user application, etc. that use TCP/IP (from now on, referred to as "application") between remote places. It uses original high-speed transfer protocols based on UDP and the communication bandwidth control technology that use the telecommunication bandwidth to its maximum. As a result, the reliability of the communication is secured achieving the cancellation of communication delay by long distance communication and the fast transfer.

Before III Transfer Accelerator is introduced, it is not necessary to adjust the application. In the data source, III Transfer Accelerator can be used only by modifying the configuration of destination of data transfer of the application.

Figure 1.1 Before and after the introduction of III Transfer Accelerator
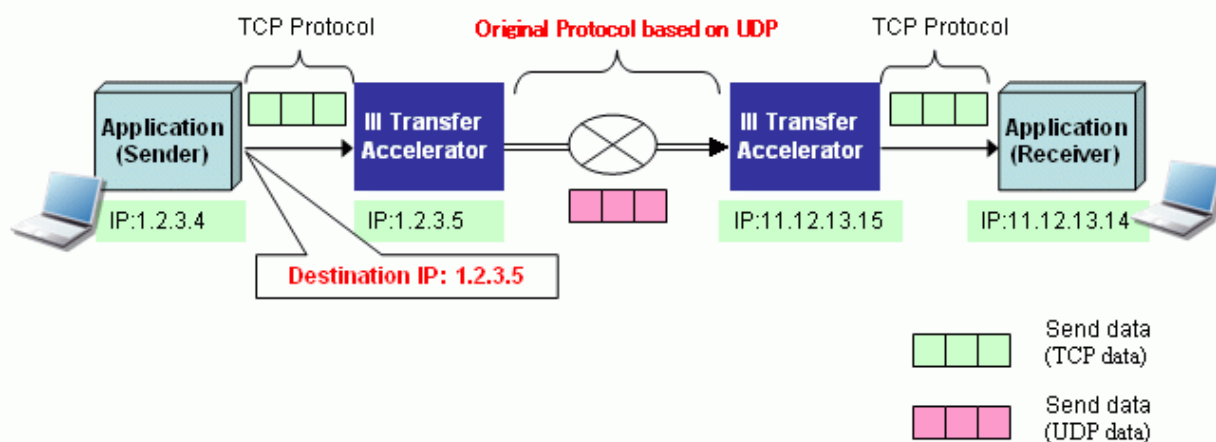
In addition, you do not have to make a file beforehand about transmission data in III Transfer Accelerator. A past data transfer product transmits data reading transmission data made a file beforehand (File Transfer Type). By contrast in III Transfer Accelerator, the immediate data is received from the application, and III Transfer Accelerator is transmitted to the other party side system as it is (Memory Transfer Type).

Figure 1.2 Comparison between past data transfer product and III Transfer Accelerator
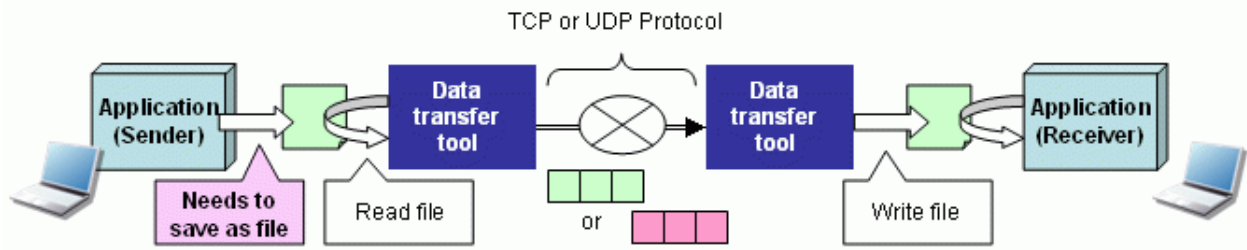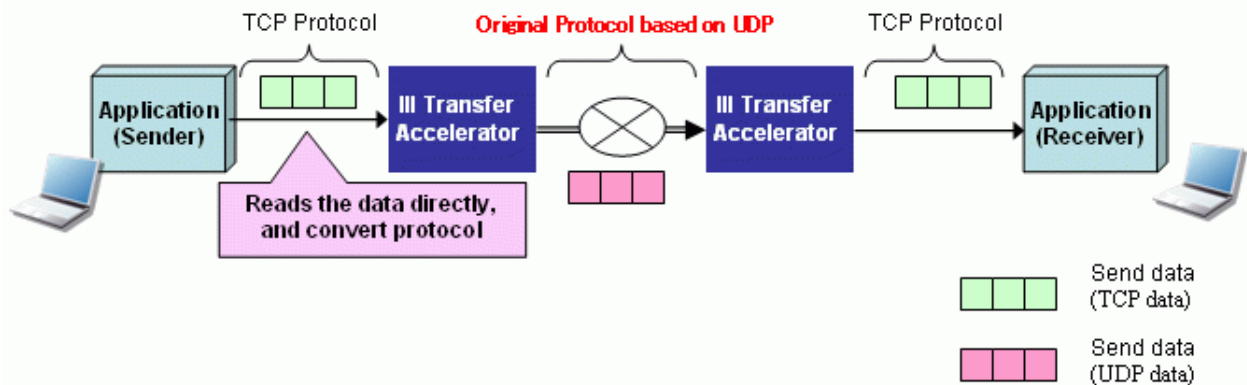
Moreover, III Transfer Accelerator can be used on Android that is smart device in addition to Windows, Linux, and Solaris. You can send and receive data faster than existing TCP communication, in the environment that has communication data wasted at high ratio such as WiMAX, by the introduction of III Transfer Accelerator into the Android device that operates the application that uses TCP/IP.

Note

Android version III Transfer Accelerator can be used only as a client. It is not possible to use it as a server. Moreover, it is necessary to introduce III Transfer Accelerator into the Android device that operates the application that uses TCP/IP. It is not possible to use III Transfer Accelerator by arranging the application and III Transfer Accelerator that uses TCP/IP in a separate Android device. Refer to "Chapter 2 System configuration" for details.

In this manual, III Transfer Accelerator that operates in Windows, Linux, and the Solaris environment is written to Android version III Transfer Accelerator, "PC version III Transfer Accelerator". However, content of both PC version and the Android version, and which is indicated writes in case of the clear situation, "III Transfer Accelerator".

Refer to "Appendix A Notes concerning usage environment of III Transfer Accelerator" when you use III Transfer Accelerator.

The function of III Transfer Accelerator is shown below.

Table 1.1 List of functions of III Transfer Accelerator

Function name	Explanation
Data transfer	It is a transfer function of the application data. Original high-speed transfer protocols named RPS, UNAP, and R-TSP besides usual TCP can be used as a communication protocol.
Dynamic bandwidth control	The band of a possible data transfer is dynamically controlled.
Data encryption	The communication data on the network is encrypted.
Transfer-speed control	The network load is reduced by controlling the data-transfer velocity. Especially, it is effective when line speed is slow in the bulk file transfer.

1.2 Data transfer

In this section, it explains the communication protocols and the communication ports used to send and receive data using III Transfer Accelerator.

1.2.1 Communication protocols that can be used

The following communication protocols can be used in III Transfer Accelerator.

Table 1.2 Communication protocols that can be used

Protocol	Description
TCP	It is a protocol used by the communication between the applications that use TCP/IP.
RPS	Random Parity Stream: Fujitsu's original packet error recovering technology.
UNAP	Universal Network Acceleration Protocol: Fujitsu's original unnecessary packet resending control technology.
R-TSP	Reconfigurable-Transport: Auto select technology of best-performance protocol based on network feature.

RPS and UNAP are the protocols based on UDP. In general, UDP is faster than TCP, but not as reliable as TCP. In other hand, an original technology to improve reliability has been added to RPS and UNAP respectively. As a result, a high reliability communication can be achieved taking advantage of the advantage of UDP whose communication speed is fast.

It explains details of RPS, UNAP, and R-TSP at the following.

RPS

It is a communication method to which sink enables RPS (Random Parity Stream: disappearance correction technology) to restore data even if the redundant data encoded beforehand is transmitted, and the packet loss is generated, and retransmission of packets are assumed to be unnecessary.

RPS is useful in the environment that packet loss rate is high, because RPS does not need retransmission of packets even if the packet is lost. As a result the load is never applied to the network. However, the overhead is generated, because in the sending side, the redundant data (coded data) are made to unnecessary retransmission, on the other hand in the receiving side, the coded data are decoded.

Figure 1.3 Mechanism of RPS
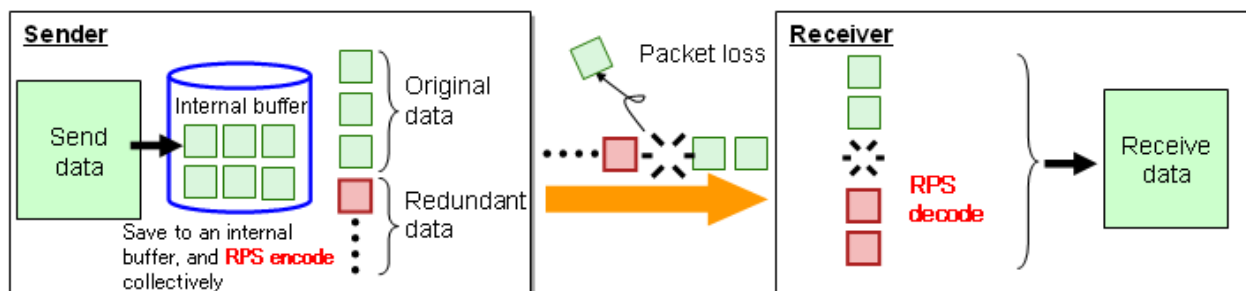
UNAP

UNAP (Universal Network Acceleration Protocol: communication high speed technology) judges why the delivery delay are generated for the request packet sending again from the receiving side, either by temporary congestion on the network or by the packet loss.

UNAP is a communication method to which an unnecessary sending again is controlled by sending the packet again only when judged the generation of the packet loss.

UNAP is useful in the environment that packet loss rate is low. CPU utilization can be suppressed to overheads few because UNAP is different from RPS in that UNAP do not encode/decode.

Figure 1.4 Mechanism of UNAP
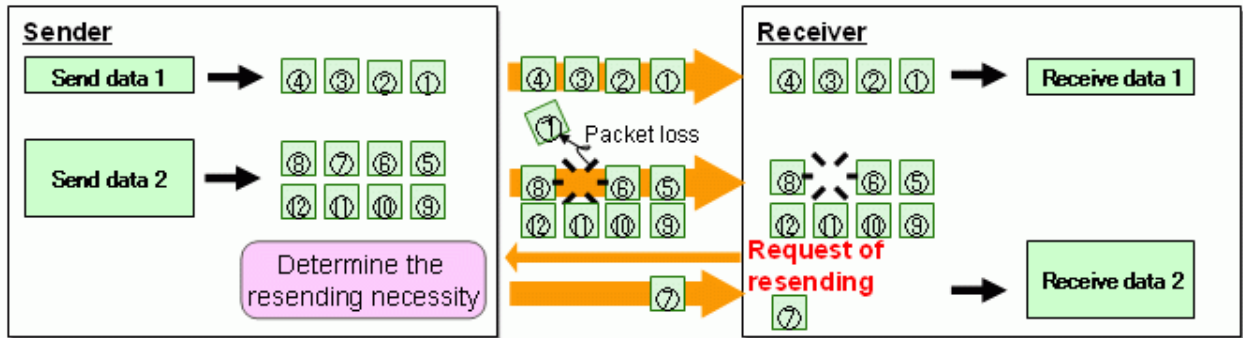
R-TSP

R-TSP (Reconfigurable-Transport: optimizing communication technology) selects best transmission mode from TCP, RPS, and UNAP by the automatic operation according to the characteristic of the network characteristic.

Figure 1.5 Mechanism of R-TSP

CCM: Communication characteristics model
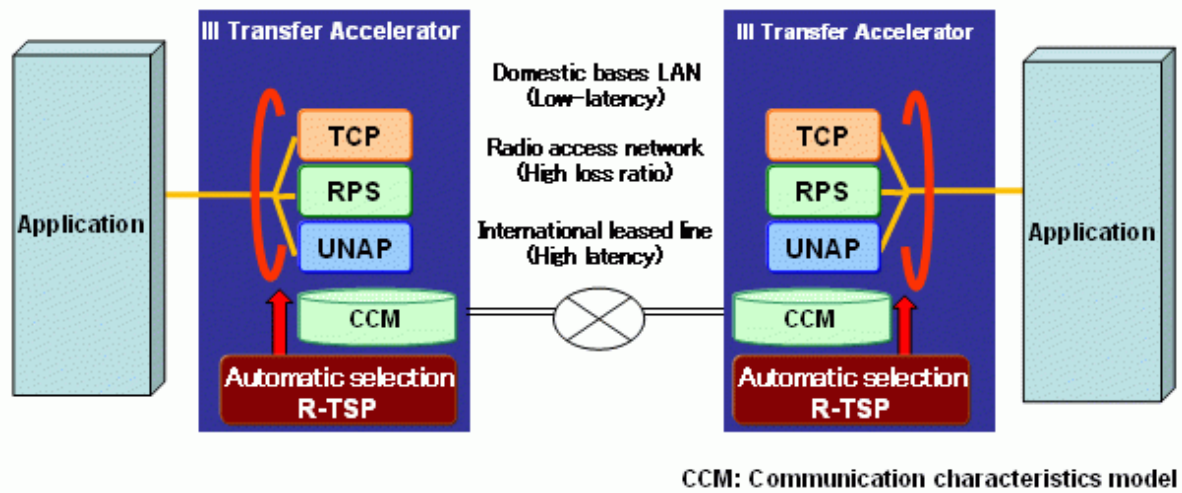
1.2.2 Communication ports that be used

In III Transfer Accelerator, three communication ports are used to do data transfer.

- TCP port for data transfer control

- TCP port for data receiving

- UDP port for data transfer

Figure 1.6 Communication ports that be used by III Transfer Accelerator
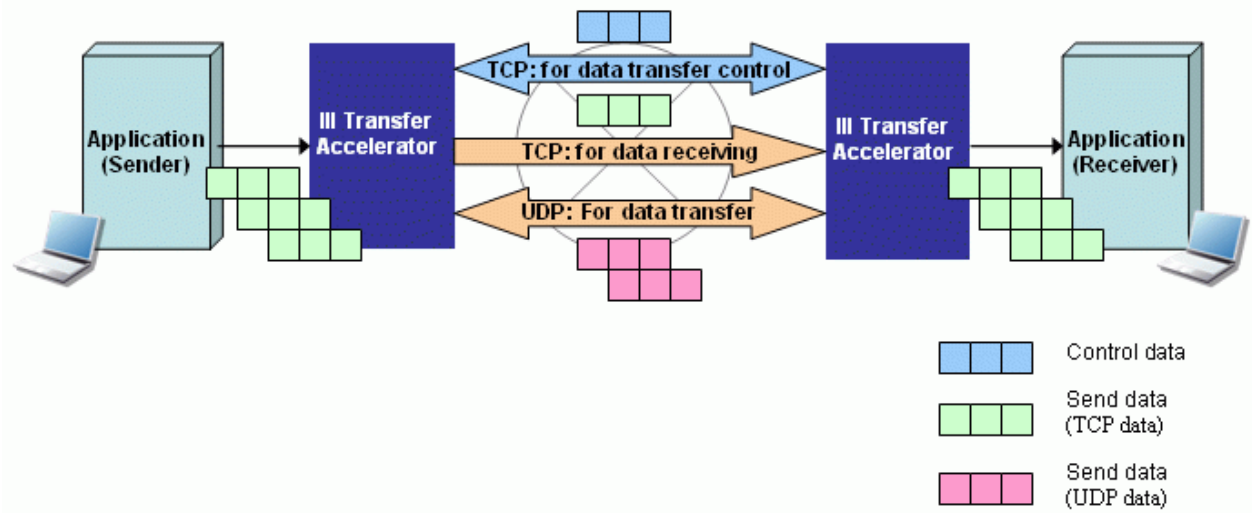
1.3 Dynamic bandwidth control

Using a previous bandwidth control, data that exceeds bandwidth set beforehand cannot be transfer, even if the telecommunication line has empty bandwidth. In the other hand, III Transfer Accelerator regularly confirms an empty bandwidth on the telecommunication line and controls the bandwidth dynamically. Thus, Data can be sent and received speedy by that the empty bandwidth is used to its maximum while the influence on other communications is made a minimum.

Figure 1.7 Usual bandwidth control and dynamic bandwidth control
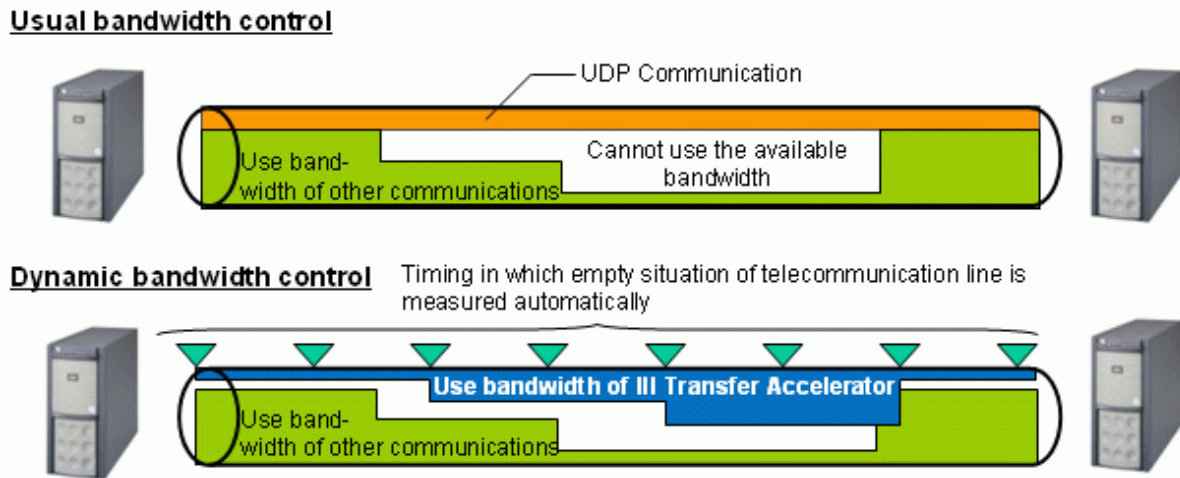
1.4 Data encryption

The user data is encrypted while that flows over the network and is decoded when the data is received automatically operation with the environmental configuration on III Transfer Accelerator. III Transfer Accelerator encrypts user data by using AES that is the encryption algorithm. AES encrypts user data by the common key of 128-bit strength.

1.5 Transfer-speed control

The upper limit and the lower limit of the transfer-speed can be specified with the environment configuration of III Transfer Accelerator. Thus, it can be prevented from influencing other communications occupying the network band when a large file transfers in the environment that the line speed is slow.

Chapter 2 System configuration

This chapter explains the composition of the data transfer system using III Transfer Accelerator.

In the data transfer system, the role of III Transfer Accelerator is divided into "Client" and "Server". The client receives the event that becomes the source of the data transfer, and demands data transfer from the server. The server transfers data according to the demand from the client.
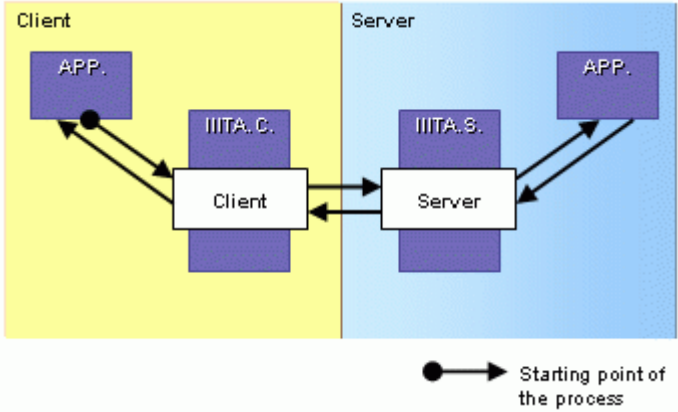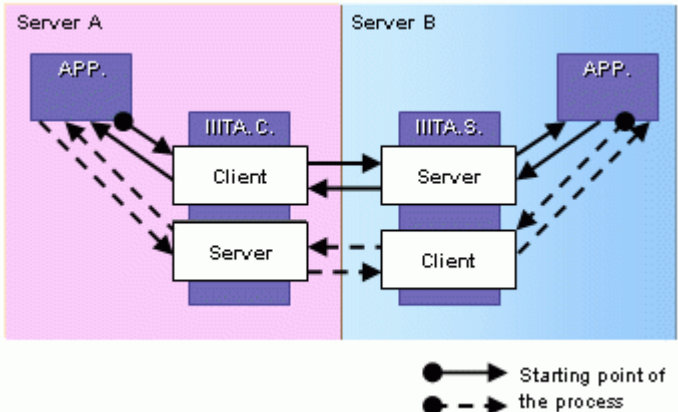
In the data transfer system using III Transfer Accelerator, three compositions that exist in the following table are possible.

However, when you use Android version III Transfer Accelerator (Client), refer to "2.4 Notes when Android version III Transfer Accelerator is used".

In the configuration in the table the following, the following terms are used.

- "APP.": Application

- "IIITA.C.": III Transfer Accelerator(Client)

- "IIITA.S.": III Transfer Accelerator(Server)

Table 2.1 Three compositions of data transfer system using III Transfer Accelerator

Name	Explanation	System Configuration

Client-server Type	Transfer data between IIITA.C. and IIITA.S.
	
	IIITA.C. side always becomes the source of the data transfer processing.
	
	The data transfer between IIITA.S. of two or more IIITA.C. and 1 is also possible.
		
		- Client
		
		   Request data transfer
		
		- Server
		
		   Process data transfer

Server-server Type	Transfer data between two IIITA.S.. Both IIITA.S. can become the source of the data transfer processing. (Both IIITA.S. can be operated as IIITA.C.. One operates as IIITA.S. when the other one operates as IIITA.C..)	 - Server A Request/Process data transfer - Server B

			Process/Request data transfer
Mixed Type	Both "Client-server Type" and "Server-server Type" exist in the same data transfer system.		
			- Client Request data transfer - Server A Request/Process data transfer - Server B Request/Process data transfer

The following explains configuration details of each system.

2.1 Client-Server Type

According to III Transfer Accelerator server and client, and the way it arranges applications, Client-Server Type can be divided into four types.

Table 2.2 Composition pattern of client-server type

No	Class	Explanation	System Configuration
1	Client & Server co-exists	In both client and server, user application and the software will be resided in the same system.	
2	Client separate, Server co-exists	In client side, user application and the software will reside in the separate system. In server side, user application and the software will reside in the same system.	 (*1)

| 3 | Client co-exists, Server separate | In client side, user application and the software will reside in the same system. In server side, user application and the software will reside in the separate system. | |
| 4 | Client & Server both separate | In both client and server, user application and the software will reside in the separate system. |
(*2) |

(*1) III Transfer Accelerator (Client) can be merged into one system (Reference: #4)

(*2) III Transfer Accelerator (Client) can be separated into each client (Reference: #2)

2.2 Server-Server Type

According to III Transfer Accelerator server, and the way it arranges applications, Server-Server Type can be divided into four types.

Table 2.3 Composition pattern of Server-Server type

No	Class	Explanation	System Configuration
1	Both Servers co-exists	In both servers, user application and the software will reside in the same system.	
2	One Server separate, another Server co-exists	In one server, user application and the software will reside in the separate system. For another server, user application and the software will reside in the same system.	
3	One Server co-exists, another Server separate	In one server, user application and the software will reside in the same system. For another server, user application and the software will reside in the separate system.	

4	Both Servers separate	In both servers, user application and the software will reside in the separate system.	

2.3 Client and Server Mixed

Configuration can be made by mixing aforementioned Client-Server Type and Server-Server Type. The following shows one example of possible configurations.

Table 2.4 Composition pattern of Client and Server Mixed

Class	Explanation	System Configuration
Client co-exist, Server A co-exist, Server B separate	In client and Server A, user application and the software will reside in the same system. In Server B, user application and the software will reside in the separate system.	

2.4 Notes when Android version III Transfer Accelerator is used

In this section, it explains notes when Android version III Transfer Accelerator is used.

Android version III Transfer Accelerator can be used only as a client. It is not possible to use it as a server. Moreover, it is necessary to introduce Android version III Transfer Accelerator into the Android device that operates the application. Therefore, the arrangement of Android version III Transfer Accelerator and the application becomes only a cohabitation type.

The composition pattern that can be executed by the data transfer system using Android version III Transfer Accelerator is shown among system configurations presented by this chapter below.

Table 2.5 System configuration possible by Android version III Transfer Accelerator

System Configuration	Composition pattern	Right or wrong of execution
Client-Server Type	Client & Server both co-exists	Y
	Client separate, Server co-exists	N
	Client co-exists, Server separate	Y
	Client & Server both separate	N
Server-Server Type	Both Servers co-exists	N
	One Server separate, another Server co-exists	N

	One Server co-exists, another Server separate	N
	Both Servers separate	N
Client and Server Mixed	Type that mixes the above-mentioned each composition	P

Y: It is possible to execute it.

N: It is not possible to execute it.

P: Only when only the composition pattern that can be executed mixes it, it is possible.

Chapter 3 System requirements

When III Transfer Accelerator is used, this chapter explains necessary system requirements.

3.1 Hardware Requirements

In both the server and the client of III Transfer Accelerator, the following hardware resources are necessary.

For Windows

Table 3.1 Necessary hardware resource in Windows environment

Class	Required Spec

Operation model	- III Transfer Accelerator(Server)
	
	  - PRIMERGY
	
	  - PRIMEQUEST 1000 Series
	
	  - Fujitsu Global Cloud Platform FGCP/S5
	
	  - Machine only for server of AT interchangeable architecture of IBM,DELL,HP,NEC, Hitachi
	
	  It is the one to secure operation as for Windows Server 2012/Windows Server 2008/ Windows Server 2003.
	
	- III Transfer Accelerator(Client)
	
	  - FMV
	
	  - PRIMERGY
	
	  - PRIMEQUEST 1000 Series
	
	  - Fujitsu Global Cloud Platform FGCP/S5
	
	  - Machine only for server of AT interchangeable architecture of IBM,DELL,HP,NEC, Hitachi
	
	  It is the one to secure operation as for Windows Server 2012/Windows Server 2008/ Windows Server 2003.
	
	  - AT compatible machine

MEMORY	more than 2GB (*1)
DISK	more than 500MB free space

(*1) III Transfer Accelerator needs usable memory for Java (default 512MB) when it starts.

For Linux

Table 3.2 Necessary hardware resource in Linux environment

Class	Required Spec

Operation model	- III Transfer Accelerator(Server)
	
	  - PRIMERGY
	
	  Linux installation agent service bandletype and Diskless/HD type (SupportDesk target model)
	
	  - PRIMEQUEST 1000 Series
	
	  - Fujitsu Global Cloud Platform FGCP/S5
	
	- III Transfer Accelerator(Client)
	
	  - PRIMERGY

	Linux installation agent service bandletype and Diskless/HD type (SupportDesk target model)
	- PRIMEQUEST 1000 Series
	- Fujitsu Global Cloud Platform FGCP/S5
MEMORY	more than 2GB (*1)
DISK	more than 500MB free space

(*1) III Transfer Accelerator needs usable memory for Java (default 512MB) when it starts.

For Solaris

Table 3.3 Necessary hardware resource in Solaris environment

Class	Required Spec
Operation model	- III Transfer Accelerator(Server)
	- SPARC Enterprise
	- PRIMEPOWER
	- S Series
	- III Transfer Accelerator(Client)
	- SPARC Enterprise
	- PRIMEPOWER
	- S Series
MEMORY	more than 2GB (*1)
DISK	more than 500MB free space

(*1) III Transfer Accelerator needs usable memory for Java (default 512MB) when it starts.

For Android

Table 3.4 Necessary hardware resource in Android environment

Class	Required Spec
Operation model	- III Transfer Accelerator(Server)
	- (cannot be used as a server)
	- III Transfer Accelerator(Client)
	- Smart device equipped with Android
MEMORY	more than 1GB
DISK	more than 500MB free space

3.2 Software Requirements

In both the server and the client of III Transfer Accelerator, the following software resources are necessary.

For Windows

Table 3.5 Necessary software resource in Windows environment

Class	Required Spec
OS	It is possible to operate by the following OS.
(*1)(*2)	- Windows Server 2003

Class	Required Spec
	- Windows Server 2008
	- Windows Server 2012
	- Windows Vista
	- Windows 7
	- Windows 8
Java (*3)	Either of the following items is required. - Java Runtime Version 6 Update 24 (6u24, 1.6.0_24) or later (JDK/JRE) - Java Runtime Version 7 Update 7 (7u7, 1.7.0_7) or later (JDK/JRE)

(*1) Operate in 32bit mode, even on 64bit machine.

(*2) When the IPv6 address is used, Windows7, Windows Vista, Windows Server 2008 or Windows Server 2012 is necessary.

(*3) When the IPv6 address is used, Java Runtime Version 7 Update 7 or later is necessary.

For Linux

Table 3.6 Necessary software resource in Linux environment

Class	Required Spec
OS (*1)	It is possible to operate by the following OS. - Red Hat Enterprise Linux 5 (for x86) - Red Hat Enterprise Linux 5 (for Intel64) - Red Hat Enterprise Linux 6 (for x86) - Red Hat Enterprise Linux 6 (for Intel64)
Java (*2)	Either of the following items is required. - Java Runtime Version 6 Update 24 (6u24, 1.6.0_24) or later (JDK/JRE) - Java Runtime Version 7 Update 7 (7u7, 1.7.0_7) or later (JDK/JRE)

(*1) Operate in 32bit mode, even on 64bit machine.

(*2) When the IPv6 address is used, Java Runtime Version 7 Update 7 or later is necessary.

Note

Linux version III Transfer Accelerator can be used as a client, and cannot be used as a server in the current version.

For Solaris

Table 3.7 Necessary software resource in Solaris environment

Class	Required Spec
OS (*1)	It is possible to operate by the following OS. - Solaris 10 - Solaris 11
Java (*2)	Either of the following items is required. - Java Runtime Version 6 Update 24 (6u24, 1.6.0_24) or later (JDK/JRE) - Java Runtime Version 7 Update 7 (7u7, 1.7.0_7) or later (JDK/JRE)

(*1) Operate in 32bit mode, even on 64bit machine.

(*2) When the IPv6 address is used, Java Runtime Version 7 Update 7 or later is necessary.

Note

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Solaris version III Transfer Accelerator can be used as a client, and cannot be used as a server in the current version.

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For Android

Table 3.8 Necessary software resource in Android environment

Class	Required Spec
OS	It is possible to operate by the following OS. - Android OS 4.0 - Android OS 4.1 - Android OS 4.2

Note

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Android version III Transfer Accelerator can be used as a client, and cannot be used as a server.

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3.3 Network Requirements

Enable communication between the server and the client of III Transfer Accelerator requires the following network resources.

Table 3.9 Network resource necessary for operation of III Transfer Accelerator

Class	Required Spec			Note
Bandwidth	more than 2Mbps or faster (more than 3Mbps recommended)			
Line Quality	packet loss rate below 3% recommended			
Line Type	dedicated line (international) recommended			
Dedicated Port	III Transfer Accelerator(Server)	TCP	1 port	for control session waiting
	III Transfer Accelerator(Server)	TCP	1 port	for receiving from III Transfer Accelerator client
	III Transfer Accelerator(Server)/III Transfer Accelerator(Client)	UDP	1 port	for data transfer from other III Transfer Accelerator

Chapter 4 Environment Settings

This chapter explains environment settings after installation.

Note

It is required that III Transfer Accelerator has been installed normally. Refer to *Transfer Accelerator Software Release Guide* for installation method of III Transfer Accelerator.

Moreover, confirm the required version of Java has been installed. Refer to "Chapter 3 System requirements" for information of Java version used by III Transfer Accelerator.

4.1 Overview of environment settings

In this section, it explains the outline of environment settings.

Places where environmental setting is necessary

The environmental setting is necessary for the part of [A-1], [C-1]-[C-3], [S-1]-[S-3], and [F-1] of the following figures.

Moreover, the example of the set up information of [A-1], [C-1]-[C-3], and [S-1]-[S-3] is also described in this figure.

Figure 4.1 Places where environmental setting is necessary
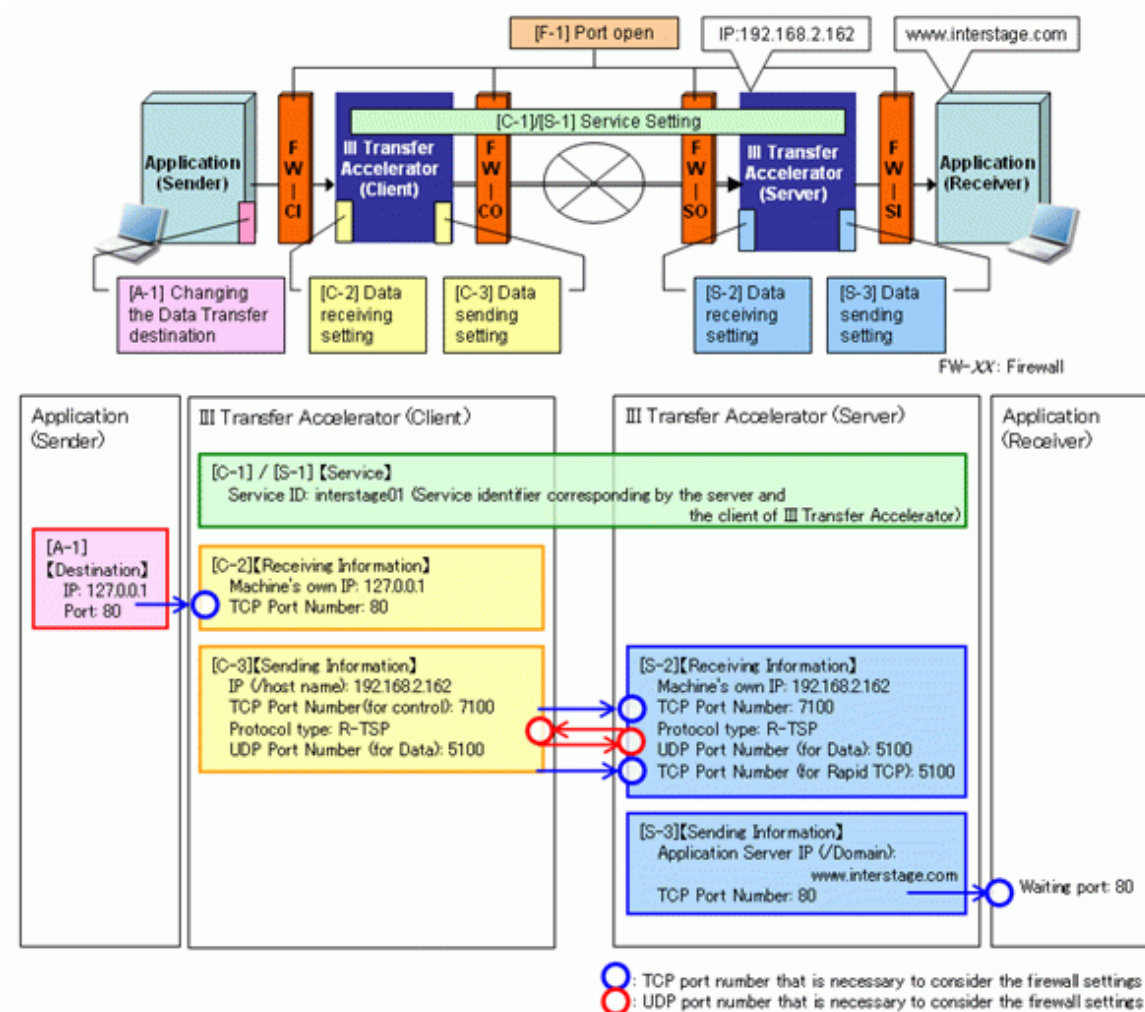
- [A-1]: III Transfer Accelerator (Client) side application

  In III Transfer Accelerator (Client) side application, the destination of data transfer needs to be modified from the data receiver application to IP address of the machine in which III Transfer Accelerator (Client) is installed.

- [C-1]-[C-3]: III Transfer Accelerator (Client)

  In III Transfer Accelerator (Client), Service ID, receiving information from III Transfer Accelerator (Client) side application, sending information to III Transfer Accelerator (Server) etc. need to be set.

- [S-1]-[S-3]: III Transfer Accelerator (Server)

  In III Transfer Accelerator (Server), Service ID, receiving information from III Transfer Accelerator (Client), sending information to III Transfer Accelerator (Server) side application etc. need to be set.

- [F-1]: Firewall

  When there is a firewall on the network, the network port needs to be opened.

Procedure of environmental settings

The environmental setting is executed according to the following procedures.

1. Set the environment of the firewall.

   Set [F-1] of "Places where environmental setting is necessary". It is only necessary when there is a firewall in the network. Refer to "4.2 Firewall setting".

2. Set the environment of the application.

   Set [A-1] of "Places where environmental setting is necessary". Refer to "4.3 Application setting".

3. Set the environment of III Transfer Accelerator

   Set [C-1]-[C-3] and [S-1]-[S-3] of "Places where environmental setting is necessary". Set [S-1]-[S-3] in III Transfer Accelerator (Server), then set [C-1]-[C-3] in III Transfer Accelerator (Client).

   Refer to "4.4 III Transfer Accelerator setting (PC version)" in case of PC version III Transfer Accelerator, or "4.5 III Transfer Accelerator setting (Android version)" in case of Android version III Transfer Accelerator.

4. Confirm the communication.

   After completing the above-mentioned settings, confirm the communication to check whether the application operates normally. Refer to "4.6 Communication Confirmation".

🛇 Note

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For using III Transfer Accelerator by cluster configuration

For using III Transfer Accelerator by cluster configuration, set "4.8 How to set up III Transfer Accelerator used by cluster configuration" when you set the environment of III Transfer Accelerator.

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4.2 Firewall setting

In this section, it explains the environment setting of firewall.

The environmental setting of the firewall is necessary only when there is a firewall on the network. When the firewall is not used, this setting is unnecessary.

When the firewall is used, set the exception to the following communication ports of III Transfer Accelerator and the III Transfer Accelerator (Server) side application. Refer to the manual of each OS for the exception setting method.

The following <> denote the reference that you set which firewall of "Places where environmental setting is necessary" of "4.1 Overview of environment settings".

- For III Transfer Accelerator (Server)

The exceptions of the following three ports are set regardless of the number of III Transfer Accelerator (Client) that sends and receives data.

However, if R-TSP or TCP is not specified for the protocol, the setting of the TCP port for receiving data is unnecessary.

- <FW-SO> TCP port to control data for III Transfer Accelerator (Client)

- <FW-SO> TCP port to receive data for III Transfer Accelerator (Client)

- <FW-SO> UDP port for send and receive data for III Transfer Accelerator (Client)

- For III Transfer Accelerator (Client)

- <FW-CO> UDP port to send and receive data for III Transfer Accelerator (Server)

- <FW-CI> TCP port to receive data for III Transfer Accelerator (Client) side application

- For III Transfer Accelerator (Server) side application

- <FW-SI> TCP port to receive data for III Transfer Accelerator (Server)

4.3 Application setting

In this section, it explains the environment setting of application.

It is necessary that you change destination IP address of data transfer from the data receiver application to the machine that III Transfer Accelerator (Client) is installed. If III Transfer Accelerator (Client) is installed in the same machine as the application, set its own IP address. Confirm to the system administrator and execute it, because the method to change destination of data transfer is different according to the application.

The setting modification of III Transfer Accelerator (Server) side application is unnecessary.

Change destination of the Web application using HTTP/HTTPS

The method to change destination of data transfer is different according to the application. However, the destination of data transfer can be changed by editing the HOSTS(hosts) file of OS if the Web application uses HTTP/HTTPS.

In the following operation, it explains how to change HOSTS(hosts) file.

Storage location of HOSTS file

The HOSTS(hosts) File is stored in the following place.

- For Windows

Windows system Installation directory\SYSTEM32\DRIVERS\ETC\HOSTS

- For UNIX
    - IPv4

    /etc/hosts

    - IPv6
        - For Linux

        /etc/hosts

        - For Solaris

        /etc/inet/ipnodes

Settings

In HOSTS(hosts) file, register the domain name of the application server in destination of data transfer by IP address of the machine that operates III Transfer Accelerator (Client).

Definition example

The definition example based on "Places where environmental setting is necessary" of "4.1 Overview of environment settings" is shown in following. In this example, the domain name of the application server in destination of data transfer is "www.interstage.com" in the IPv4 environment.

- When III Transfer Accelerator (Client) and the data sender application server are in the same system

  Specify IP address of the own machine.

  ```
  127.0.0.1 localhost
  127.0.0.1 www.interstage.com(*)
  ```

  (*)The line feed code is necessary for the end of line.

- When III Transfer Accelerator (Client) and the data sender application server are in the separate system

  Specify IP address of the machine that III Transfer Accelerator (Client) is installed (It is assumed "192.0.2.50" in this example).

  ```
  127.0.0.1 localhost
  192.0.2.50 www.interstage.com(*)
  ```

  (*)The line feed code is necessary for the end of line.

4.4 III Transfer Accelerator setting (PC version)

In this section, it explains the environment setting of III Transfer Accelerator (PC version).

Refer to "4.5 III Transfer Accelerator setting (Android version)" for the environment setting of Android version III Transfer Accelerator.

III Transfer Accelerator operates by the pair of "III Transfer Accelerator (Client)" and "III Transfer Accelerator (Server)." "III Transfer Accelerator (Client)" receives event that becomes source of data transfer. "III Transfer Accelerator (Server)" responds to the processing. In III Transfer Accelerator, the pair of this "III Transfer Accelerator (Client)" and "III Transfer Accelerator (Server)" is managed as one "Service ID".

In the environmental setting of III Transfer Accelerator, "Service definition" is made by the "Service ID" unit.

Same Service ID is set in both the server and the client of III Transfer Accelerator. Moreover, one III Transfer Accelerator can have two or more Service ID.

📖 Note
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After installing III Transfer Accelerator, environment setting of sample (Service ID "interstage01") is arranged. Delete the sample, or overwrite the relevant information in environmental setting of sample.

III Transfer Accelerator may fail to start if the environmental setting of sample is remained as it is after the installation.
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The environmental setting of PC version III Transfer Accelerator is set in either following methods.

- Create Service definition using Environment setting tool.

  Service definition is created on the GUI window. Select this method usually.

  Refer to "4.4.1 Using Environment setting tool" for detail information.

- Create Service definition by editing Environment file.

  Service definition is created by editing Environment file directly. Select this method when you cannot use Environment setting tool.

  Refer to "4.4.2 Editing Environment file" for detail information.

4.4.1 Using Environment setting tool

Set environment according to the following procedures by using Environment setting tool.

1. Start III Transfer Accelerator (Server) side Environment setting tool.

   Refer to "4.4.1.1 Starting Environment setting tool" for starting method of Environment setting tool.

2. In **Basic Setting** window of Environment setting tool, set basic Information of data transfer.

   Refer to "4.4.1.2 Setting of Basic Setting Window" for detail information of setting items.

3. In **Line Setting** window of Environment setting tool, set line Information of data transfer.

   Refer to "4.4.1.3 Setting of Line Setting Window" for detail information of setting items.

4. Reboot III Transfer Accelerator (Server).

   Refer to "Chapter 5 Start and stop III Transfer Accelerator" for rebooting method of III Transfer Accelerator (Server).

5. Repeat procedure 1-4 to III Transfer Accelerator (Client).

📗 **Note**

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For UNIX, execute it by the environment for which GUI such as GNOME and CDE can be used.

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📘 **Point**

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Setting contents of Environment setting tool

Environment setting tool is composed of the following windows.

- **Basic Setting** window

- **Line Setting** window

In **Basic Setting** window, set [C-1]-[C-3] and [S-1]-[S-3] that appear in "Places where environmental setting is necessary" of "4.1 Overview of environment settings". In **Line Setting** window, set items for efficiently transferring data.

・・

4.4.1.1 Starting Environment setting tool

Starting method of Environment setting tool is different according to the environment using III Transfer Accelerator.

📗 **Note**

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- Do not run two or more Environment setting tool at the same time on a machine. When plural tools run, the definition operation might not be correctly reflected.

- If the character that cannot be used for Service ID or the machine name is used, Environment setting tool does not start. In addition, if Environment file is edited directly and saved by wrong setting contents, the tool does not start, too. In that case, correct Environment file directly referring to the event log (or system log on UNIX).

・・

For Windows

Select "Environment Tool" in **Start** menu.

Or, open The Command Prompt and execute the following command.

> *IIITransferAcceleratorInstallDirectory*\bin\ifiac.env.bat

Note

- **For Windows Vista or later and Windows Server 2008 or later**

  This tool must be executed after promoting the end user to administrator permissions. If you use the Command Prompt to start, select **Run as administrator** when opening it. Refer to the Windows Help and Support Center for information on how to run commands as an administrator.

- **When Windows version Environment setting tool cannot start**

  When Environment setting tool cannot start, set the absolute path of the Java command to the following File. Then, start Environment setting tool again.

  - Edit File

    IIITransferAcceleratorInstallDirectory\bin\ifiac.env.bat

  - Edit File content

    Specify the java command by the absolute path.

    Ex)

    Before: java -Djava.library.path="..\lib" -jar ifiac.env.jar

    After: "C:\Program Files\Java\jre7\bin\java" -Djava.library.path="..\lib" -jar ifiac.env.jar

For Linux

Execute the following command.

> /opt/FJSVifiac/bin/ifiacSetupEnvLx.sh

Note

When Linux version Environment setting tool cannot start

When Environment setting tool cannot start, set the install path of the Java to the following File. Then, start Environment setting tool again.

- Edit File

  /opt/FJSVifiac/bin/ifiacSetupEnvLx.sh

- Edit File content

  Remove comment sign of "#JAVA_HOME=" (Head "#"), and specify installation pass of Java.

  Ex)

  Before: #JAVA_HOME=/usr/java/jre1.6.0_33

  After: JAVA_HOME=/usr/java/jre1.7.0_25

For Solaris

Execute the following command.

```
/opt/FJSVifiac/bin/ifiacSetupEnvSO.sh
```

Note

When Solaris version Environment setting tool cannot start

When Environment setting tool cannot start, set the install path of the Java to the following File. Then, start Environment setting tool again.

- Edit File

  /opt/FJSVifiac/bin/ifiacSetupEnvSO.sh

- Edit File content

  Remove comment sign of "#JAVA_HOME=" (Head "#"), and specify installation pass of Java.

  Ex)

  Before: #JAVA_HOME=/usr/java/jre1.6.0_33

  After: JAVA_HOME=/usr/java/jre1.7.0_25

4.4.1.2 Setting of Basic Setting Window

The contents on **Basic Setting** window are different in the server and the client of III Transfer Accelerator.

For III Transfer Accelerator (Server)

Figure 4.2 Basic Setting window in III Transfer Accelerator (Server)

In the following, how to use each button of **Basic Setting** window is shown.

- New

  New Service definition is made after all items are cleared at the right of the window.

- Apply

  Setting contents in the right of the window is registered in left **Service Name**.

- Delete

  Service definition selected on **Service Name** at the left of the window is deleted.

- OK

  Setting contents is saved and Environment setting tool is closed.

- Cancel

  Environment setting tool is closed without saving setting contents.

 Note

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- First, select the value of the System location item when you create Service definition by clicking **New**. **Basic Setting** window corresponding to the selected value is displayed.

- **Service Name** must have one or more Service definition. Therefore even if you save it (click **OK**), deletion processing is not reflected when all Service definitions are deleted.

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In the following, the content of each setting item is shown.

The setting example of [S-1]-[S-3] that appear in "Places where environmental setting is necessary" of "4.1 Overview of environment settings" is described in "Setting example".

Table 4.1 Setting items on Basic Setting window of III Transfer Accelerator (Server)

Item name		Description	Specified format	Optional	Setting example
[S-1] Service					
	Service ID	This is an arbitrary name that identifies the data transfer service. Specify the same value for the server and the client of III Transfer Accelerator of the same service.	Specify service identifier, using no more than 127 characters (bytes). You can use alphanumeric characters and Single-byte symbols (Only ., :, -, and _).	No	interstage01
	System location	Specify whether it operates as either the server or the client of III Transfer Accelerator.	Specify the following value. SERVER	No	SERVER
[S-2] Receiving Information					
	Machine's own IP	This is IP address or a hostname of the machine that operates III Transfer Accelerator (Server).	Specify service identifier, using no more than 255 characters (bytes). You can use alphanumeric characters and Single-byte symbols (Only ., :, -, and _). However, you cannot specify "localhost", "127.0.0.1" or "::1".	No	192.168.2.162
	TCP Port Number	This is TCP reception port number for the data transfer control. When there are two or more server definitions (the definition whose "System location" is "SERVER".), set the same value to this item of each server definition. When an existing value and a different value are specified, pop up that confirms whether to modify an existing value is displayed. When an existing value is modified, the values of other server definitions	Specify a number between 1 and 65535.	No	7100

		synchronize and are modified, too.			
	Protocol type	This is a protocol used for transferring data with III Transfer Accelerator (Client).	Specify the following one. - R-TSP: The best protocol is selected automatically from RPS, UNAP or TCP. - RPS: RPS is used for the data transfer. - UNAP: UNAP is used for the data transfer. - TCP: TCP is used for the data transfer.	No	R-TSP
	UDP Port Number (for Data)	This is UDP port number for the data transfer. When there are two or more Service definitions, set the same value to this item of each Service definition. When an existing value and a different value are specified, pop up that confirms whether to modify an existing value is displayed. When an existing value is modified, the values of other Service definitions synchronize and are modified, too.	Specify a number between 1 and 65535.	No	5100
	TCP Port Number (for Rapid TCP)	This is TCP port number to wait for the connection for the data transfer when R-TSP or TCP is used for the data transfer. When there are two or more server definitions (the definition whose "System location" is "SERVER".), set the same value to this item of each server definition. When an existing value and a different value are specified, pop up that confirms whether to modify an existing value is displayed. When an existing value is modified, the values of other server definitions synchronize and are modified, too.	Specify a number between 1 and 65535. However, you cannot specify the same value as "TCP Port Number" of [S-2].	No	5100
[S-3] Sending Information					
	Applicatio n Server IP (/ Domain)	This is IP address or a hostname of the machine that operates the application. However, the domain name	Specify service identifier, using no more than 255 characters (bytes). You can use alphanumeric characters and	No	www.interstag e.com

		can be specified for the Web server.	Single-byte symbols (Only ., :, -, and _).		
	TCP Port Number	Specify The TCP port number of III Transfer Accelerator (Server) side application.	Specify a number between 1 and 65535.	No	80

For III Transfer Accelerator (Client)

Figure 4.3 Basic Setting window in III Transfer Accelerator (Client)

In the following, how to use each button of **Basic Setting** window is shown.

- New

  New Service definition is made after all items are cleared at the right of the window.

- Apply

  Setting contents in the right of the window is registered in left **Service Name**.

- Delete

  Service definition selected on **Service Name** at the left of the window is deleted.

- OK

  Setting contents is saved and Environment setting tool is closed.

- Cancel

  Environment setting tool is closed without saving setting contents.

🕝 **Note**

. . . .

- First, select the value of the System location item when you create Service definition by clicking **New**. **Basic Setting** window corresponding to the selected value is displayed.

- **Service Name** must have one or more Service definition. Therefore even if you save it (click **OK**), deletion processing is not reflected when all Service definitions are deleted.

. . . .

In the following, the content of each setting item is shown.

The setting example of [C-1]-[C-3] that appear in "Places where environmental setting is necessary" of "4.1 Overview of environment settings" is described in "Setting example".

Table 4.2 Setting items on Basic Setting window of III Transfer Accelerator (Client)

Item name		Description	Specified format	Optional	Setting example
[C-1] Service					
	Service ID	This is an arbitrary name that identifies the data transfer service. Specify the same value for the server and the client of III Transfer Accelerator of the same service.	Specify the value of "Service ID" of [S-1] in **Basic Setting** window of III Transfer Accelerator (Server).	No	interstage01
	System location	Specify whether it operates as either the server or the client of III Transfer Accelerator.	Specify the following value. CLIENT	No	CLIENT
[C-2] Receiving Information					
	Machine's own IP	This is IP address or a hostname of the machine that operates III Transfer Accelerator (Client).	Specify service identifier, using no more than 255 characters (bytes). You can use alphanumeric characters and Single-byte symbols (Only ., :, -, and _). When it is in the same machine as the application, you can specify "localhost", "127.0.0.1" or "::1". When it is in a different machine, you cannot specify them.	No	127.0.0.1
	TCP Port Number	This is TCP reception port number that receives the data from III Transfer Accelerator (Client) side application. Specify a port number different in each Service ID of III Transfer Accelerator. Moreover, specify port	Specify a number between 1 and 65535.	No	80

		number does not overlap with applications other than III Transfer Accelerator (for instance, "3389" of RDP and "445" of CIFS). For port numbers that are used in other applications, you are able to check by using the command etc.			
[C-3] Sending Information					
	IP (/host name)	This is IP address or a hostname of the machine that operates III Transfer Accelerator (Server).	Specify the value of "Machine's own IP" of [S-2] in **Basic Setting** window of III Transfer Accelerator (Server).	No	192.168.2.162
	TCP Port Number(f or control)	This is TCP reception port number for the data transfer control that III Transfer Accelerator (Server) uses.	Specify the value of "TCP Port Number" of [S-2] in **Basic Setting** window of III Transfer Accelerator (Server).	No	7100
	Protocol type	This is a protocol used for transferring data with III Transfer Accelerator (Server).	Specify the value of "Protocol type" of [S-2] in **Basic Setting** window of III Transfer Accelerator (Server).	No	R-TSP
	UDP Port Number (for Data)	This is UDP port number for receiving data from III Transfer Accelerator (Server). When there are two or more Service definitions, set the same value to this item of each Service definition. When specify a value different from existing value, pop up that confirms whether to modify the existing value is displayed. When an existing value is modified, the values of other Service definitions synchronize and are modified, too.	Specify a number between 1 and 65535.	No	5100

4.4.1.3 Setting of Line Setting Window

The contents on **Line Setting** window are same in the server and the client of III Transfer Accelerator.

Figure 4.4 Line Setting window
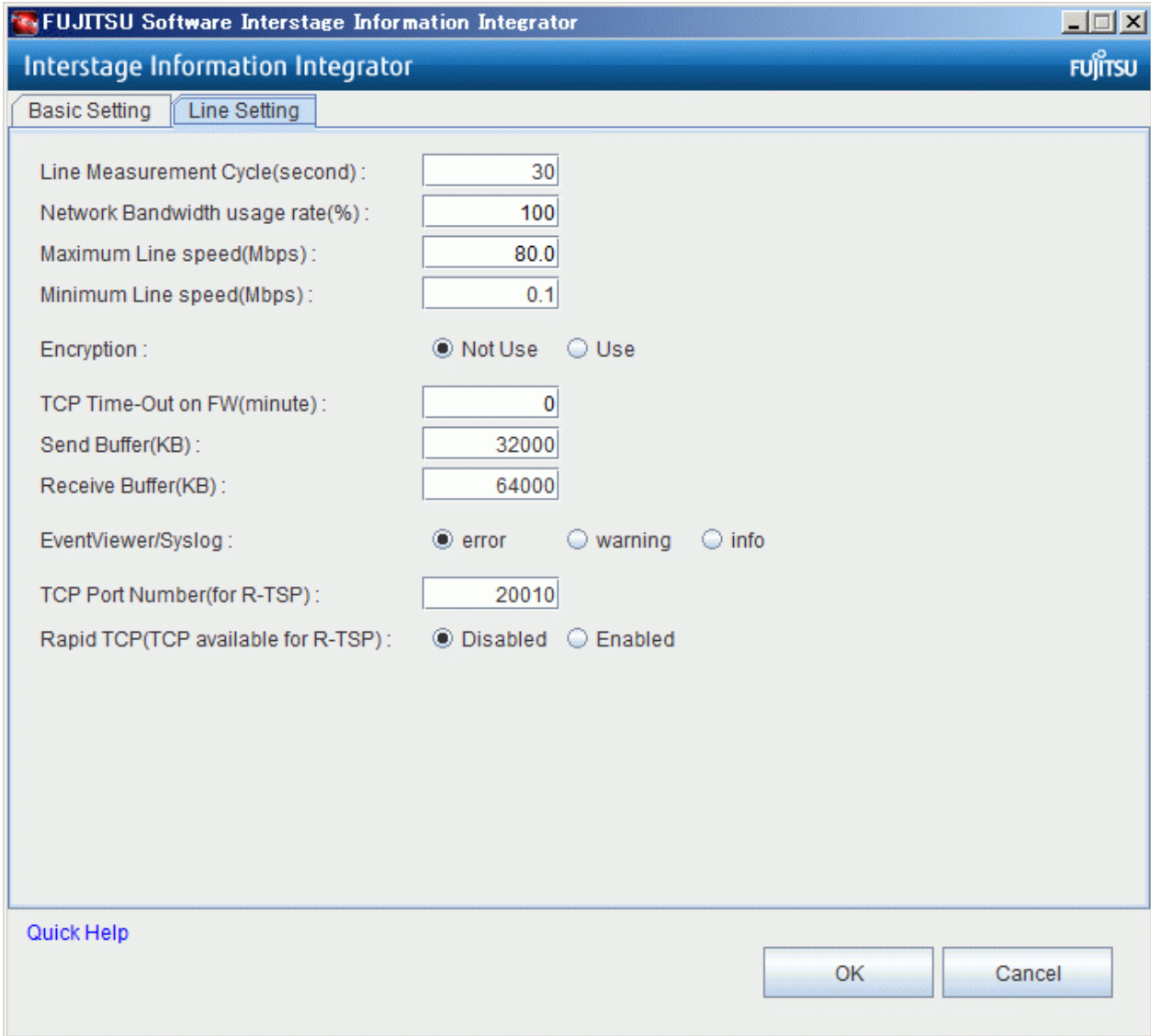
In the following, how to use each button of **Line Setting** window is shown.

- OK

  Setting contents is saved and Environment setting tool is closed.

- Cancel

  Environment setting tool is closed without saving setting contents.

In the following, the content of each setting item is shown.

Table 4.3 Setting items on Line Setting window

Item name	Description	Specified format	Optional
Line Measurement Cycle(second)	Specify the measure interval of available line bandwidth while not transferring data.	Specify an integer number between 5 and 60. (Unit: second)	No
Network Bandwidth Usage rate(%)	Specify that what percentage of the line bandwidth is available for data transfer.	Specify an integer number between 1 and 100. (Unit: %) Specify "100" if space of bandwidth is not required.	No

		Recommended value: 100	
Maximum Line speed(Mbps)	When the line measurement result is faster than specified "Maximum Line speed", adjust it to "Maximum Line speed" to prevent data overflow. Specify the value in consideration of the influence on other communications. In III Transfer Accelerator (Client), specify the value of "Maximum Line speed" of III Transfer Accelerator (Server), or line speed of the network environment.	Specify a number between 0.1 and maximum line speed. (Unit: Mbps)	No
Minimum Line speed(Mbps)	When the line measurement result is slower than specified "Minimum Line speed", adjust to "Minimum Line speed" to surely send the data.	Specify a number between 0.1 and minimum line speed. (Unit: Mbps)	No
Encryption	Specify whether the encryption of the data is necessary between applications. The performance might fall due to the encryption processing. However, the specification of this item is unnecessary in III Transfer Accelerator (Client). It is processed automatically according to the setting value of III Transfer Accelerator (Server).	Choose one of the followings. - (Encryption) Use - (Encryption) Not Use	No
TCP TIME-OUT(minute)	When there is time-out setting of the TCP communication in the firewall, specify the timeout period. However, the specification of this item is unnecessary in III Transfer Accelerator (Client).	Specify an integer number between 0 and 2147483647. (Unit: minute) Specify "0" when there is no time-out setting of the TCP communication in the firewall.	No
Send Buffer(KB)	Specify the size of the buffer temporarily maintained until the data received from the application is sent to other party side III Transfer Accelerator.	Specify an integer number between 80 and 2147483600. (Unit: KB) Specify the value of integer multiples of 80. When you do not specify the value of integer multiples of 80, the remainder that divides a specified value by 80 is rounded down. For instance, when "88888" is specified, it treats as "88880".	No
Receive Buffer(KB)	Specify the size of the buffer temporarily maintained until the data received from other party side III Transfer Accelerator is sent to the application.	Specify an integer number between 80 and 2147483600. (Unit: KB) Specify the value of integer multiples of 80. When you do not specify the value of integer multiples of 80, the remainder that divides a specified value by 80 is rounded down. For instance, when "88888" is specified, it treats as "88880".	No
EventViewer/System log	Specify output level of the event log (or system log on UNIX). The performance	Choose one of the followings.	No

	might fall when the amount of the output of the log is large when "info" is specified.	- info: Error and warning and normal message are output. - warning: Error and warning message are output. - error: Error message is output.	
TCP Port Number(for R-TSP)	Specify the TCP port number for the interior communication with R-TSP. However, you cannot specify the same value as the TCP port number specified by other items.	Specify an integer number between 1 and 65535.	No

Rapid TCP(TCP available for R-TSP)	Specify whether you want to include TCP in choices of the communication protocol if R-TSP is used. If TCP is included in choice, enable "Rapid TCP" of OS.
	
	Rapid TCP is the following. Refer to "4.7 How to set up Rapid TCP" for setting method.
	
	  - For Windows
	
	    Compound TCP
	
	  - For Linux
	
	    Scalable TCP
	
	  - For Solaris
	
	    HighSpeed TCP
		Choose one of the followings.
		
		- (TCP available for R-TSP is) Enabled
		
		- (TCP available for R-TSP is) Disabled
			No

4.4.2 Editing Environment file

Set environment according to the following procedures by editing the environment file.

1. Confirm the storage location and the edit file of Environment file.

   Refer to "4.4.2.1 Environment file" for detail information of Environment file.

2. Set basic Information of III Transfer Accelerator (Server) to Environment file.

   Refer to "4.4.2.2 Setting of basic Information" for detail information of setting items.

3. Set line Information of III Transfer Accelerator (Server) to Environment file.

   Refer to "4.4.2.3 Setting of line Information" for detail information of setting items.

4. Reboot III Transfer Accelerator (Server).

   Refer to "Chapter 5 Start and stop III Transfer Accelerator" for rebooting method of III Transfer Accelerator (Server).

5. Repeat procedure 1-4 to III Transfer Accelerator (Client).

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Setting contents of Environment file

Environment file is composed of the following files.

- RepeatInfo.xml

- RepeatService.xml

- UdpInfo.xml

In RepeatInfo.xml and RepeatService.xml, set [C-1]-[C-3] and [S-1]-[S-3] that appear in "Places where environmental setting is necessary" of "4.1 Overview of environment settings". In UdpInfo.xml, set items for efficiently transferring data.

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4.4.2.1 Environment file

In this section, it explains the overview of Environment file.

File storage location

Environment file is stored in the following directory.

- For Windows

IIITransferAcceleratorInstallDirectory\config

- For UNIX

/opt/FJSVifiac/config

Edit file

Environment file is composed of the following files.

- RepeatInfo.xml

- RepeatService.xml

- UdpInfo.xml

Basic information for III Transfer Accelerator to operate is set to RepeatInfo.xml and RepeatService.xml. Moreover, line Information necessary for more efficient data transfer is set to UdpInfo.xml.

In the server and the client of III Transfer Accelerator, the edited file is different.

Table 4.4 Environment files to be edited

Category	Environment file	III Transfer Accelerator (Server)	III Transfer Accelerator (Client)
Basic Information	RepeatInfo.xml	Y	Y
	RepeatService.xml	Y	N
Line Information	UdpInfo.xml	Y	Y

Y: Edit possible.

N: Edit impossible.

Edit method

Format of Environment file is XML. It is configured of tag ID and value which means the setting items.

<tag ID>value</tag ID>

Modify only the value of necessary items. For instance, if you modify <serviceName> items from "interstage01" to "service001", only the "interstage01" part is corrected as follows.

- Before

<serviceName>interstage01</serviceName>

- After

```
<serviceName>service001</serviceName>
```

📖 Note

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Do not modify the value of the irrelevant items. (For example, tag ID is modified, the line is added, etc.) Otherwise III Transfer Accelerator cannot operate normally.

. . . .

4.4.2.2 Setting of basic Information

For the setting of basic Information, edit the following Environment file.

- RepeatInfo.xml

- RepeatService.xml (only III Transfer Accelerator (Server))

The setting contents of basic Information are different in the server and the client of III Transfer Accelerator.

- For III Transfer Accelerator (Server)

- For III Transfer Accelerator (Client)

For III Transfer Accelerator (Server)

The content of each setting item is shown below.

The setting example of [S-1]-[S-3] that appear in "Places where environmental setting is necessary" of "4.1 Overview of environment settings" is described in "Setting example".

📖 Note

. . . .

Do not modify the items that are not described in the table.

. . . .

Table 4.5 Setting items of RepeatInfo.xml

tag ID	Item name	Description	Specified format	Optional	Setting example
`<serviceName>`	Service ID	This is an arbitrary name that identifies the data transfer service. Specify the same value for the server and the client of III Transfer Accelerator of the same service.	Specify service identifier, using no more than 127 characters (bytes). You can use alphanumeric characters and Single-byte symbols (Only ., :, -, and _).	No	interstage 01
`<containerType>`	System location	Specify whether it operates as either the server or the client of III Transfer Accelerator.	Specify the following value. SERVER	No	SERVER
`<inBindedIP Address>`	Machine's own IP	This is IP address or a hostname of the machine that operates III Transfer Accelerator (Server).	Specify service identifier, using no more than 255 characters (bytes). You can use alphanumeric characters and Single-byte symbols (Only ., :, -, and _). However, you cannot specify "localhost", "127.0.0.1" or "::1".	No	192.168.2. 162

\<inPort\>	TCP Port Number	This is TCP reception port number for the data transfer control. When there are two or more server definitions (the definition whose "System location" is "SERVER".), set the same value to this item of each server definition.	Specify a number between 1 and 65535.	No	7100
\<inType\>	Protocol type	This is a protocol used for transferring data with III Transfer Accelerator (Client).	Specify the following one. - R-TSP: The best protocol is selected automatically from RPS, UNAP or TCP. - RPS: RPS is used for the data transfer. - UNAP: UNAP is used for the data transfer. - TCP: TCP is used for the data transfer.	No	R-TSP
\<SpeedCaaTUdpPort\>	UDP Port Number (for Data)	This is UDP port number for the data transfer. When there are two or more Service definitions, set the same value to this item of each Service definition.	Specify a number between 1 and 65535.	No	5100
\<SpeedCaaTTcpPort\>	TCP Port Number (for Rapid TCP)	This is TCP port number to wait for the connection for the data transfer when R-TSP or TCP is used for the data transfer. When there are two or more server definitions (the definition whose "System location" is "SERVER".), set the same value to this item of each server definition.	Specify a number between 1 and 65535. However, you cannot specify the same value as "TCP Port Number" in this file.	No	5100
\<sendBufferSize\>	Send Buffer(KB)	Specify the size of the buffer temporarily maintained until the data received from the application is sent to other party side III Transfer Accelerator.	Specify an integer number between 80 and 2147483600. (Unit: KB) Specify the value of integer multiples of 80. When you do not specify the value of integer multiples of 80, the remainder that divides a specified value by 80 is rounded down. For instance, when "88888" is specified, it treats as "88880".	No	32000

tag ID	Item name	Description	Specified format	Optional	Setting example
<recvBufferSize>	Receive Buffer(KB)	Specify the size of the buffer temporarily maintained until the data received from other party side III Transfer Accelerator is sent to the application.	Specify an integer number between 80 and 2147483600. (Unit: KB) Specify the value of integer multiples of 80. When you do not specify the value of integer multiples of 80, the remainder that divides a specified value by 80 is rounded down. For instance, when "88888" is specified, it treats as "88880".	No	64000

Table 4.6 Setting items of RepeatService.xml

tag ID	Item name	Description	Specified format	Optional	Setting example
<serviceName>	Service ID	This is an arbitrary name that identifies the data transfer service. Specify the same value for the server and the client of III Transfer Accelerator of the same service.	Specify the same value as <serviceName> of RepeatInfo.xml.	No	interstage 01
<iPAddress>	Application Server IP (/Domain)	This is IP address or a hostname of the machine that operates the application. However, the domain name can be specified for the Web server.	Specify service identifier, using no more than 255 characters (bytes). You can use alphanumeric characters and Single-byte symbols (Only ., :, -, and _).	No	www.interstage.com
<port>	TCP Port Number	Specify The TCP port number of III Transfer Accelerator (Server) side application.	Specify a number between 1 and 65535.	No	80

In the following, the example of describing the Environment file is shown.

- RepeatInfo.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<RepeatInfo>
<RepeatInfoData>
<serviceName>interstage01</serviceName>
<containerType>SERVER</containerType>
<inBindedIPAddress>192.168.2.162</inBindedIPAddress>
<inPort>7100</inPort>
<inType>R-TSP</inType>
<outServiceName>null</outServiceName>
<repeatIPAddress>null</repeatIPAddress>
<repeatPort>0</repeatPort>
<repeatType>null</repeatType>
```

```
<SpeedCaaTUdpPort>5100</SpeedCaaTUdpPort>

<SpeedCaaTTcpPort>5100</SpeedCaaTTcpPort>

<lineMargin>100</lineMargin>

<sendBufferSize>32000</sendBufferSize>

<recvBufferSize>64000</recvBufferSize>

<nagle>false</nagle>

</RepeatInfoData>

</RepeatInfo>
```

- RepeatService.xml

```
<?xml version="1.0" encoding="UTF-8"?>

<RepeatService>

<RepeatServiceData>

<serviceName>interstage01</serviceName>

<iPAddress>www.interstage.com</iPAddress>

<port>80</port>

<type>TCP</type>

</RepeatServiceData>

</RepeatService>
```

For III Transfer Accelerator (Client)

The content of each setting item is shown below.

The setting example of [C-1]-[C-3] that appear in "Places where environmental setting is necessary" of "4.1 Overview of environment settings" is described in "Setting example".

🔔 **Note**

. . . .

Do not modify the items that are not described in the table.

. . . .

Table 4.7 Setting items of RepeatInfo.xml

tag ID	Item name	Description	Specified format	Optional	Setting example
<serviceName>	Service ID	This is an arbitrary name that identifies the data transfer service. Specify the same value for the server and the client of III Transfer Accelerator of the same service.	Specify the value of <serviceName> of RepeatInfo.xml of III Transfer Accelerator (Server).	No	interstage01
<containerType>	System location	Specify whether it operates as either the server or the client of III Transfer Accelerator.	Specify the following value. CLIENT	No	CLIENT
<inBindedIPAddress>	Machine's own IP	This is IP address or a hostname of the machine	Specify service identifier, using no more than 255 characters (bytes). You can	No	127.0.0.1

		that operates III Transfer Accelerator (Client).	use alphanumeric characters and Single-byte symbols (Only ., :, -, and _). When it is in the same machine as the application, you can specify "localhost", "127.0.0.1" or "::1". When it is in a different machine, you cannot specify them.		
<inPort>	TCP Port Number	This is TCP reception port number that receives the data from III Transfer Accelerator (Client) side application. Specify a port number different in each Service ID of III Transfer Accelerator. Moreover, specify port number does not overlap with applications other than III Transfer Accelerator (for instance, "3389" of RDP and "445" of CIFS). For port numbers that are used in other applications, you are able to check by using the command etc.	Specify a number between 1 and 65535.	No	80
<outServiceName>	Service ID	This is an arbitrary name that identifies the data transfer service. Specify the same value for the server and the client of III Transfer Accelerator of the same service.	Specify the value of <serviceName> in this file.	No	interstage 01
<repeatIPAddress>	IP (/host name)	This is IP address or a hostname of the machine that operates III Transfer Accelerator (Server).	Specify the value of <inBindedIPAddress> of RepeatInfo.xml of III Transfer Accelerator (Server).	No	192.168. 2.162
<repeatPort>	TCP Port Number(for control)	This is TCP reception port number for the data transfer control that III Transfer Accelerator (Server) uses.	Specify the value of <inPort> of RepeatInfo.xml of III Transfer Accelerator (Server).	No	7100
<repeatType>	Protocol type	This is a protocol used for transferring data with III Transfer Accelerator (Server).	Specify the value of <inType> of RepeatInfo.xml of III Transfer Accelerator (Server).	No	R-TSP
<SpeedCaaT UdpPort>	UDP Port Number (for Data)	This is UDP port number for receiving data from III Transfer Accelerator (Server).	Specify a number between 1 and 65535.	No	5100

		When there are two or more Service definitions, set the same value to this item of each Service definition.			
<sendBufferSize>	Send Buffer(KB)	Specify the size of the buffer temporarily maintained until the data received from the application is sent to other party side III Transfer Accelerator.	Specify an integer number between 80 and 2147483600. (Unit: KB) Specify the value of integer multiples of 80. When you do not specify the value of integer multiples of 80, the remainder that divides a specified value by 80 is rounded down. For instance, when "88888" is specified, it treats as "88880".	No	32000
<recvBufferSize>	Receive Buffer(KB)	Specify the size of the buffer temporarily maintained until the data received from other party side III Transfer Accelerator is sent to the application.	Specify an integer number between 80 and 2147483600. (Unit: KB) Specify the value of integer multiples of 80. When you do not specify the value of integer multiples of 80, the remainder that divides a specified value by 80 is rounded down. For instance, when "88888" is specified, it treats as "88880".	No	64000

In the following, the example of describing the Environment file is shown.

- RepeatInfo.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<RepeatInfo>
<RepeatInfoData>
<serviceName>interstage01</serviceName>
<containerType>CLIENT</containerType>
<inBindedIPAddress>127.0.0.1</inBindedIPAddress>
<inPort>80</inPort>
<inType>TCP</inType>
<outServiceName>interstage01</outServiceName>
<repeatIPAddress>192.168.2.162</repeatIPAddress>
<repeatPort>7100</repeatPort>
<repeatType>R-TSP</repeatType>
<SpeedCaaTUdpPort>5100</SpeedCaaTUdpPort>
<lineMargin>100</lineMargin>
<sendBufferSize>32000</sendBufferSize>
<recvBufferSize>64000</recvBufferSize>
```

```
<nagle>false</nagle>

</RepeatInfoData>

</RepeatInfo>
```

4.4.2.3 Setting of line Information

For the setting of line Information, edit the following Environment file.

- UdpInfo.xml

The setting contents are same in the server and the client of III Transfer Accelerator.

In the following, the content of each setting item is shown.

📗 Note

. . . .

Do not modify the items that are not described in the table.

. . . .

Table 4.8 Setting items of UdpInfo.xml

tag ID	Item name	Description	Specified format	Optional
<measureSecond>	Line Measurement Cycle(second)	Specify the measure interval of available line bandwidth while not transferring data.	Specify an integer number between 5 and 60. (Unit: second)	No
<lineMargin>	Network Bandwidth Usage rate(%)	Specify that what percentage of the line bandwidth is available for data transfer.	Specify an integer number between 1 and 100. (Unit: %) Specify "100" if space of bandwidth is not required. Recommended value: 100	No
<maximumSpeed>	Maximum Line speed(Mbps)	When the line measurement result is faster than specified "Maximum Line speed", adjust it to "Maximum Line speed" to prevent data overflow. Specify the value in consideration of the influence on other communications. In III Transfer Accelerator (Client), specify the value of "Maximum Line speed" of III Transfer Accelerator (Server), or line speed of the network environment.	Specify a number between 0.1 and maximum line speed. (Unit: Mbps)	No
<minimumSpeed>	Minimum Line speed(Mbps)	When the line measurement result is slower than specified "Minimum Line speed", adjust to "Minimum Line speed" to surely send the data.	Specify a number between 0.1 and minimum line speed. (Unit: Mbps)	No
<encryption>	Encryption	Specify whether the encryption of the data is necessary between applications. The performance	Choose one of the followings. - true: It is encrypted. - false: It is not encrypted.	No

		might fall due to the encryption processing. However, the specification of this item is unnecessary in III Transfer Accelerator (Client). It is processed automatically according to the setting value of III Transfer Accelerator (Server).		
<timeoutOfFirewall>	TCP TIME-OUT(minute)	When there is time-out setting of the TCP communication in the firewall, specify the timeout period. However, the specification of this item is unnecessary in III Transfer Accelerator (Client).	Specify an integer number between 0 and 2147483647. (Unit: minute) Specify "0" when there is no time-out setting of the TCP communication in the firewall.	No
<eventLog>	EventViewer/ System log	Specify output level of the event log (or system log on UNIX). The performance might fall when the amount of the output of the log is large when "info" is specified.	Choose one of the followings. - INFO: Error and warning and normal message are output. - WARNING: Error and warning message are output. - ERROR: Error message is output.	No
<rtspPort>	TCP Port Number(for R-TSP)	Specify the TCP port number for the interior communication with R-TSP. However, you cannot specify the same value as the TCP port number specified by other items.	Specify an integer number between 1 and 65535.	No

<isTcpEnabled>	Rapid TCP(TCP available for R-TSP)	Specify whether you want to include TCP in choices of the communication protocol if R-TSP is used. If TCP is included in choice, enable "Rapid TCP" of OS.
		
		Rapid TCP is the following. Refer to "4.7 How to set up Rapid TCP" for setting method.
		
		- For Windows
		
		  Compound TCP
		
		- For Linux
		
		  Scalable TCP
		
		- For Solaris
		
		  HighSpeed TCP
			Choose one of the followings.
			
			- true: TCP available for R-TSP is effective.
			
			- false: TCP available for R-TSP is not effective.
				No

In the following, the example of describing the Environment file is shown.

- UdpInfo.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<UdpInfo>
<bandWidthCtrl>true</bandWidthCtrl>
<minimumSpeed>20.0</minimumSpeed>
<maximumSpeed>80.0</maximumSpeed>
<lineMargin>100</lineMargin>
<measureSecond>5</measureSecond>
<encryption>false</encryption>
<timeoutOfFirewall>0</timeoutOfFirewall>
<eventLog>ERROR</eventLog>
<rtspPort>20010</rtspPort>
<isTcpEnabled>true</isTcpEnabled>
</UdpInfo>
```

4.5 III Transfer Accelerator setting (Android version)

In this section, it explains the environment setting of III Transfer Accelerator (Android version).

Refer to "4.4 III Transfer Accelerator setting (PC version)" for the environment setting of Android version III Transfer Accelerator.

In Android version III Transfer Accelerator, "Service definition" is also made by the "Service ID" unit just like PC version III Transfer Accelerator.

Same Service ID is set in both the server of III Transfer Accelerator and Android version III Transfer Accelerator. Moreover, one Android version III Transfer Accelerator can have two or more Service ID.

📋 Note
. . . .

After installing III Transfer Accelerator, environment setting of sample (Service ID "interstage01") is arranged. Delete the sample, or overwrite the relevant information in environmental setting of sample.

III Transfer Accelerator may fail to start if the environmental setting of sample is remained as it is after the installation.
. . . .

Set environment in Android version III Transfer Accelerator according to the following procedures.

1. In **Service manager** window, create service definition.

   Refer to "4.5.1 Creation of Service definition" for creation method of Service definition.

2. In **Service Setting** window, set basic Information of data transfer.

   Refer to "4.5.2 Setting of Service Setting Window" for detail information of setting items.

3. In **Line Setting** window, set line Information of data transfer.

   Refer to "4.5.3 Setting of Line Setting Window" for detail information of setting items.

4. Reboot Android version III Transfer Accelerator.

   Refer to "B.2 Start and stop Android version III Transfer Accelerator" for rebooting method of Android version III Transfer Accelerator.

Note

....

Reboot III Transfer Accelerator after modifying setting contents. When III Transfer Accelerator is rebooted, modified setting contents become effective.

....

 Point

....

Setting contents of Android version III Transfer Accelerator

The environment setting of Android version III Transfer Accelerator can be set on the following windows.

   - **Service Setting** window

   - **Line Setting** window

In **Service Setting** window, set [C-1]-[C-3] that appear in "Places where environmental setting is necessary" of "4.1 Overview of environment settings". In **Line Setting** window, set items for efficiently transferring data.

....

4.5.1 Creation of Service definition

Refer to "New service definition" of "B.3 Service Manager" for creation method of Service definition.

 Point

....

Registered Service definition can be edited. Refer to "Edit service definition" of "B.3 Service Manager" for editing method of registered Service definition.

....

4.5.2 Setting of Service Setting Window

When "4.5.1 Creation of Service definition" is executed, **Service Setting** window is displayed.

Figure 4.5 Service Setting window
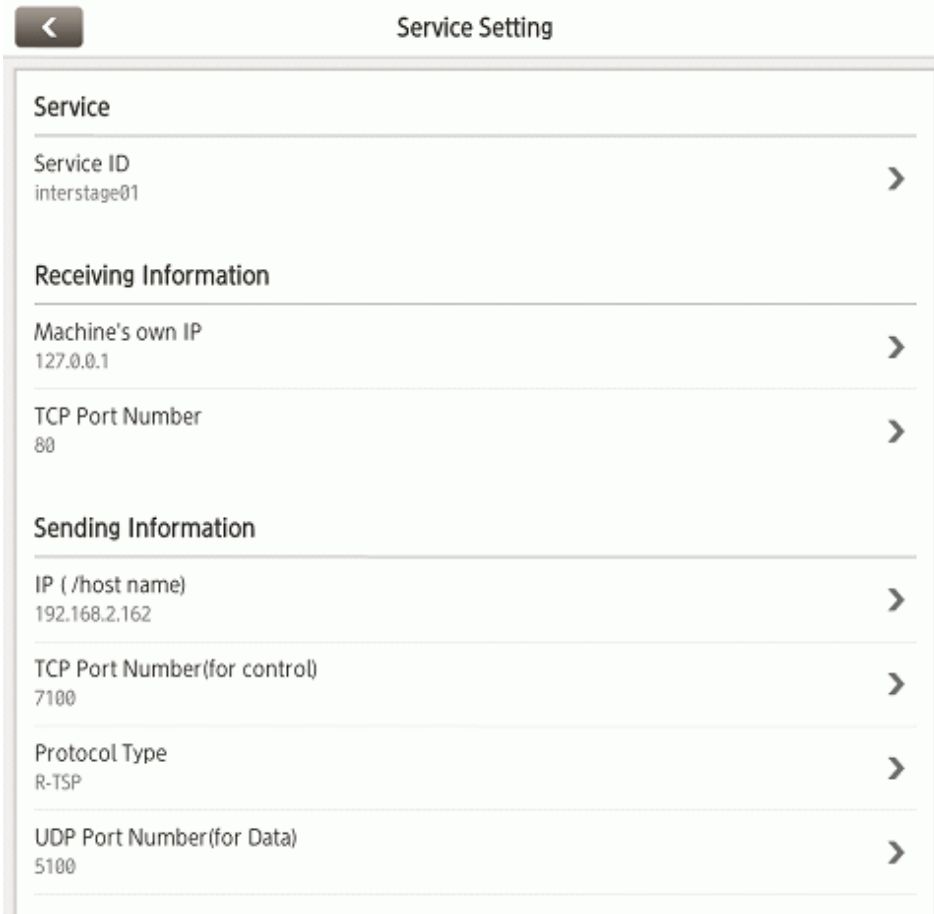
In the following, the content of each setting item is shown.

The setting example of [C-1]-[C-3] that appear in "Places where environmental setting is necessary" of "4.1 Overview of environment settings" is described in "Setting example".

Table 4.9 Setting items on Service Setting window

Item name		Description	Specified format	Optional	Setting example
Service					
	Service ID	This is an arbitrary name that identifies the data transfer service. Specify the same value for III Transfer Accelerator (server) and Android version III Transfer Accelerator of the same service.	Specify the following value of III Transfer Accelerator (Server). - For Environment setting tool The value of "Service ID" of [S-1] in **Basic Setting** window. - For Environment file The value of <serviceName> of RepeatInfo.xml.	No	interstage01
Receiving Information					
	Machine's own IP	This is IP address or a hostname of the machine that	Specify service identifier, using no more than 255	No	127.0.0.1

		operates Android version III Transfer Accelerator.	characters (bytes). You can use alphanumeric characters and Single-byte symbols (Only ., :, -, and _). You can specify "localhost", "127.0.0.1" or "::1". When it is in a different machine, you cannot specify them.		
	TCP Port Number	This is TCP reception port number that receives the data from Android version III Transfer Accelerator side application. Specify a port number different in each Service ID of III Transfer Accelerator. Moreover, specify port number does not overlap with applications other than III Transfer Accelerator (for instance, "3389" of RDP and "445" of CIFS). For port numbers that are used in other applications, you are able to check by using the command etc.	Specify a number between 1 and 65535.	No	80
Sending Information					
	IP (/host name)	This is IP address or a hostname of the machine that operates III Transfer Accelerator (Server).	Specify the following value of III Transfer Accelerator (Server). - For Environment setting tool The value of "Machine's own IP" of [S-2] in **Basic Setting** window. - For Environment file The value of <inBindedIPAddress> of RepeatInfo.xml.	No	192.168.2.162
	TCP Port Number(f or control)	This is TCP reception port number for the data transfer control that III Transfer Accelerator (Server) uses.	Specify the following value of III Transfer Accelerator (Server). - For Environment setting tool The value of "TCP Port Number" of [S-2] in **Basic Setting** window. - For Environment file The value of <inPort> of RepeatInfo.xml.	No	7100

		Protocol type	This is a protocol used for transferring data with III Transfer Accelerator (Server).	Specify the following value of III Transfer Accelerator (Server). - For Environment setting tool The value of "Protocol type" of [S-2] in **Basic Setting** window. - For Environment file The value of \<inType\> of RepeatInfo.xml.	No	R-TSP
		UDP Port Number (for Data)	This is UDP port number for receiving data from III Transfer Accelerator (Server). When there are two or more Service definitions, set the same value to this item of each Service definition. When specify a value different from existing value, pop up that confirms whether to modify the existing value is displayed. When an existing value is modified, the values of other Service definitions synchronize and are modified, too.	Specify a number between 1 and 65535.	No	5100

4.5.3 Setting of Line Setting Window

Refer to "B.4 Line Setting" for the operating instruction of **Line Setting** window.

Figure 4.6 Line Setting window
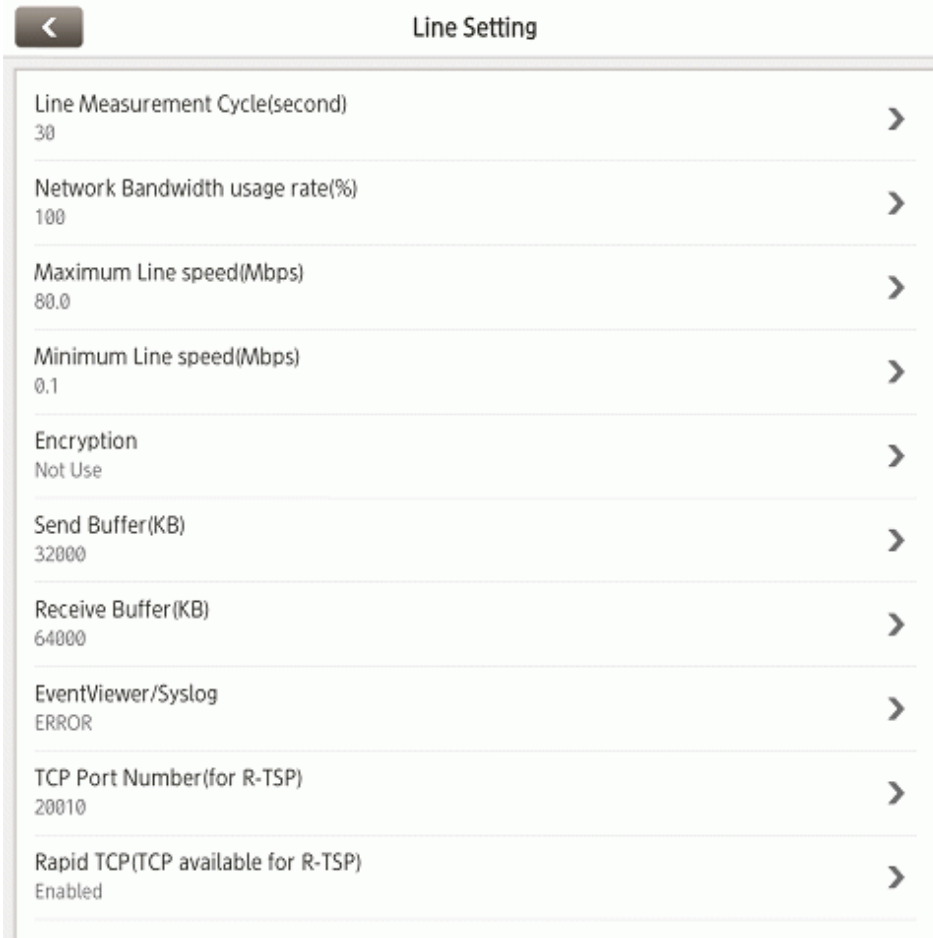
In the following, the content of each setting item is shown.

Table 4.10 Setting items on Line Setting window

Item name	Description	Specified format	Optional
Line Measurement Cycle(second)	Specify the measure interval of available line bandwidth while not transferring data.	Specify an integer number between 5 and 60. (Unit: second)	No
Network Bandwidth usage rate(%)	Specify that what percentage of the line bandwidth is available for data transfer.	Specify an integer number between 1 and 100. (Unit: %) Specify "100" if space of bandwidth is not required. Recommended value: 100	No
Maximum Line speed(Mbps)	When the line measurement result is faster than specified "Maximum Line speed", adjust it to "Maximum Line speed" to prevent data overflow. Specify the value in consideration of the influence on other communications. In Android version III Transfer Accelerator, specify the value of "Maximum Line speed" of III Transfer Accelerator (Server), or line speed of the network environment.	Specify a number between 0.1 and maximum line speed. (Unit: Mbps)	No

Minimum Line speed(Mbps)	When the line measurement result is slower than specified "Minimum Line speed", adjust to "Minimum Line speed" to surely send the data.	Specify a number between 0.1 and minimum line speed. (Unit: Mbps)	No
Encryption	Specify whether the encryption of the data is necessary between applications. The performance might fall due to the encryption processing. However, the specification of this item is unnecessary in Android version III Transfer Accelerator. It is processed automatically according to the setting value of III Transfer Accelerator (Server).	Choose one of the followings. - (Encryption) Use - (Encryption) Not Use	No
Send Buffer(KB)	Specify the size of the buffer temporarily maintained until the data received from the application is sent to other party side III Transfer Accelerator.	Specify an integer number between 80 and 2147483600. (Unit: KB) Specify the value of integer multiples of 80. When you do not specify the value of integer multiples of 80, the remainder that divides a specified value by 80 is rounded down. For instance, when "88888" is specified, it treats as "88880".	No
Receive Buffer(KB)	Specify the size of the buffer temporarily maintained until the data received from other party side III Transfer Accelerator is sent to the application.	Specify an integer number between 80 and 2147483600. (Unit: KB) Specify the value of integer multiples of 80. When you do not specify the value of integer multiples of 80, the remainder that divides a specified value by 80 is rounded down. For instance, when "88888" is specified, it treats as "88880".	No
EventViewer/System log	Specify output level of the event log (or system log on UNIX). The performance might fall when the amount of the output of the log is large when "INFO" is specified.	Choose one of the followings. - INFO: Error and warning and normal message are output. - WARNING: Error and warning message are output. - ERROR: Error message is output.	No
TCP Port Number(for R-TSP)	Specify the TCP port number for the interior communication with R-TSP. However, you cannot specify the same value as the TCP port number specified by other items.	Specify an integer number between 1 and 65535.	No
Rapid TCP(TCP available for R-TSP)	Specify whether you want to include TCP in choices of the communication protocol if R-TSP is used. If TCP is included in choice, enable "Rapid TCP" of OS. For Android, Rapid TCP is "CUBIC TCP".	Choose one of the followings. - (TCP available for R-TSP is) Enabled - (TCP available for R-TSP is) Disabled	No

	Refer to "4.7 How to set up Rapid TCP" for setting method.		

4.6 Communication Confirmation

After completing the environmental settings, confirm whether the application operates normally.

Confirm the following items when the application does not operate normally.

- Check whether the server and the client of III Transfer Accelerator start normally.

    Refer to "Chapter 5 Start and stop III Transfer Accelerator" for detail information of confirming method.

- Check whether the environment set up information that is output to each start log of the server and the client of III Transfer Accelerator is correct. Moreover, check consistency of environmental setting between the server and the client of III Transfer Accelerator.

    Refer to "5.1.3 Environment setting Confirmation after start" for detail information of confirming method.

- Check whether the communication port necessary for the data transfer is opened in III Transfer Accelerator (Server), III Transfer Accelerator (Client), and III Transfer Accelerator (Server) side application.

    Refer to "4.2 Firewall setting" for information on communication port that should be opened. When the communication port is not opened, confirm the setting of the firewall of OS.

- When there is a firewall on the network, the above-mentioned UDP port and the TCP port are opened.

    Inquire of the network administrator.

4.7 How to set up Rapid TCP

In the environmental setting of III Transfer Accelerator, the setting status of Rapid TCP is specified for Service definition.

In this section, it explains the setting and unsetting method of Rapid TCP.

In this manual, Rapid TCP indicates the following TCP congestion control algorithm.

- For Windows: Compound TCP

- For Linux: Scalable TCP

- For Solaris: HighSpeed TCP

- For Android: CUBIC TCP

For Windows

Note

For Windows Vista or later, or Windows Server 2008 or later, 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.

- Windows Server 2012

    - Setting method

        1. Open the PowerShell and execute the following command.

        ```
        set-nettcpsetting -Settingname Custom -CongestionProvider CTCP
        ```

        2. To confirm the setting status of Rapid TCP, execute the following command.

           If "CongestionProvider" is "CTCP", Rapid TCP is enabled.

        ```
        get-nettcpsetting -Settingname Custom
        ```

- Unsetting method

    1. Open The Command Prompt and execute the following command.

    ```
    set-nettcpsetting -Settingname Custom -CongestionProvider DCTCP
    ```

    2. To confirm the setting status of Rapid TCP, execute the following command.

       If "CongestionProvider" is "DCTCP", Rapid TCP is disabled.

    ```
    get-nettcpsetting -Settingname Custom
    ```

- Windows 8

  - Setting method

    1. Open The Command Prompt and execute the following command.

    ```
    set supplemental congestionprovider=ctcp
    ```

    2. To confirm the setting status of Rapid TCP, execute the following command.

       If it is displayed as "supplemental congestionprovider=ctcp", Rapid TCP is enabled.

    ```
    set supplemental congestion provider
    ```

  - Unsetting method

    1. Open The Command Prompt and execute the following command.

    ```
    set supplemental congestionprovider=none
    ```

    2. To confirm the setting status of Rapid TCP, execute the following command.

       If it is displayed as "supplemental congestionprovider=none", Rapid TCP is enabled.

    ```
    set supplemental congestion provider
    ```

- Windows Vista/7 and Windows Server 2008

  - Setting method

    1. Open The Command Prompt and execute the following command.

    ```
    netsh interface tcp set global congestionprovider=ctcp
    ```

    2. To confirm the setting status of Rapid TCP, execute the following command.

       If "Add-On Congestion Control Provider" is "ctcp", Rapid TCP is enabled.

    ```
    netsh interface tcp show global
    ```

  - Unsetting method

    1. Open The Command Prompt and execute the following command.

    ```
    netsh interface tcp set global congestionprovider=none
    ```

    2. To confirm the setting status of Rapid TCP, execute the following command.

       If "Add-On Congestion Control Provider" is "none", Rapid TCP is disabled.

    ```
    netsh interface tcp show global
    ```

- Windows Server 2003 (Only 64bit version corresponds)

  - Setting method

  Open the Registry Editor and modify the value of the following registry key to "1". When this value is "1", Rapid TCP is enabled.

  ```
  HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\TCPCongestionControl
  ```

  - Unsetting method

  Open the Registry Editor and modify the value of the following registry key to "0". When this value is "0", Rapid TCP is disabled.

  ```
  HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\TCPCongestionControl
  ```

For Linux

- Setting method

  1. Execute the following command.

  ```
  sysctl -w net.ipv4.tcp_congestion_control=scalable
  ```

  2. To confirm the setting status of Rapid TCP, execute the following command.

  If "net.ipv4.tcp_congestion_control" is "scalable", Rapid TCP is enabled.

  ```
  sysctl -a | grep tcp_congestion_control
  ```

- Unsetting method

  1. To return it to default state of default, execute the following command.

    - For RHEL5 (Red Hat Enterprise Linux 5)

    ```
    sysctl -w net.ipv4.tcp_congestion_control=bic
    ```

    - For RHEL6 (Red Hat Enterprise Linux 6)

    ```
    sysctl -w net.ipv4.tcp_congestion_control=cubic
    ```

  2. To confirm the setting status of Rapid TCP, execute the following command.

  If "net.ipv4.tcp_congestion_control" is the value set in procedure 1, it is the state of default (Rapid TCP is disabled).

For Solaris

- Setting method

  1. Execute the following command.

  ```
  ipadm set-prop -p cong_default=highspeed
  ```

  2. To confirm the setting status of Rapid TCP, execute the following command.

  If "CURRENT" is "highspeed", Rapid TCP is enabled.

  ```
  ipadm show-prop -p cong_default tcp
  ```

- Unsetting method

  1. To return it to default state of default, execute the following command.

  ```
  ipadm set-prop -p cong_default=newreno tcp
  ```

2. To confirm the setting status of Rapid TCP, execute the following command.

If "CURRENT" is "newreno", it is the state of default (Rapid TCP is disabled).

```
ipadm show-prop -p cong_default tcp
```

For Android

Rapid TCP is "CUBIC TCP" fixation.

4.8 How to set up III Transfer Accelerator used by cluster configuration

In this section, it explains the setting method of III Transfer Accelerator used by cluster configuration.

For III Transfer Accelerator used by cluster configuration, edit the following file.

- Edit File

    - For Windows

    ```
    III Transfer Accelerator operation resources directory(*)\config\SCTConfig.properties
    ```

    (*)This is the directory where operation resources of III Transfer Accelerator are stored. You are able to specify it when III Transfer Accelerator is installed.

    - For UNIX

    ```
    /etc/opt/FJSVifiac/config/SCTConfig.properties
    ```

- Edit File content

    Add the following line.

    ```
    bind.udp=true
    ```

Chapter 5 Start and stop III Transfer Accelerator

This chapter explains how to start and stop III Transfer Accelerator.

5.1 Start III Transfer Accelerator

To start III Transfer Accelerator, you should start the server and the client of III Transfer Accelerator. Moreover, after the start, confirm the correspondence of environmental setting between the server and the client of III Transfer Accelerator.

🔔 Note

. . . .

- For Windows execute this operation as a user with system administrator permissions.

- For UNIX, execute this command as a superuser.

. . . .

📖 Information

. . . .

Observer service

Transfer data requires III Transfer Accelerator is working. Therefore, Observer service is offered in preparation for stop service by System reboot and other causes.

III Transfer Accelerator is composed of main application which handles data transfer (main body of III Transfer Accelerator) and observer service program which monitors the start processing and running status of the main application.

The observer service is registered in OS as a service application. Start or stop III Transfer Accelerator can be operated by starting or stopping the observer service.

The following shows the roles of Observer service.

Start and stop III Transfer Accelerator main application.

When the machine is rebooted, automatically start III Transfer Accelerator main application.

Monitor III Transfer Accelerator main application, and if in case application has been stopped due to trouble, automatically restart the application.

. . . .

5.1.1 Start III Transfer Accelerator (Server)

Open the **Windows Service Console** and execute the following operations.

1. Click "Interstage Information Integrator III Transfer Accelerator" in services list, and select **Properties** from Right-Click menu.

   -> **Interstage Information Integrator III Transfer Accelerator Properties** window is displayed.

2. Modify **Startup Type** to "Automatic", and Click **Start**.

3. Click **OK**.

Confirm the service moves into the "Running" state after executing the operations.

🔔 Note

. . . .

When Windows version III Transfer Accelerator cannot be started

When Windows version III Transfer Accelerator cannot be started, set the installation pass of Java to the following two files, and begin serving again.

- Edit File

  - *IIITransferAcceleratorInstallDirectory*\config\sctobserver.ini

- *IIITransferAcceleratorInstallDirectory*\config\rtspobserver.ini

- Edit File content

  Remove comment symbol of "# java_home=" (Head "# "), and specify installation pass of Java.

  Ex)

  Before: # java_home=

  After: java_home=C:\Program Files\Java\jre7

5.1.2 Start III Transfer Accelerator (Client)

Starting method of III Transfer Accelerator (Client) is different according to the environment that III Transfer Accelerator (Client) operates.

For Windows

Starting method of III Transfer Accelerator (Client) is the same as III Transfer Accelerator (Server). Refer to "".

For Linux

Execute the following command.

```
/etc/init.d/f3jnifiacobserverLx start
```

Note

When Linux version III Transfer Accelerator cannot start

When Linux version III Transfer Accelerator cannot start, set the installation pass of Java to the following two Files, and begin serving again.

- Edit File

  - /opt/FJSVifiac/bin/ifiacStartUpLx.sh

  - /opt/FJSVifiac/bin/ifiacRtspLx.sh

- Edit File content

  Remove comment sign of "# java_home=" (Head "# "), and specify installation pass of Java.

  Ex)

  Before: #JAVA_HOME=/usr/java/jre1.6.0_33

  After: JAVA_HOME=/usr/java/jre1.7.0_25

For Solaris

Execute the following command.

```
/etc/init.d/f3jnifiacobserverSO start
```

Note

When Solaris version III Transfer Accelerator cannot start

When Solaris version III Transfer Accelerator cannot start, set the installation pass of Java to the following two Files, and begin serving again.

- Edit File

  - /opt/FJSVifiac/bin/ifiacStartUpSO.sh

  - /opt/FJSVifiac/bin/ifiacRtspSO.sh

- Edit File content

  Remove comment sign of "# java_home=" (Head "# "), and specify installation pass of Java.

  Ex)

  Before: #JAVA_HOME=/usr/java/jre1.6.0_33

  After: JAVA_HOME=/usr/java/jre1.7.0_25

....

For Android

Refer to "B.2 Start and stop Android version III Transfer Accelerator" for starting method of Android version III Transfer Accelerator.

5.1.3 Environment setting Confirmation after start

In the start processing of III Transfer Accelerator, the correspondence confirmation of environmental setting between the server and the client of III Transfer Accelerator is not checked. Therefore, communication problems occur when the environmental setting is inapposite even if III Transfer Accelerator starts normally.

In this section, it explains the confirm method of the environmental setting after III Transfer Accelerator starts.

1. Confirm the startup log of III Transfer Accelerator (Server).

   The startup log is output to the following directory.

IIITransferAcceleratorInstallDirectory\trc\sctstartup.log

   When III Transfer Accelerator (Server) starts normally, the environment set up information is output to "sctstartup.log" or the event log as follows.

... 2013/08/01 12:00:00.000 INFO ServiceName[interstage01] ContainerType[SERVER] Type[R-TSP] Port[7100] RepeatIPAddress[www.interstage.com] RepeatPort[80] RepeatType[TCP] ...

   Confirm the following environment set up information.

ServiceName	ContainerType	Type	Port	RepeatIPAddress	RepeatPort	RepeatType
interstage01	SERVER	R-TSP	7100	www.interstage.com	80	TCP

   When the mistake is found in the environment set up information, it fails to start, and the content of the error is output to sctstartup.log or the event log. Correct the environmental settings based on the content of the output, and do the start processing again.

1. Confirm the startup log of III Transfer Accelerator (Client).

   The startup log is output to the following directory.

   - For Windows

IIITransferAcceleratorInstallDirectory\trc\sctstartup.log

   - For UNIX

/opt/FJSVifiac/trc/sctstartup.log

- For Android

Refer to "B.6 Log Browsing" for display method of "sctstartup.log" of Android version III Transfer Accelerator.

When III Transfer Accelerator (Client) starts normally, the environment set up information is output to "sctstartup.log" or the event log (or system log on UNIX or Android) as follows.

```
...
2013/08/01 12:00:00.000 INFO ServiceName[interstage01] ContainerType[CLIENT] Type[TCP] Port[80]
RepeatIPAddress[192.168.2.162] RepeatPort[7100] RepeatType[R-TSP]
...
```

Confirm the following environment set up information.

ServiceName	ContainerType	Type	Port	RepeatIPAddress	RepeatPort	RepeatType
interstage01	CLIENT	TCP	80	192.168.2.162	7100	R-TSP

When the mistake is found in the environment set up information, it fails to start, and the content of the error is output to sctstartup.log or the event log (or system log on UNIX or Android). Correct the environmental settings based on the content of the output, and do the start processing again.

2. Check the environment set up information between the server and the client of III Transfer Accelerator based on information confirmed by procedure 1 and 2.

Compare the environment set up information between the server and the client of III Transfer Accelerator.

Division	ServiceName	ContainerType	Type	Port	RepeatIPAddress	RepeatPort	RepeatType
III Transfer Accelerator (Server)	interstage01	SERVER	R-TSP	7100	www.interstage.com	80	TCP
III Transfer Accelerator (Client)	interstage01	CLIENT	TCP	80	192.168.2.162	7100	R-TSP

Confirm the following items.

ServiceName: Check whether the server and the client of III Transfer Accelerator have the same "Service ID".

ContainerType: Check whether III Transfer Accelerator (Server) is "SERVER" and III Transfer Accelerator (Client) is "CLIENT".

III Transfer Accelerator (Client)'s "Port": Check whether it is the correct port number that allows receiving data from III Transfer Accelerator (Client) side's application.

III Transfer Accelerator (Client)'s "RepeatIPAddress": Check whether IP address or host name of III Transfer Accelerator (Server) is correct.

III Transfer Accelerator (Client)'s "RepeatPort": Check whether it has the same value as III Transfer Accelerator (Server)'s "Port".

III Transfer Accelerator (Server)'s "RepeatIPAddress": Check whether it is the same as IP address or host name (or Domain name in case of Web server) of III Transfer Accelerator (Server) side's application.

III Transfer Accelerator (Server)'s "RepeatPort": Check whether it has the correct TCP port to transfer data to III Transfer Accelerator (Server) side's application.

5.2 Stop III Transfer Accelerator

To stop III Transfer Accelerator you should stop the server and the client of III Transfer Accelerator.

Note

- For Windows execute this operation as a user with system administrator permissions.

- For UNIX, execute this command as a superuser.

5.2.1 Stop III Transfer Accelerator (Server)

Open the **Windows Service Console** and execute the following operations.

1. Click "Interstage Information Integrator III Transfer Accelerator" in services list, and select **Properties** from Right-Click menu.

   -> **Interstage Information Integrator III Transfer Accelerator Properties** window is displayed.

2. Modify **Startup Type** to "Manual", and Click **Stop**.

3. Click **OK**.

Confirm pertinent service moves into "stop" state after executing the operations.

Point

When III Transfer Accelerator (Server) is stopped for temporary maintenance, **Startup Type** need not be modified to "Manual". If **Startup Type** is "Automatic", III Transfer Accelerator (Server) starts automatically when the machine reboots.

5.2.2 Stop III Transfer Accelerator (Client)

It is different to stop III Transfer Accelerator (Client) according to the environment that III Transfer Accelerator (Client) operates.

For Windows

Stop III Transfer Accelerator (Client) is the same as stopping III Transfer Accelerator (Server). Refer to "5.2.1 Stop III Transfer Accelerator (Server)".

For Linux

Execute the following command.

```
/etc/init.d/f3jnifiacobserverLx stop
```

For Solaris

Execute the following command.

```
/etc/init.d/f3jnifiacobserverSO stop
```

For Android

Refer to "B.2 Start and stop Android version III Transfer Accelerator" for stopping method of Android version III Transfer Accelerator.

Chapter 6 Operation

This chapter explains the operation of III Transfer Accelerator.

6.1 Log that III Transfer Accelerator outputs

In this section, it explains the logs that III Transfer Accelerator outputs.

There are four kinds of logs that III Transfer Accelerator outputs as follows.

- event log (or system log on UNIX or Android)

  When III Transfer Accelerator is started, running, and stopped, notification information to the user is output.

  There are three kinds of messages output to event log (or system log on UNIX or Android) as follows.

  - Information message

    Information message is output when III Transfer Accelerator is started or stopped, or when the connection for data transfer control is established.

  - Warning message

    Warning message is output if the process can be continued though the error occurred when III Transfer Accelerator is started, running, or stopped.

  - Error message

    Error message is output if the process cannot be continued because the error occurred when III Transfer Accelerator is started, running, or stopped.

- network log

  The communications information between the application and III Transfer Accelerator as well as between the server and the client of III Transfer Accelerator is output. The network log is output if the connection of network changes such as establishing and cutting the connection while III Transfer Accelerator is operating.

- startup log

  When III Transfer Accelerator is started, the environment setting information etc. is output.

  Two kinds of startup logs are shown as follows.

  - The startup log of main III Transfer Accelerator: sctstartup.log

  - The startup log of R-TSP protocol: rtspstartup.log

- investigation log

  Investigation information if error occurs when III Transfer Accelerator is started, running, and stopped is output. When the problem does not solve even if the operation described in the treatment of the message is executed, send the investigation log to Fujitsu and request the investigation.

It explains the display method of each log as follows.

For PC version III Transfer Accelerator

For PC version III Transfer Accelerator, refer to the log below as needed.

- event log (or system log on UNIX or Android)

  Refer to the manual of each OS for the output place.

- network log

  The output place is as follows.

  - For Windows

    IIITransferAcceleratorInstallDirectory\logs\sctnet.log

- For UNIX

```
/opt/FJSVifiac/logs/sctnet.log
```

- The startup log of main III Transfer Accelerator

The output place is as follows.

- For Windows

```
IIITransferAcceleratorInstallDirectory\trc\sctstartup.log
```

- For UNIX

```
/opt/FJSVifiac/trc/sctstartup.log
```

- The startup log of R-TSP protocol

The output place is as follows.

- For Windows

```
IIITransferAcceleratorInstallDirectory\trc\rtspstartup.log
```

- For UNIX

```
/opt/FJSVifiac/trc/rtspstartup.log
```

📘 Point
. . . .

Save log automatically

The following logs are automatically saved when the size of the log file exceeds 10MB.

- network log

- The startup log of main III Transfer Accelerator

- The startup log of R-TSP protocol

The saved log is preserved for the network log until ten generations and it is preserved for the startup log of main III Transfer Accelerator and the startup log of R-TSP protocol until five generations. When the maximum generation of each log is exceeded, the File of the oldest generation is automatically deleted. The figure is added to the saved log file behind the extension. The figure is arranged in ascending order from 1.
. . . .

For Android version III Transfer Accelerator

For Android version III Transfer Accelerator, refer to the log below as needed.

- system log

- The startup log of main III Transfer Accelerator

- The startup log of R-TSP protocol

Refer to "B.6 Log Browsing" for display method of each log.

6.2 Error Recovery

When error occurs in the operation of III Transfer Accelerator, the information is output to the event log and the system log. Eliminate error cause according to output message.

Refer to "6.2.1 Message" for detail information of message that III Transfer Accelerator outputs and the treatment.

Moreover, when the problem does not solve even if the operation described in the treatment of the message is executed, send log to Fujitsu and request the investigation. Refer to "6.2.2 Sending investigation log" for sending method of investigation log.

6.2.1 Message

In this section, it explains the messages that III Transfer Accelerator outputs.

P Point

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When the message in this chapter is output, there is a possibility that the mistake is found in the setting of III Transfer Accelerator and the Network. Refer to "Chapter 4 Environment Settings" to confirm the environmental setting.

....

Output place

- For Windows

  event log

- For UNIX and Android

  system log

Output format of message

The message is output in the form of the following.

messageID: *messageText*

messageID

ID of the message is displayed.

It is classified by the error cause as follows.

- 0- : trouble in common parts

- 10000-: trouble in environmental settings

- 13000-: trouble in encryption and decryption

- 16000-: trouble in communication processing

- 20000-: internal error

messageText

Body of the message is displayed.

Message

The message that III Transfer Accelerator outputs is shown.

The content of each item in the table is as follows.

Category

This refers to the category of the message that is output.

Message ID

This refers to the ID of the message that is output.

Message Text

This refers to the body of the message. The arbitrary character string corresponding to the error cause is output to {N} (N is an integer of 0 or more.).

Treatment

The recommended user's action on the output message is shown.

Table 6.1 Message that III Transfer Accelerator outputs

Category	Message ID	Message Text	Treatment
common parts	00001	A system error has occurred. (code={0})	For more information, contact Fujitsu.
	00002	A read buffer error has occurred.	
	00003	A read buffer error has occurred. No additional information is available.	
	00016	Failed to close.	
	00017	Failed to start a process.	
	00018	An I/O error has occurred.	
	00019	A socket error has occurred.	
	00027	No result has been returned even though a command was executed.	
	00028	Unsupported OS.	
	00029	Failed to execute a command, or an error has occurred while accessing the result of a command.	
	00030	An error has occurred while waiting a process execution.	
	00901	The first parameter is invalid.	
	00902	The second parameter is invalid.	
	00903	The third parameter is invalid.	
	00904	The forth parameter is invalid.	
	00905	The fifth parameter is invalid.	
	00914	Not initialized.	
	00999	A system error has occurred. (detail info={0})	
	01030	The client is trying to operate as the server.	Correct Service definition so that III Transfer Accelerator operates as a client.
	02013	Invalid queue message.	For more information, contact Fujitsu.

environmental settings	10001	The SCTConfig.properties file does not exist.	Confirm whether the File output to the message exists in the following directory.
			
			- For Windows
			
			  IIITransferAcceleratorInstallDirectory\config
			
			- For UNIX
			
			  /opt/FJSVifiac/config
			
			- For Android
			
			  /data/data/ com.fujitsu.interstage.android.ifiac/ files/config

	10011	The RepeatInfo.xml file does not exist.	
	10012	The RepeatInfo.xml file has an invalid value or format at (row#={0}).	
	10013	The RepeatInfo.xml file has no definition info, so writing is not allowed.	
	10023	The RepeatService.xml file has no definition info, so writing is not allowed.	
	10031	The UdpInfo.xml file does not exist.	
	10033	The UdpInfo.xml file has no definition info, so writing is not allowed.	

Category	Message ID	Message Text	Treatment
			When the File exists, confirm the setting value with Environment setting tool or Environment file, and update the as needed.
			When the File does not exist or the remediation of the File cannot be done, reinstall III Transfer Accelerator.
	10101	Attribute "serviceName" in RepeatInfo.xml is indispensable.	Confirm whether the setting content of Environment file "RepeatInfo.xml" is correct.
	10102	Attribute "containerType" in RepeatInfo.xml is indispensable.	
	10103	Invalid value is set to attribute "containerType" in RepeatInfo.xml.	
	10104	Attribute "inBindedIPAddress" in RepeatInfo.xml is indispensable.	
	10105	Attribute "inType" in RepeatInfo.xml is indispensable.	
	10106	Invalid value is set to attribute "inType" in RepeatInfo.xml (inType={0}).	
	10107	Attribute "outServiceName" in RepeatInfo.xml is indispensable.	
	10108	Attribute "repeatIPAddress" in RepeatInfo.xml is indispensable.	
	10109	Attribute "repeatType" in RepeatInfo.xml is indispensable.	
	10110	Invalid value is set to attribute "repeatType" in RepeatInfo.xml (repeatType={0}).	
	10111	Attribute "inPort" in RepeatInfo.xml is not set or is set invalid value.	
	10112	Attribute "repeatPort" in RepeatInfo.xml is not set or is set invalid value.	
	10113	Attribute "speedCaaTUdpPort" in RepeatInfo.xml is not set or is set invalid value.	
	10114	Attribute "speedCaaTTcpPort" in RepeatInfo.xml is not set or is set invalid value.	
	10120	Attribute "serviceName" in RepeatService.xml is indispensable.	Confirm whether the setting content of Environment file "RepeatService.xml" is correct.
	10121	Attribute "iPAddress" in RepeatService.xml is indispensable.	
	10122	Attribute "type" in RepeatService.xml is indispensable.	
	10123	Invalid value is set to attribute "type" in RepeatService.xml (type={0}).	
	10124	Attribute "port" in RepeatService.xml is not set or is set invalid value.	

Category	Message ID	Message Text	Treatment
	10125	No "RepeatServiceData" tag in RepeatService.xml.	
	10126	No service definition in RepeatService.xml (serviceName={0}).	
	10127	Too long ServiceID(serviceName={0}).	Reexecute it after correcting the value of the environmental setting to appropriate.
	10128	Too Long hostname(hostname={0}).	
	10130	TCP port number is different (port number={0}).	Set the same value as the TCP port number of each server definition of III Transfer Accelerator. The server definition means that "System location" is "SERVER." The definition is made with "Environment setting tool" or "Environment file".
	10131	UDP port number is different.	Set the same value as the UDP port number of each Service definition of III Transfer Accelerator.
	10133	TCP port number is different(port number={0}).	Set the same value as the TCP port number of each server definition of III Transfer Accelerator. The server definition means that "System location" is "SERVER." The definition is made with "Environment setting tool" or "Environment file".
	10134	ServiceID contains multibyte character (serviceName={0}).	Open Environment file "RepeatInfo.xml" and "RepeatService.xml" with the text editor and correct it directly.
	10135	Machine's own IP contains multibyte character (IP={0}).	Open Environment file "RepeatInfo.xml" with the text editor and correct it directly.
	10136	IP (/hostname) contains multibyte character (IP={0}).	Open Environment file "RepeatInfo.xml" with the text editor and correct it directly.
	10137	Application Server IP contains multibyte character (IP={0}).	Open Environment file "RepeatService.xml" with the text editor and correct it directly.
	10138	ServiceID contains invalid character (serviceName={0}).	Open Environment file "RepeatInfo.xml" and "RepeatService.xml" with the text editor and correct it directly.
	10139	Machine's own IP contains invalid character (IP={0}).	Open Environment file "RepeatInfo.xml" with the text editor and correct it directly.
	10140	IP (/hostname) contains invalid character (IP={0}).	Open Environment file "RepeatInfo.xml" with the text editor and correct it directly.
	10141	Application Server IP contains invalid character (IP={0}).	Open Environment file "RepeatService.xml" with the text editor and correct it directly.
	10305	Attribute "rtspPort" in UdpInfo.xml is not set or is set invalid value.	Set an appropriate value to "rtspPort" in Environment file "UdpInfo.xml".
	10400	Configuration file path is not specified.	Reboot it according to the procedure described in this manual, because III Transfer Accelerator might not be running correctly.
	10401	Throughput data file does not exist(path={0}).	Confirm whether the File output to the message exists.

Category	Message ID	Message Text	Treatment
	10402	Latency data file does not exist(path={0}).	If the File does not exist, reinstall III Transfer Accelerator.

	10500	TCP port number is duplicated (port number={0}).	Review the setting that the port number is not overlap about the following items.
			
			- For III Transfer Accelerator (Server)
			  - TCP Port Number of [S-2]
			  - TCP Port Number (for Rapid TCP)
			  - TCP Port Number(for R-TSP)
			- For III Transfer Accelerator (Client)
			  - TCP Port Number
			  - TCP Port Number(for R-TSP)

	10600	Invalid service(servicename={0}).	Confirm services both the server and the client of III Transfer Accelerator exist. If the services exist, confirm whether the protocols specified with each the server and the client of III Transfer Accelerator are corresponding.
	10700	Invalid number in RepeatInfo.xml (detail={0}).	Open Environment file "RepeatInfo.xml" with the text editor and correct it directly.
	10701	Invalid number in RepeatService.xml (detail={0}).	Open Environment file "RepeatService.xml" with the text editor and correct it directly.
	10702	Invalid number in UdpInfo.xml (detail={0}).	Open Environment file "UdpInfo.xml" with the text editor and correct it directly.
	10912	The conversion of the character code isn't supported.	For more information, contact Fujitsu.
	10915	A message couldn't be registered to the queue.	
	10997	An I/O error has occurred while accessing a file. (path={0}, detail info={1})	
	10999	A system error has occurred. (detail info={0})	

encryption and decryption	13024	There's an abnormality in size of the common key info. Check the common key file.	Confirm whether "encryption.def" exists in the following directory of III Transfer Accelerator.
			
			- For Windows
			  IIITransferAcceleratorInstallDirectory\config
			- For UNIX
			  /opt/FJSVifiac/config
			- For Android
			  /data/data/ com.fujitsu.interstage.android.ifiac/ files/config

Category	Message ID	Message Text	Treatment
			If "encryption.def" exists, delete it.
commun ication processi ng	16012	The TCP server socket has been closed. (port#={0}, detail info={1})	Confirm the following. - The services both the server and the client of III Transfer Accelerator run normally. - The application in destination of data transfer runs normally. - The environmental setting of III Transfer Accelerator is correct. If the error occurs after these confirmations, contact Fujitsu.
	16013	The server (for TCP connection) doesn't exist, or the network accelerator service hasn't been started on the server (for TCP connection). (server={0}, port#={1})	
	16014	An error has occurred while receiving data sent from the client (for TCP connection). (client={0}, port#={1}, detail code={2})	
	16015	The TCP socket has been closed. (connection={0}, port#={1})	
	16016	The receiving server (for UDP connection) doesn't exist, or the network accelerator service hasn't been started on the receiving server (for UDP connection). (server={0}, port#={1})	
	16017	The UDP socket has been closed. (connection={0}, port#={1}, detail info={2})	
	16018	The UDP port is busy in another application. (port#={0})	Set the UDP port number not used by other applications.
	16019	An error has occurred while receiving data sent from client (for UDP connection). (client={0}, port#={1}, detail code={2})	Confirm the following. - The services both the server and the client of III Transfer Accelerator run normally. - The application in destination of data transfer runs normally. - The environmental setting of III Transfer Accelerator is correct. If the error occurs after these confirmations, contact Fujitsu.
	16021	The UDP socket has been closed. (port#={0}, detail info={1})	
	16022	Failed to resolve hostname(hostname={0}).	Confirm whether the hostname is correct. When it is correct, confirm the setting of the DNS server.
	16044	Sending data : An error has occurred while connecting to the server (TCP connection). (server={0}, port#={1}, detail code={2})	Confirm the following. - The services both the server and the client of III Transfer Accelerator run normally. - The application in destination of data transfer runs normally. - The environmental setting of III Transfer Accelerator is correct. If the error occurs after these confirmations, contact Fujitsu.
	16045	Sending data : An error has occurred while sending a connection request protocol on processing a request for connecting to the server (TCP connection). (server={0}, port#={1}, detail code={2})	
	16046	Sending data : An error has occurred while receiving data from the server (TCP connection). (server={0}, port#={1}, detail code={2})	
	16048	Sending data : An error has occurred on the server while processing a request for	

Category	Message ID	Message Text	Treatment
		connection to the server (TCP connection). (server={0}, port#={1}, detail info={2})	
	16052	Sending data : An error has occurred while connecting to the server (UDP connection). (server={0}, port#={1}, detail code={2})	
	16059	Sending data : An error has occurred while sending data to the client. (client={0}, detail code={1})	
	16063	Receiving data : An error has occurred while receiving data from the client (UDP connection). (port#={0}, detail info={1})	
	16067	An error has occurred while sending data. (server={0}, port#={1}, detail code={2})	
	16072	Sending data : An error has occurred while sending data to the server. (server={0}, port#={1}, detail code={2})	
	16103	An error has occurred while receiving data from the client (TCP connection : for sending data). (client={0}, port#={1}, detail code={2})	
	16104	An error has occurred while sending data to the client (TCP connection : for sending data). (client={0}, detail code={1})	
	16105	There's no connection with the client (TCP connection : for sending data), or it's been disconnected. (client={0}, port#={1})	
	16109	An error has occurred while receiving data. (detail code={0})	
	16111	An error has occurred while connecting to the server (TCP connection : for sending data). (server={0}, port#={1}, detail code={2})	
	16112	An error has occurred while sending data to the client (TCP connection : for sending data). (server={0}, port#={1}, detail code={2})	
	16113	An error has occurred while listening. (listenIPaddress={0}, port#={1})	There is a possibility that the TCP port number specified for TCP Port Number (for Rapid TCP) is used for other applications. Modify the value of TCP Port Number (for Rapid TCP).
	16114	An error has occurred while connecting to the host at server. (server={0}, servicename={1})	Confirm III Transfer Accelerator (Server) side application starts. Moreover, Confirm the following setting content of III Transfer Accelerator (Server) is correct. - For Environment setting tool Each item of [S-3] Sending Information - For Environment file

Category	Message ID	Message Text	Treatment
			Each item of RepeatService.xml
	16115	Service does not exist. (client={0}, servicename={1})	Confirm whether Service definition both the server and the client of III Transfer Accelerator are correctly set.
	16116	An error has occurred while connection to the host. (IPaddress={0}, port#={1}, servicename={2})	Confirm III Transfer Accelerator (Server) side application starts. Moreover, Confirm the following setting content of III Transfer Accelerator (Server) is correct. - For Environment setting tool Each item of [S-3] Sending Information - For Environment file Each item of RepeatService.xml Besides this, there is a possibility that the IPv6 address is used in Java. Confirm the version of Java, and confirm it is Java Runtime Version 7 Update 7 or later. When it is not Java Runtime Version 7 Update 7 or later, update Java.
	16117	An error has occurred while receiving data (UDP : for receiving data). (IPaddress={0}, port#={1}, detail code={2})	Confirm the following. - The services both the server and the client of III Transfer Accelerator start normally. - The application in destination of data transfer operates normally. - The environmental setting of III Transfer Accelerator is correct. When the error occurs after these confirmations, For more information, contact Fujitsu.
	16118	An error has occurred while receiving data (TCP connection: for receiving data). (LocalAddress={0}, port#={1}, RemoteAddress={2}, port#={3})	
	16300	An error has occurred while connecting to R-TSP. (Address={0}, port#={1})	Confirm whether the setting content of Environment file "UdpInfo.xml" is correct.
	16905	An error has occurred while initializing the sub class. (detail code={0})	Confirm the following. - The services both the server and the client of III Transfer Accelerator start normally. - The application in destination of data transfer operates normally. - The environmental setting of III Transfer Accelerator is correct. When the error occurs after these confirmations, For more information, contact Fujitsu.
	16907	An error has occurred while terminating the sub class. (detail code={0})	
	16911	There's no termination code in the received data. (received data={0})	
	16912	A connection to the server (TCP connection) has been established. (server={0}, port#={1})	
	16913	A connection to the destination hasn't been established, or the TCP socket had been closed. (destination={0}, port#={1})	
	16915	The TCP socket has been opened in server mode.	

Category	Message ID	Message Text	Treatment
	16924	An error has occurred while adding a message to the queue.	
	16993	An I/O error has occurred while accessing to the UDP socket. (port#={0}, detail info={1})	
	16994	An interruption has occurred in the thread. (detail info={0})	
	16995	An I/O error has occurred while accessing to the UDP socket. (server={0}, port#={1}, detail info={2})	Confirm the following. - The services both the server and the client of III Transfer Accelerator start normally. - The application in destination of data transfer operates normally. - The environmental setting of III Transfer Accelerator is correct. Besides this, there is a possibility that the IPv6 address is used in Java. Confirm the version of Java, and confirm it is Java Runtime Version 7 Update 7 or later. When it is not Java Runtime Version 7 Update 7 or later, update Java. When the error occurs after these confirmations, For more information, contact Fujitsu.
	16997	An I/O error has occurred while accessing to the TCP server socket. (port#={0}, detail info={1})	Confirm the following. - The services both the server and the client of III Transfer Accelerator start normally. - The application in destination of data transfer operates normally. - The environmental setting of III Transfer Accelerator is correct. When the error occurs after these confirmations, For more information, contact Fujitsu.
	16998	An I/O error has occurred while accessing to the TCP socket. (server={0}, port#={1}, detail info={2})	Confirm the following. - The services both the server and the client of III Transfer Accelerator start normally. - The application in destination of data transfer operates normally. - The environmental setting of III Transfer Accelerator is correct. Besides this, there is a possibility that the IPv6 address is used in Java. Confirm the version of Java, and confirm it is Java Runtime Version 7 Update 7 or later. When

Category	Message ID	Message Text	Treatment
			it is not Java Runtime Version 7 Update 7 or later, update Java. When the error occurs after these confirmations, For more information, contact Fujitsu.
	16999	A system error has occurred. (detail info={0})	Confirm the following. - The services both the server and the client of III Transfer Accelerator start normally. - The application in destination of data transfer operates normally. - The environmental setting of III Transfer Accelerator is correct. When the error occurs after these confirmations, For more information, contact Fujitsu.
internal error	20500	Failed to initialize the UDP port manager. (detail code={0})	
	20501	Please check IP and Port # again and confirm that port is not used by another application.(server={0}, port#={1})	Confirm whether IP address and the port number are correct. When the port number is used by other applications, modify the port number of the application or the port number set to III Transfer Accelerator. Besides this, there is a possibility that the IPv6 address is used in Java. Confirm the version of Java, and confirm it is Java Runtime Version 7 Update 7 or later. When it is not Java Runtime Version 7 Update 7 or later, update Java.
	20503	Failed to initialize the connector. (detail code={0})	Confirm the following. - The services both the server and the client of III Transfer Accelerator start normally. - The application in destination of data transfer operates normally. - The environmental setting of III Transfer Accelerator is correct. When the error occurs after these confirmations, For more information, contact Fujitsu.
	20504	Failed to initialize the send manager. (detail code={0})	
	20505	Failed to exec the send manager. (detail code={0})	
	20506	Failed to initialize the receive manager. (detail code={0})	
	20507	Failed to exec the receive manager. (detail code={0})	

6.2.2 Sending investigation log

When the problem occurs after executing the treatment written in the message, send investigation log to Fujitsu and request investigation.

To send the investigation log, according to the following procedures.

For PC version III Transfer Accelerator

1. Preserve investigation log.

   Investigation log is output in the following directory. Compress the directory into the zip form etc.

- For Windows

IIITransferAcceleratorInstallDirectory\trc

- For UNIX

/opt/FJSVifiac/trc

2. Send Fujitsu the investigation request mail that appends the investigation log.

For Android version III Transfer Accelerator

1. Preserve log "III_logdata.zip" for the investigation

   Refer to "B.7 Log Saving" for preservation method of log "III_logdata.zip" for the investigation.

2. Connect Android device with PC by using USB cable.

   ->USB storage of Android device is mounted as a drive. As a result, you can refer SD card of Android device from PC.

🛇 Note

- When you use the USB tethering function of Android device, turn off the USB tethering function before file transferring between Android device and PC.

- The MTP protocol to which the standard is supported since Windows Vista is used for this connection. Therefore, when you use Windows XP or earlier versions, or OS other than Windows, the installation of the application might become necessary to connect Android device with PC by using USB and to transfer file. Refer to the manual of Android for detail information.

3. Refer to SD card of Android device from PC and take out investigation log.

   Investigation log is stored in the following directory.

/mnt/sdcard/*Pass specified for preservation place by log preservation function*/III_logdata.zip

4. Cut the connection of Android device and PC detaching USB cable.

5. Send Fujitsu the investigation request mail that appends the investigation log taken out to PC according to procedure 3.

Appendix A Notes concerning usage environment of III Transfer Accelerator

In this appendix, it explains the notes concerning usage environment of III Transfer Accelerator.

Applications not to be able to demonstrate effect of speed-up

The effect of speed-up with III Transfer Accelerator cannot be demonstrated by the following applications.

- The one to make an acknowledgement of small capacity data unit on application side where TCP/IP is used (example: CIFS 1.0 protocol)

  However, the effect of speed-up can be expected because it is improved for CIFS to enlarge 2.0 data units of acknowledgment.

- The one to set Internet Protocol address and port number to protocol message, and to use them on application side where TCP/IP is used (example: FTP protocol)

  In this case, because it is not possible to convert it into a high-speed transfer protocol with III Transfer Accelerator, it is not possible to provide high-speed transfer service.

- Application that uses UDP (example: PCo IP protocol of VMware View)

  In this case, because it is not possible to convert it into a high-speed transfer protocol because communication cannot be caught with III Transfer Accelerator, it is not possible to provide high-speed transfer service.

Moreover, it is worth noting protocol (CIFS protocol etc.) that cannot specify the port number from III Transfer Accelerator (client) side is used, because TCP port number for waiting for III Transfer Accelerator (server) side is fixed. For instance, port number "445" that used by CIFS on Windows is fixed. Therefore, it fails to start III Transfer Accelerator (client) when III Transfer Accelerator (client) installed on Windows and "445" is set to the TCP port number for waiting. In this case, it is necessary to install III Transfer Accelerator (client) on OS other than Windows, and to set "445" to the TCP port number for waiting.

Refer to "Chapter 2 System configuration" for "Server" and "Client" of III Transfer Accelerator.

Network environment not to be able to demonstrate effect of speed-up

The effect of speed-up with III Transfer Accelerator cannot be demonstrated by the following network environment.

- Environment where communication delay rarely happens (example: The data sender and the data receiver are a short distance away from each other.)

- Environment with low packet loss rate (example: LAN environment)

- Environment where there is no space in communications zone

- Environment of SSL-VPN

  III Transfer Accelerator converts the TCP communication into UDP based high-speed transfer protocol to provide High-speed data transfer. However, this UDP communication is capsulated and it becomes HTTPS communication (TCP communication) when through SSL-VPN. After all, the problem of time delay of TCP is generated because it is returned to TCP by SSL-VPN even in case of speed-up with the UDP base.

- Environment that is set to squeeze band with QoS-enabled devices.

  Since III Transfer Accelerator use a high-speed transfer protocol of the UDP based high-speed transfer protocol, a large amount of data can be sent at the same time (Burstiness is high). The effect of speed-up cannot be demonstrated in the environment that is set to observe high communications of burstiness and squeeze its band with QoS-enabled devices.

Appendix B Android version III Transfer Accelerator operation guide

In this appendix, it explains the manner of operation of Android version III Transfer Accelerator.

First, it explains the term used in this appendix.

Figure B.1 Menu window of Android version III Transfer Accelerator
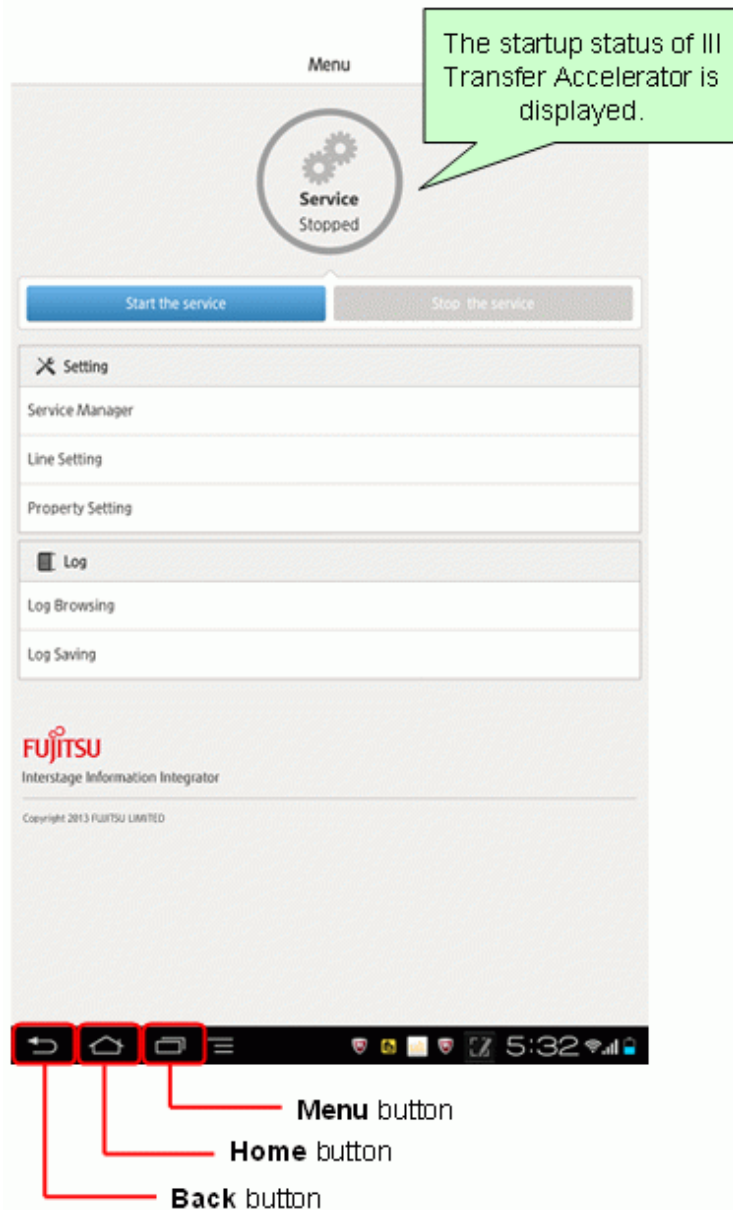
How to use each button is as follows.

- **Back** button

  The previous one window is displayed.

- **Home** button

  Home window is displayed.

- **Menu** button

  Options menu is displayed.

The content of options menu is different according to the window displayed when this button is pushed.

In addition, the operation that touches the liquid crystal display is written "Tap" as a peculiar operation to a smart device.

B.1 Start and close application

Start application

The following operation starts the application.

When "Interstage Information Integrator III Transfer Accelerator" (start icon name "III Transfer Accelerator") is tapped from the list of the application of the Android device, this application starts.

-> **Menu** window of the application is displayed.

Close application

The following operation exits the application.

1. Press **Back** button of the Android device on **Menu** window.

   -> **Confirm exit** dialog is displayed.

2. Tap **OK** button.

Note
....

III Transfer Accelerator does not stop even if the application is closed. Operate the start or stop III Transfer Accelerator on **Menu** window.
....

B.2 Start and stop Android version III Transfer Accelerator

Start Android version III Transfer Accelerator

The following operation starts Android version III Transfer Accelerator.

1. Tap **Start the service** on **Menu** window.

   -> III Transfer Accelerator starts and **Start the service** dialog is displayed.

2. Tap **OK** button.

   -> "Service started" is displayed on **Menu** window.

Stop Android version III Transfer Accelerator

The following operation exits the Android version III Transfer Accelerator.

1. Tap **Stop the service** on **Menu** window.

   -> III Transfer Accelerator stops and **Stop the service** dialog is displayed.

2. Tap **OK** button.

   -> "Service Stopped" is displayed on **Menu** window.

B.3 Service Manager

The service definition of III Transfer Accelerator (basic information of data transfer) is managed in **Service Manager** menu of **Setting** column on **Menu** window.

Start Service Manager

The following operation starts the service management.

Tap **Service Manager** menu of **Setting** column on **Menu** window.

-> **Service Manager** window is displayed.

Close Service Manager

The following operation exits the service management.

Tap **Returning** button ![arrow] at the top left-hand of **Service Manager** window or tap **Back** button of the Android device.

-> It returns to **Menu** window.

When the modified content is not saved, **Confirm save** dialog is displayed. Select an appropriate item.

New service definition

The following operation creates new service definition.

1. Tap **New** button at the top right-hand of **Service Manager** window.

    -> **New Service** dialog is displayed.

2. Tap the set item.

    -> A dialog of the selected item is displayed.

    Refer to "4.5.2 Setting of Service Setting Window" for details of each set item.

3. Tap the text field.

4. Set parameter using the keyboard.

5. Check the new parameter displayed in the text field, and tap **OK** button.

    -> The set value is reflected on **New service** window.

6. Repeat procedure 2-5 about all set items.

7. Tap **Returning** button ![arrow] at the top left-hand of **New Service** window or tap **Back** button of the Android device.

    -> **Confirm save** dialog is displayed.

8. Tap **Save** button.

    -> The set content is saved, and the window returns to **Service Manager** window.

🔔 Note

. . . .

The set parameter is not saved until **Save** button is tapped on **Confirm save** dialog. Finish the service management after the save operation.

. . . .

Edit service definition

The following operation edits a service definition.

1. Tap Service ID to edit on **Service Manager** window.

    -> **Service Setting** window of selected Service ID is displayed.

2. Tap the set item.

    -> A dialog of the selected item is displayed.

    Refer to "4.5.2 Setting of Service Setting Window" for details of each set item.

3. Tap the text field.

4. Set parameter using the keyboard.

5. Check the new parameter displayed in the text field, and tap **OK** button.

    -> The set value is reflected on **Service Setting** window.

6. You repeat procedure 2-5 about all set items.

7. Tap **Returning** button [<] at the top left-hand of **Service Setting** window or tap **Back** button of the Android device.

   -> **Confirm save** dialog is displayed.

8. Tap **Save** button.

   -> The set content is saved, and the window returns to **Service Manager** window.

 Note

The set parameter is not saved until **Save** button is tapped on **Confirm save** dialog. Finish the service management after the save operation.

Delete service definition

The following operation deletes a service definition.

1. Select Service ID to delete on **Service Manager** window by either following operation.

   In addition, you can select various service IDs.

   - Tap the check box.

   - Tap and hold on label name of Service ID.

2. Tap **Delete** button.

   -> **Confirm delete** dialog is displayed.

3. Tap **OK** button.

   -> The selected service definition is deleted.

4. Tap **Returning** button [<] at the top left-hand of **Service Manager** window or tap **Back** button of the Android device.

   -> **Confirm save** dialog is displayed.

5. Tap **Save** button.

   -> The set content is saved, and the window returns to **Menu** window.

 Note

- The set parameter is not saved until **Save** button is tapped on **Confirm save** dialog. Finish the service management after the save operation.

- **Service Manager** window must have one or more service definitions. Therefore, deletion operation is not reflected, when you save the service definition (tap **Back** button or **Returning** button) since all the service definitions are deleted.

Clear service ID's selection

The following operation clears selection of service ID.

Tap **Deselect** button on **Service Manager** window.

-> All service ID selection is cleared.

B.4 Line Setting

The service definition of III Transfer Accelerator (line information of data transfer) is managed in **Line Setting** menu of **Setting** column on **Menu** window.

Start Line Setting

The following operation runs the line setting.

Tap **Line Setting** menu of **Setting** column on **Menu** window.

-> **Line Setting** window is displayed.

Close Line Setting

The following operation exits the line setting.

Tap **Returning** button [<] at the top left-hand of **Line Setting** window or tap **Back** button of the Android device.

-> It returns to **Menu** window.

When the modified content is not saved, **Confirm save** dialog is displayed. Select an appropriate item.

Edit line setting item

The following operation edits item of the line setting.

1. Tap the item to edit on **Line Setting** window.

   -> A dialog of the selected item is displayed.

   Refer to "4.5.3 Setting of Line Setting Window" details of each set item.

2. Tap the text field.

3. Set parameter using the keyboard.

4. Check the new parameter displayed in the text field, and tap **OK** button.

   -> The set value is reflected on **Line Setting** window.

5. Repeat procedure 1-4 about all set items.

6. Tap **Returning** button [<] at the top left-hand of **Line Setting** window or tap **Back** button of the Android device.

   -> **Confirm save** dialog is displayed.

7. Tap **Save** button.

   -> The set content is saved, and the window returns to **Menu** window.

🖐 **Note**
. . . .
The set parameter is not saved until **Save** button is tapped on **Confirm save** dialog. Finish the line setting after the save operation.
. . . .

B.5 Property Setting

The property that controls the operation of III Transfer Accelerator is managed in **Property Setting** menu of **Setting** column on **Menu** window.

🖐 **Note**
. . . .
Set the property only when Fujitsu's engineers instruct you.
. . . .

Start Property Setting

The following operation starts the property setting.

Tap **Property Setting** menu of **Setting** column on **Menu** window.

-> **Property Setting** window is displayed.

Close Property Setting

The following operation exits the property setting.

Tap **Returning** button ![back button] at the top left-hand of **Property Setting** window or tap **Back** button of the Android device.

-> It returns to **Menu** window.

When the modified content is not saved, **Confirm save** dialog is displayed. Select an appropriate item.

New property

The following operation adds a new property.

1. Tap **New** button at the top right-hand of **Property Setting** window.

   -> **Add item** dialog is displayed.

2. Input new property name by either following operation.

   - Input directly

     1. Tap the text field of item name.

     2. Input property name using the keyboard.

        -> The input property name is displayed in the text field.

     3. Tap the text field of item value.

     4. Input property value using the keyboard.

        -> The input property value is displayed in the text field.

   - Input using assistance

     You can select the property often used from the list.

     1. Tap **Shortcut** button at the right of the text field of item name.

        -> **Select property name** dialog is displayed.

     2. Select the property to be added.

        -> The selected property name and its default value are displayed in the text field.

     3. Tap the text field of item value when you want to modify the property value.

     4. Input property value using the keyboard.

        -> The input property value is displayed in the text field.

3. Tap **OK** button.

   -> The input property (or selected property) is added on **Property Setting** window.

4. Repeat procedure 1-3 about all addition items.

5. Tap **Returning** button ![back button] at the top left-hand of **Property Setting** window or tap **Back** button of the Android device.

   -> **Confirm save** dialog is displayed.

6. Tap **Save** button.

   -> The set content is saved, and the window returns to **Menu** window.

![Note icon] Note

The set parameter is not saved until **Save** button is tapped on **Confirm save** dialog. Finish the property setting after the save operation.

Edit property

The following operation edits the property.

Tap property name to edit on **Property Setting** window.

-> **Edit item** dialog is displayed.

Tap the text field.

Set parameter using the keyboard.

Check the new parameter displayed in the text field, and tap **OK** button.

-> The set value is displayed on **Property Setting** window.

Repeat procedure 1-4 about all set items.

1. Tap **Returning** button at the top left-hand of **Property Setting** window or tap **Back** button of the Android device.

   -> **Confirm save** dialog is displayed.

2. Tap **Save** button.

   -> The set content is saved, and the window returns to **Menu** window.

Note

. . . .

The set parameter is not saved until **Save** button is tapped on **Confirm save** dialog. Finish the property setting after the save operation.

. . . .

Delete property

The following operation deletes the property.

1. Select the property to delete on **Property Setting** window by either following operation.

   In addition, you can select any properties.

   - Tap the check box.

   - Tap and hold on label name of the property.

2. Tap **Delete** button.

   -> **Confirm delete** dialog is displayed.

3. Tap **OK** button.

   -> The service definition of selected property is deleted.

4. Tap Returning button at the top left-hand of **Property Setting** window or tap Back button of the Android device.

   -> **Confirm save** dialog is displayed.

5. Tap **Save** button.

   -> The set content is saved, and the window returns to **Menu** window.

Note

. . . .

The set parameter is not saved until **Save** button is tapped on **Confirm save** dialog. Finish the property setting after the save operation.

. . . .

Clear property's selection

The following operation clears selection of the property.

Tap **Deselect** button of **Property Setting** window.

-> All property selection is cleared.

B.6 Log Browsing

The logs that III Transfer Accelerator outputs is displayed in **Log Browsing** menu of **Log** column on **Menu** window.

Display log

The following operation displays the logs.

1. Tap **Log Browsing** menu of **Log** column on **Menu** window.

   -> **Select log to browse** window is displayed.

2. Tap the referred log from the list.

   You can refer the following logs.

   - syslog: System log

   - sctstartup.log: The startup log of III Transfer Accelerator

   - rtspstartup.log: The startup log of R-TSP protocol

   -> The selected log is displayed on **Log Browse** window.

You can return to **Menu** window when you tap **Returning** button ![<] at the top left-hand of **Log Display** window or tap **Back** button of the Android device.

Switch log

You can switch the displayed log to another log.

The following operation switches the displayed log to another.

1. Tap **Log switch** button at the top center-hand of **Log Browse** window.

   -> **Log name list** dialog is displayed.

2. Tap the log to be referred from the log name list.

   You can refer the same logs as "Display log".

   -> The selected log is displayed on **Log Browse** window.

P Point

....

Display log using filtering function

The following operation narrows the syslog displayed on **Log Browse** window.

1. Tap **Filter** button at the top left-hand on **Log Display** window.

   -> **Filter name list** dialog is displayed.

2. Tap the displayed log from **Filter name list** dialog.

   You can select one of the following filters.

   - syslog: error

     Only error message is displayed.

   - syslog: warn,error

     Warning message and error message are displayed.

   - syslog: info,warn,error

     All messages (normal message, warning message, and error message) are displayed.

   -> Only the log of the selected filter is displayed on **Log Browse** window.

....

B.7 Log Saving

The logs of III Transfer Accelerator for the investigation are saved as "III_logdata.zip" in **Log Saving** menu of **Log** column on **Menu** window.

Save log

The following operation saves the logs as "III_logdata.zip."

1. Tap **Log Saving** menu of **Log** column on **Menu** window.

   -> **Select destination folder** dialog is displayed.

2. When you want to change the folder that the logs are saved, you operate as following.

   1. Tap Save another folder button.

      -> **Select folder** dialog is displayed.

   2. Select the folder that the logs are saved from folder list, and tap **Save the folder** button.

      -> **Select destination folder** dialog that the selected folder is set is displayed.

   P Point
   . . . .

   The following folder is recommended for investigation.

   When III Transfer Accelerator is uninstalled, following folder is automatically deleted.

/mnt/sdcard/Android/data/data/com.fujitsu.interstage.android.ifiac/files

   (*)The folder name of the SD card might be different depending on the model of the Android device.
   . . . .

1. Tap **OK** button.

   -> The log is saved in the specified folder.

   G Note
   . . . .

   When the file that named "III_data.zip" exists, it is overwritten.
   . . . .

Appendix C Speed up transferring file from Information Integrator Server

In this appendix, it explains the method of speeding up transferring file between Information Integrator Servers by using III Transfer Accelerator.

Note

The Information Integrator Server and III Transfer Accelerator are required to be installed normally.

Refer to *Software Release Guide* and *Transfer Accelerator Software Release Guide* for installation method. Moreover, confirm the right version of Java is installed. Refer to "Chapter 3 System requirements" for the version of the Java that III Transfer Accelerator uses.

C.1   Outline of environment configuration

In this section, it explains the outline of environment configuration.

The following examples show the product structure, the system configuration and the set up information of the file transfer between Information Integrator Servers.

Figure C.1 Product structure
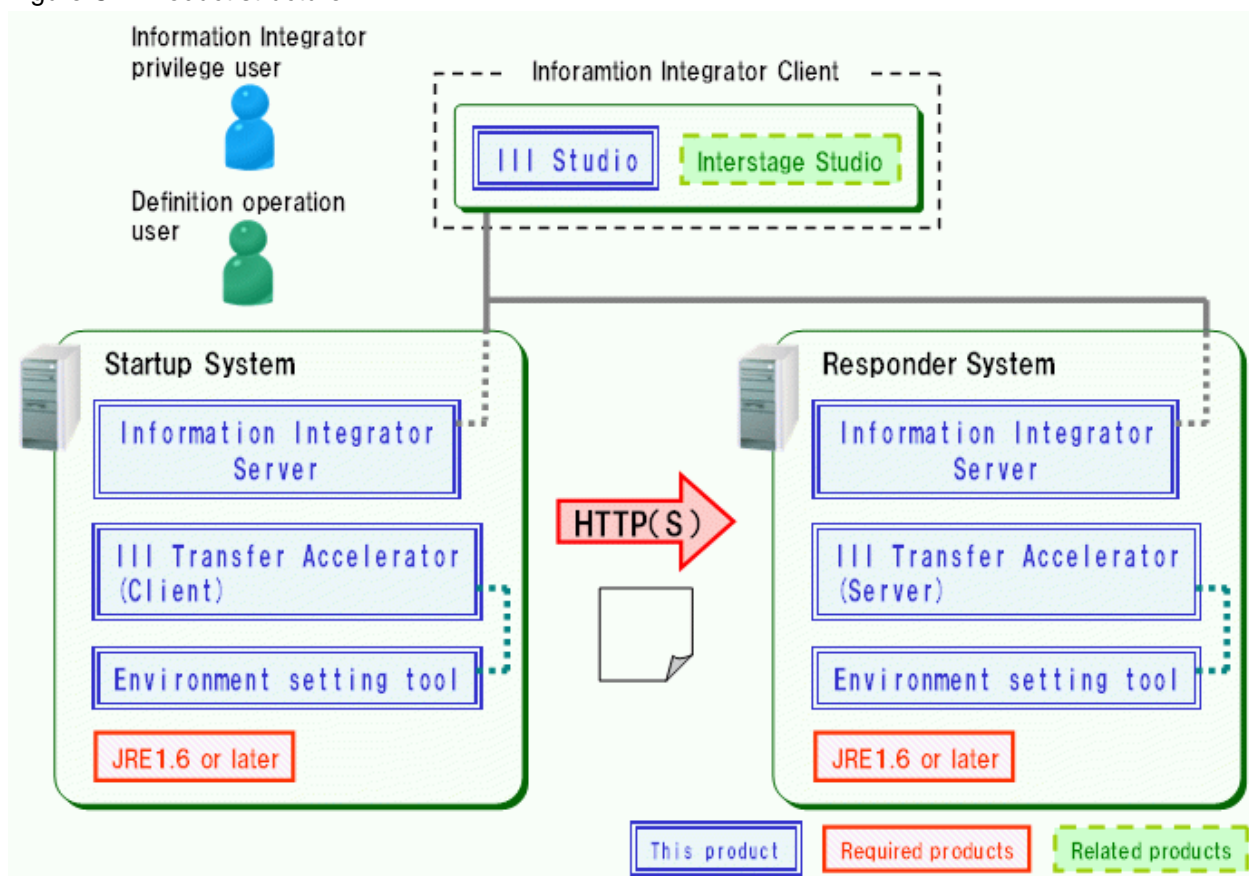
Information Integrator Server and III Transfer Accelerator are introduced into the same server.
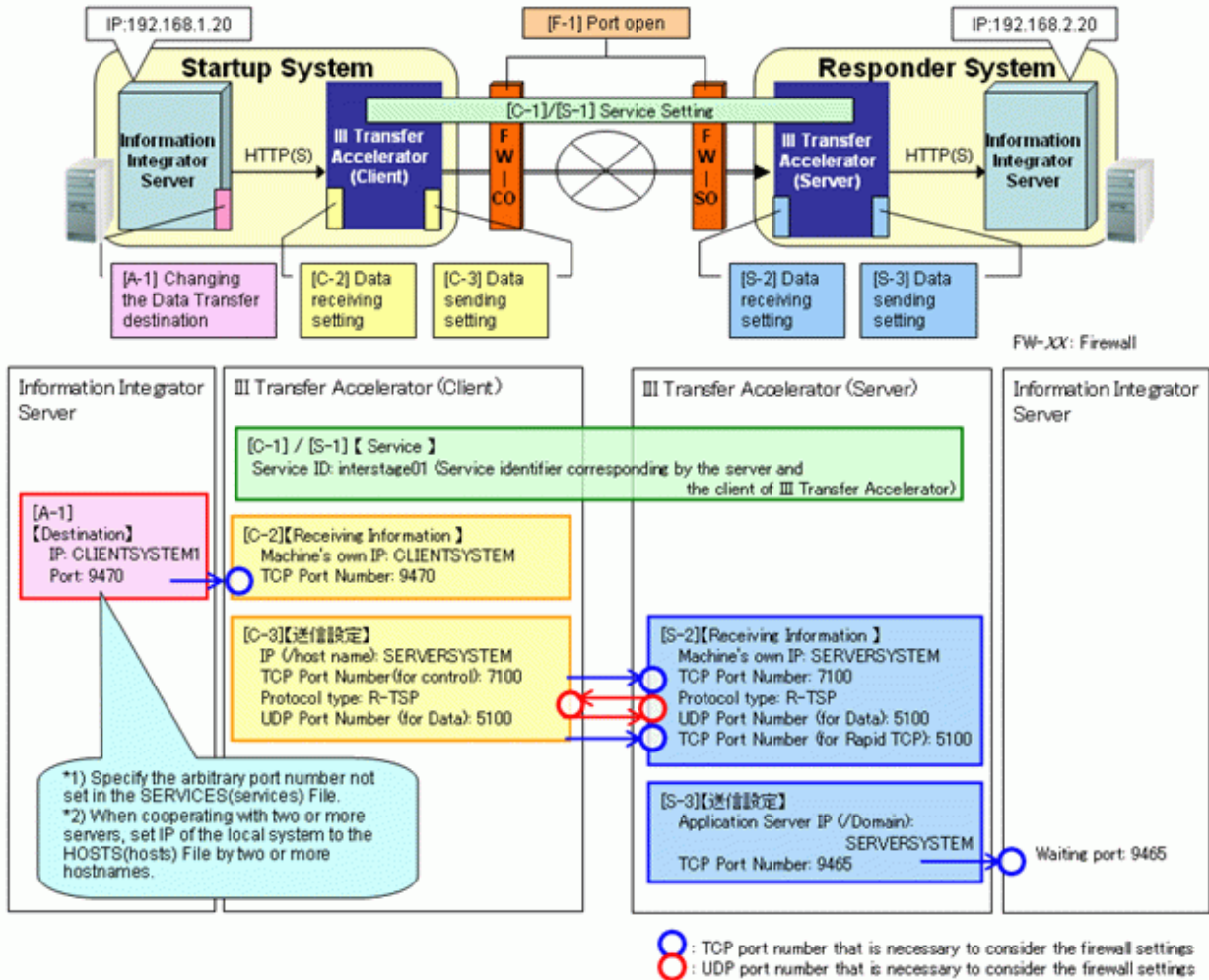
Moreover, Information Integrator Client can be introduced into the same server as Information Integrator Server for Windows.

Note

The III agent cannot be used to speed up the file transfer when using III Transfer Accelerator.

Figure C.2 Example of the system configuration and the set up information

- [A-1]: The Information Integrator Server on the startup system side

  In the Information Integrator Server on the startup system side, the destination of data transfer needs to be modified from the Information Integrator Server on the responder system side to IP address of the machine in which III Transfer Accelerator (Client) is installed.

- [C-1]-[C-3]: III Transfer Accelerator (Client)

  In III Transfer Accelerator (Client), Service ID, receiving information from the Information Integrator Server on the startup system side, sending information to III Transfer Accelerator (Server) etc. need to be set.

- [S-1]-[S-3]: III Transfer Accelerator (Server)

  In III Transfer Accelerator (Server), Service ID, receiving information from III Transfer Accelerator (Client), sending information to the Information Integrator Server on the responder system side etc. need to be set.

- [F-1]: Firewall

  When there is a firewall on the network, the network port needs to be opened.

In the following explanations, the Information Integrator Server on the startup system side is abbreviated to "Information Integrator Server (initiator)", and the Information Integrator Server on the responder system side is abbreviated to "Information Integrator Server (responder)".

Procedure of environmental setting

Configure environment according to the following procedures.

1. Set up environment of firewall.

   Setup [F-1] in "Example of the system configuration and the set up information ". Refer to "C.2 Set up environment of firewall" for details.

2. Set up environment of the Information Integrator Server.

   Setup [A-1] in "Example of the system configuration and the set up information". Refer to "C.3 Configure environment of the Information Integrator Server" for details.

3. Set up environment of III Transfer Accelerator.

   Setup [C-1]-[C-3] and [S-1]-[S-3] in "Example of the system configuration and the set up information". First of all, setup [S-1]-[S-3] on III Transfer Accelerator (server) side. Next, setup [C-1]-[C-3] on III Transfer Accelerator (client) side. Refer to "C.4 Set the environment of III Transfer Accelerator" for details.

4. Confirm the communication

   Confirm whether the file transfer between Information Integrator Server operates normally when the above-mentioned setting is completed. Refer to "C.5 Confirm the communication" for details.

C.2   Set up environment of firewall

In this section, it explains the environmental setting of the firewall.

Refer to "4.2 Firewall setting" for the environmental setting of the firewall. In that case, read "III Transfer Accelerator (server) side application" instead of "III Transfer Accelerator (server) side Information Integrator Server".

C.3   Configure environment of the Information Integrator Server

In this section, it explains the environmental setting of the Information Integrator Server.

To set up environment of the Information Integrator Server (initiator) and Information Integrator Server (responder), according to the following procedures.

1. Set up Information Integrator Server.

   Refer to "C.3.1 Set up the Information Integrator Server" for details.

2. Define and register Information Integrator Server.

   Refer to "C.3.2 Define and register the Information Integrator Server" for details.

C.3.1   Set up the Information Integrator Server

Set up the Information Integrator Server according to "Setup guide" after it is installed. In this section, it explains the point that should be noted during the set up procedure.

Set up HOSTS(hosts) file

IP address of the local system and the partner system is added to the HOSTS(hosts) file.

Refer to *Setup Guide* for details of the setting up the HOSTS(hosts) file.

The following setup example is based on "Example of the system configuration and the set up information" of "C.1 Outline of environment configuration".

- For the Information Integrator Server (initiator)

```
...
192.168.2.20 SERVERSYSTEM (*)
```

* Note: The line feed code is necessary for the final line.

- For the Information Integrator Server (responder)

```
...
192.168.1.20 CLIENTSYSTEM
192.168.1.20 CLIENTSYSTEM1
192.168.2.20 SERVERSYSTEM (*)
```

* Note: The line feed code is necessary for the final line.

Define operating environment file

Set the "systemname" parameter of operating environment file (ifireg.00.ini) to the local system name that specified by the HOSTS(hosts) file. Refer to *Setup Guide* for details of setting up the operating environment file.

The following setup example is based on "Example of the system configuration and the set up information" of "C.1 Outline of environment configuration".

- For the Information Integrator Server (initiator)

```
...
systemname=CLIENTSYSTEM
...
```

- For the Information Integrator Server (responder)

```
...
systemname=SERVERSYSTEM
...
```

📝 **Note**

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Reboot the Information Integrator Server when you edit the operating environment file while starting the Information Integrator Server. Reboot the Information Integrator Server to allow the modified value to take effect.

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C.3.2 Define and register the Information Integrator Server

Define and register the Information Integrator Server.

In this section, III Studio is used. Refer to *III Studio help* for details of the operating instruction of III Studio.

The definition of the Information Integrator Server is made based on the sample.

The sample definition is stored in the following directories.

```
InformationIntegratorClientInstallDirectory\sample\Accelerator
```

Moreover, the sample definition used is as follows.

Table C.1 Sample definition of III Studio

Definition name	Information Integrator Server (initiator)	Information Integrator Server (responder)
Process definition	clientproc.xml	serverproc.xml
Data source definition	clientdsrc.xml	serverdsrc.xml

Plug-in definition(*)	clientplugin.xml	serverplugin.xml

* Note: In the plug-in definition, the batch file of the sample is specified. The name and the storage place of the batch file of the sample are shown in the following procedure.

1. The sample definition of III Studio is read by starting III Studio.

   Read the sample definition according to the following procedures.

   1. Right click **III navigator view**, select **reading definition information**.

      -> **reading definition information** dialog is displayed.

   2. Specify the sample definition used, click **OK** button.

      -> The sample definition is read, and the III navigator view is displayed.

   3. For the sample definitions used, repeat procedures 1 and 2.

2. Edit the definition of the data source of the sample.

   The example of the set up information has been described to "Setting example" of the corresponding item as reference information based on "Example of the system configuration and the set up information" of "C.1 Outline of environment configuration".

   - For the Information Integrator Server (initiator)

   Edit the following items of the data source definition (Data source ID is "CLIENT").

   Table C.2 Edit item of definition of data source of Information Integrator Server (initiator)

Item name	Setting	Setting example
Basic - Remote System Name	Specify local system name specified with the HOSTS(hosts) file.	CLIENTSYSTEM1
Basic - Local System Settings - User Name	Specify the user name with which could log in local system.	CLIENT_ID
Basic - Local System Settings - Password	Specify the password with which could log in local system.	CLIENT_PASS
Details - Remote System Setting - User Name	Specify the user name with which could log in remote system.	SERVER_ID
Details - Remote System Setting - Password	Specify the password with which could log in remote system.	SERVER_PASS
Details - Port Number	Specify the waiting port number of III Transfer Accelerator.	9470

   - For the Information Integrator Server (responder)

   Edit the following items of the data source definition (Data source ID is "SERVER ").

   Table C.3 Edit item of definition of data source of Information Integrator Server (responder)

Item name	Setting	Setting example
Basic - Remote System Name	Specify remote system name specified with the HOSTS(hosts) file.	CLIENTSYSTEM
Basic - Local System Settings - User Name	Specify the user name with which could log in local system.	SERVER_ID
Basic - Local System Settings - Password	Specify the password with which could log in local system.	SERVER_PASS
Details - Remote System Setting - User Name	Specify the user name with which could log in remote system.	CLIENT_ID
Details - Remote System Setting - Password	Specify the password with which could log in remote system.	CLIENT_PASS

3. Edit the plug-in definition of the sample.

The example of the set up information has been described to "Setting example" of the corresponding item as reference information based on "Example of the system configuration and the set up information" of "C.1 Outline of environment configuration".

- For the Information Integrator Server (initiator)

Edit the following items of the plug-in definition (Plug-in ID is "RSTOR").

Table C.4 Set item of plug-in definition of Information Integrator Server (initiator)

Item name	Setting	Setting example
Basic - Plug-in Path	Specify the batch file of the sample in the following places as the absolute path. *InformationIntegratorServerInstallDirectory*\sample\Accelerator\batch\samplestr.bat	C:\INTS_II\SV\sample\Accelerator\batch\samplestr.bat
Basic - Input Parameter - Name (Item Number: 1)	Specify the file name sent to Information Integrator Server (responder) as the absolute path.	C:\indata.dat

- For the Information Integrator Server (responder)

Edit the following items of the plug-in definition (Plug-in ID is "REXT").

Table C.5 Set item of plug-in definition of Information Integrator Server (responder)

Item name	Setting	Setting example
Basic - Plug-in Path	Specify the batch file of the sample in the following places as the absolute path. *InformationIntegratorServerInstallDirectory*\sample\Accelerator\batch\samplerext.bat	C:\INTS_II\SV\sample\Accelerator\batch\samplerext.bat
Basic - Input Parameter - Name (Item Number: 1)	Specify the file name to save the file received from Information Integrator Server (initiator) as the absolute path.	C:\outdata.dat

4. The made definition is registered in the Information Integrator Server.

C.4   Set the environment of III Transfer Accelerator

In this section, it explains the environmental setting of III Transfer Accelerator.

Set up the environment of the server and the client of III Transfer Accelerator according to the following procedures.

1. Copy the service definition of the sample.

Refer to "C.4.1 Copy the service definition of the sample" for details.

2. Edit the service definition.

Refer to "C.4.2 Edit the service definition" for details.

3. Reboot III Transfer Accelerator.

Refer to "Chapter 5 Start and stop III Transfer Accelerator" for the method of rebooting III Transfer Accelerator.

C.4.1   Copy the service definition of the sample

Copy service definition of the sample that under the directory of the Information Integrator Server, and put it into the directory of III Transfer Accelerator.

The service definition of the sample is stored in the following places.

- For III Transfer Accelerator (server)

> *InformationIntegratorServerInstallDirectory*\sample\Accelerator\server\config

- For III Transfer Accelerator (client)

> *InformationIntegratorServerInstallDirectory*\sample\Accelerator\client\config

Copy the file under config directory to the following directories of III Transfer Accelerator.

> *IIITransferAcceleratorInstallDirectory*\config

C.4.2 Edit the service definition

Edit the service definition of the sample.

In this section, use the environment setting tool of III Transfer Accelerator. Refer to the "4.4.1 Using Environment setting tool" for details of using the Environment setting tool.

1. Start Environment setting tool.

2. Edit the following items of the service definition of the sample.

   - For III Transfer Accelerator(server)

   Examples [S-1]-[S-3] in "Example of system configuration and set up information" of "C.1 Outline of environment configuration" are described as "Setting example" of the corresponding item as reference.

   Table C.6 Set item of III Transfer Accelerator (server)

Item name	Setting	Setting example
[S-2] Machine's own IP	Specify IP-address or the hostname of the machine that operates III Transfer Accelerator (server).	SERVERSYSTEM
[S-3] Application Server IP (/ Domain)	Specify the value of "[S-2] Machine's own IP" of III Transfer Accelerator (Server).	SERVERSYSTEM

   - For III Transfer Accelerator(client)

   Examples [C-1]-[C-3] in "Example of system configuration and set up information" of "C.1 Outline of environment configuration" are described as "Setting example" of the corresponding item as reference.

   Table C.7 Set item of III Transfer Accelerator (client)

Item name	Setting	Setting example
[C-2] Machine's own IP	IP-address or the hostname of the machine that operates III Transfer Accelerator (server) is specified.	CLIENTSYSTEM
[C-3] IP (/host name)	Specify the value of "[S-2] Machine's own IP" of III Transfer Accelerator (Server).	SERVERSYSTEM

3. After editing, click **Apply** button to register the set up information.

4. Click **OK** button to close Environment setting tool.

C.5 Confirm the communication

Confirm whether file transfer between Information Integrator Servers operates normally after setting up the environment.

The communication confirmation is executed by the following methods.

1. The processing process is executed by using "Ifiexeprc (processing process execution)" command on Information Integrator Server (initiator). Refer to *Command Reference* for details of this command.

   Ex) When the process ID is "SAMPLESND".

   ```
   ifiexeprc -i SAMPLESND
   ```

2. When the processing process ends normally, confirm whether the file that specified by the plug-in definition item of "Input parameter 1 - name" in Information Integrator Server (responder) is created.

Confirm the item enumerated in "4.6 Communication Confirmation" when file transfer between Information Integrator Servers fail to operate normally. In that case, Read "Information Integrator Server on the III Transfer Accelerator (server) side" instead "Application on the III Transfer Accelerator (server) side".