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For Windows Systems

Job Management Partner 1/File Transmission Server/FTP

Description, Reference and Operator's Guide

3020-3-S36(E)

Preface

This manual describes the functions of and explains how to operate Job Management Partner 1/File Transmission Server/FTP (referred to hereafter as JP1/FTP).

The IPF version of JP1/FTP is not supported.

Intended readers

This manual is intended for users who use JP1/FTP to transmit files.

Organization of this manual

This manual is organized into the following chapters:

1. Overview of JP1/FTP

> Chapter 1 provides an overview of the functions of JP1/FTP and describes its features and operating procedures.

2. Installation and Setup

> Chapter 2 describes how to install and set up JP1/FTP in preparation for using JP1/FTP.

3. File Transmission by JP1/FTP

> Chapter 3 describes how to use JP1/FTP to transmit files.

4. JP1/FTP Operations Management

> Chapter 4 describes the Operations-Manager function of JP1/FTP.

5. Linkage with Other JP1 Programs

> Chapter 5 describes how to set up and operate the JP1 programs that can be linked with JP1/FTP.

6. Commands

> Chapter 6 describes the commands provided by JP1/FTP.

7. API Library

> Chapter 7 describes the API library provided by JP1/FTP.

8. Messages

> Chapter 8 describes the messages that are displayed by JP1/FTP.

9. Troubleshooting

Chapter 9 describes how to handle problems that can occur in JP1/FTP.

Related publications

This manual is part of a related set of manuals. The manuals in the set are listed below (with the manual numbers):

- *Job Management Partner 1/Automatic Job Management System 3 Linkage Guide* (3020-3-S12(E))

- *Job Management Partner 1/Base User's Guide* (3020-3-R71(E))

- *Job Management Partner 1/Integrated Management - Manager Configuration Guide* (3020-3-R77(E))

- *Job Management Partner 1/Software Distribution Administrator's Guide Volume 1* (3020-3-S81(E)), for Windows systems

Conventions: Abbreviations

This manual uses the following abbreviations for product names:

Abbreviation		Full name or meaning
HP NNM		HP Network Node Manager Starter Edition Software version 7.5 or earlier
JP1		Job Management Partner 1
JP1/AJS3	JP1/AJS - Manager	Job Management Partner 1/Automatic Job Management System 3 - Manager
	JP1/AJS - View	Job Management Partner 1/Automatic Job Management System 3 - View
JP1/FTP		Job Management Partner 1/File Transmission Server/FTP
JP1/IM	JP1/IM - Manager	Job Management Partner 1/Integrated Management - Manager
	JP1/IM - View	Job Management Partner 1/Integrated Management - View
JP1/SD		Job Management Partner 1/ Software Distribution
Windows	Windows Server 2003	Microsoft(R) Windows Server(R) 2003, Enterprise Edition
		Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition
		Microsoft(R) Windows Server(R) 2003, Standard Edition

Abbreviation		Full name or meaning
		Microsoft(R) Windows Server(R) 2003, Standard x64 Edition
Windows Server 2003	Windows Server 2003 (IPF)	Microsoft(R) Windows Server(R) 2003, Datacenter Edition for Itanium-based Systems
		Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems
Windows Server 2008		Microsoft(R) Windows Server(R) 2008 Enterprise
		Microsoft(R) Windows Server(R) 2008 Standard
		Microsoft(R) Windows Server(R) 2008 R2 Datacenter x64 Edition
		Microsoft(R) Windows Server(R) 2008 R2 Enterprise x64 Edition
		Microsoft(R) Windows Server(R) 2008 R2 Standard x64 Edition
Windows Server 2008	Windows Server 2008 (IPF)	Microsoft(R) Windows Server(R) 2008 for Itanium-based Systems

- A version of JP1/FTP that is run on Windows Server 2003 (IPF) or Windows Server 2008 (IPF) may be referred to as the IPF version.

This manual also uses the following abbreviations:

Abbreviation	Full name or meaning
API	Application Programming Interface
DNS	Domain Name System
IPF	Itanium(R) Processor Family
LAN	Local Area Network
NIC	Network Interface Card
RFC	Request for Comments
SNMP	Simple Network Management Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol
WAN	Wide Area Network

Conventions: Diagrams

This manual uses the following conventions in diagrams:

- Computer
- Server or computer
- Input/output operation
- Program

- File
- Network WAN
- Bus-type LAN
- Flow of process or task

- Flow of data
- Other flows
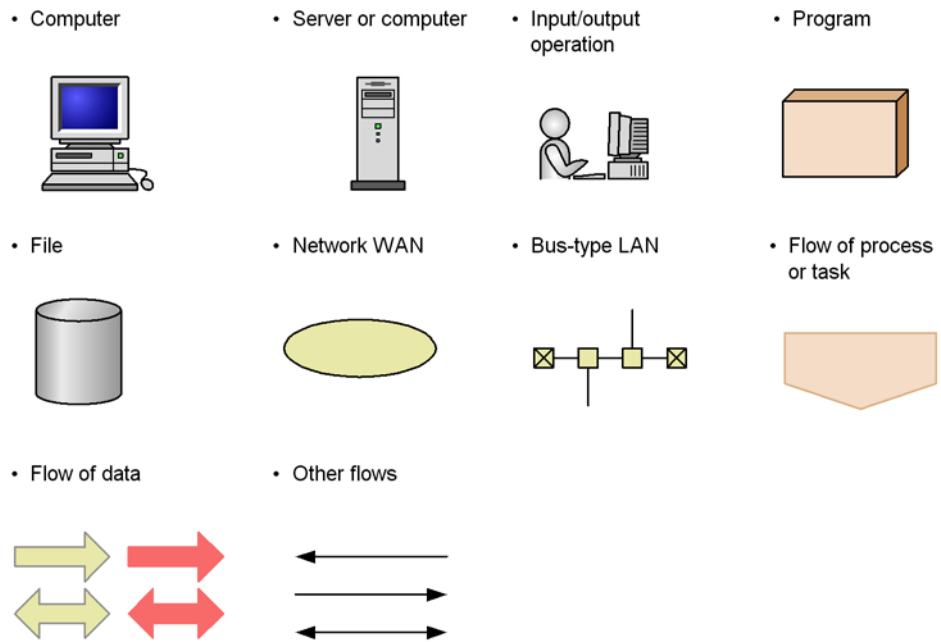
Conventions: Fonts and symbols

Font and symbol conventions are classified as:

- General font conventions
- Conventions in syntax explanations

These conventions are described below.

General font conventions

The following table lists the general font conventions:

Font	Convention
Bold	Bold type indicates text on a window, other than the window title. Such text includes menus, menu options, buttons, radio box options, and explanatory labels. For example, bold is used in sentences such as the following: • From the **File** menu, choose **Open**. • Click the **Cancel** button. • In the **Enter name** entry box, type your name.

Font	Convention
Italics	Italics are used to indicate a placeholder for some actual text provided by the user or system. Italics are also used for emphasis. For example: • Write the command as follows: `copy` *source-file target-file* • Do *not* delete the configuration file.
`Code font`	A code font indicates text that the user enters without change, or text (such as messages) output by the system. For example: • At the prompt, enter `dir`. • Use the `send` command to send mail. • The following message is displayed: `The password is incorrect.`

Examples of coding and messages appear as follows (although there may be some exceptions, such as when coding is included in a diagram):

```
MakeDatabase
...
StoreDatabase temp DB32
```

In examples of coding, an ellipsis (`...`) indicates that one or more lines of coding are not shown for purposes of brevity.

Conventions in syntax explanations

Syntax definitions appear as follows:

Store**D**atabase [temp|<u>perm</u>] (*database-name* ...)

The following table lists the conventions used in syntax explanations:

Example font or symbol	Convention
`StoreDatabase`	Code-font characters must be entered exactly as shown.
database-name	This font style marks a placeholder that indicates where appropriate characters are to be entered in an actual command.
SD	Bold code-font characters indicate the abbreviation for a command.
<u>perm</u>	Underlined characters indicate the default value.
[]	Square brackets enclose an item or set of items whose specification is optional. If multiple items are enclosed, either omit all or select one of them. Example: `[A]` means either nothing or `A` must be specified. `[B|C]` means either nothing or `B` or `C` must be specified.

Example font or symbol	Convention
|	Only one of the options separated by a vertical bar can be specified at the same time. Example: A|B|C means A, B, or C.
...	An ellipsis (...) indicates that the item or items enclosed in ( ) or [ ] immediately preceding the ellipsis may be specified as many times as necessary.
( )	Parentheses indicate the range of items to which the vertical bar (|) or ellipsis (...) is applicable.
{ }	One of the items or sets of items enclosed in curly brackets must be selected. Inside the curly brackets, the items or sets of items are delimited by a vertical bar (|). Example: {A|B|C} means that A, or B, or C must be specified.
(( ))	Double parentheses enclose the range of values that can be specified.
<< >>	Double angle brackets enclose the default value.

Conventions: KB, MB, GB, and TB

This manual uses the following conventions:

- 1 KB (kilobyte) is 1,024 bytes.
- 1 MB (megabyte) is $1,024^2$ bytes.
- 1 GB (gigabyte) is $1,024^3$ bytes.
- 1 TB (terabyte) is $1,024^4$ bytes.

Conventions: Version numbers

The version numbers of Hitachi program products are usually written as two sets of two digits each, separated by a hyphen. For example:

- Version 1.00 (or 1.0) is written as 01-00.
- Version 2.05 is written as 02-05.
- Version 2.50 (or 2.5) is written as 02-50.
- Version 12.25 is written as 12-25.

The version number might be shown on the spine of a manual as *Ver. 2.00,* but the same version number would be written in the program as *02-00*.

Contents

4. JP1/FTP Operations Management   89

5. Linkage with Other JP1 Programs   107

6. Commands   121

7. API Library   137

Chapter
1. Overview of JP1/FTP

JP1/FTP is a program for transmitting files in LAN and WAN environments. This chapter describes the features and functions of JP1/FTP. It also uses an example to explain the flow of the file transmission operations.

1.1 Features

JP1/FTP is a file transmission program that is provided with an Operations-Manager function. It uses the FTP procedure, a standard protocol for file transmission. Compared with the OS's standard FTP functions, JP1/FTP provides functions that are especially useful when files are transmitted by standard applications.

■ **Automation of file transmission jobs**

- The job start function enables you to automate processing startup when file transmission is completed.

- The API function enables you to send files to and receive files from user applications.

- You can automate processing such as receiving data from a base server on a regular schedule throughout the day and then summing up the data at the end of the day.

■ **Management of execution status**

- By using the display and notification of file transmission status, you can take actions such as error handling.

- You can manage the transmission status by collecting and displaying log information during file transmission.

■ **Scheduling transmissions**

When linked to JP1/AJS3, JP1/FTP enables you to easily perform scheduled transmission for standard applications. Additionally, JP1/FTP's automated job startup enables you to automate job execution when file transmission is finished.

■ **Centralized monitoring by JP1/IM**

By using JP1/IM, you can achieve centralized monitoring of services starting and stopping and the termination status of transmissions (normal, warning, abnormal).

■ **Operations-Manager function (not applicable to the IPF version)**

You can perform processing on multiple JP1/FTP hosts that are linked in a network, such as by displaying their file transmission histories and distributing and setting up various definition information.

1.2 Functions

The following figure presents an example of file transmission using JP1/FTP.

Figure 1-1: Example of file transmission (transmitting files between the Chicago branch and the New York headquarters)
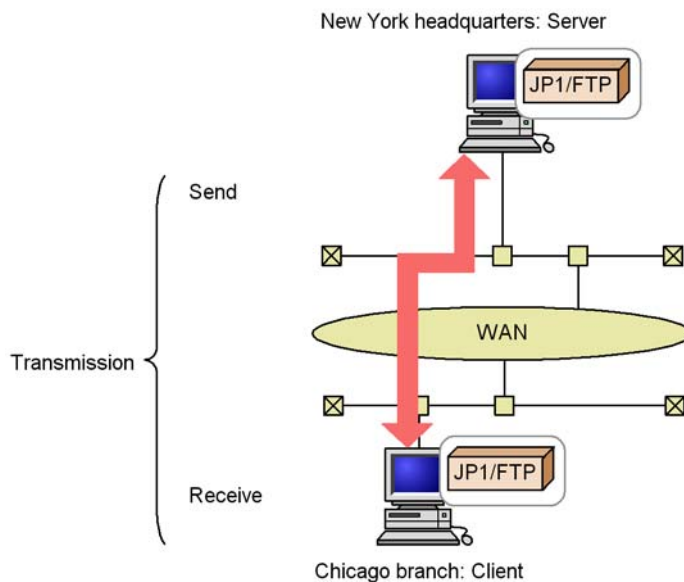
Use of JP1/FTP to send and receive files between hosts is called *transmission*. The end that sends a file is called the *client*, while the end that receives the file is called the *server*. A host can function as both client and server.

JP1/FTP provides the following three functions:

- File transmission function
- Operations-Manager function (not applicable to the IPF version)
- JP1 program linkage function

The following subsections describe these functions.

1.2.1 File transmission function

(1) Using transmission cards to register and transmit transmission information

You use a *transmission card* to register the information to be transmitted. You can specify multiple transmission cards and transmit in batch mode. You can use a transmission card that has already been registered as a model by editing its contents

and then transmitting the edited version.

JP1/FTP supports the following operations:

- Transmitting multiple files in the batch mode

  You can use wildcards to specify multiple files that are to be transmitted. If you set standard file naming rules, you can achieve efficient transmission, for example when business report files of multiple groups are to be transmitted on a weekly basis.

- Checking the file size during transmission

  You can check that the size of a file is the same at the sender and the receiver. If transmission terminates successfully, any damage to the file that occurs during transmission is not detected. However, if you check the file size, any change in the file size is detected as a transmission error. This helps you achieve reliable transmission.

  Checking the file size is supported only during JP1/FTP-to-JP1/FTP transmission.

(2) Automatically starting a program after file transmission

You can specify a program to start automatically when file transmission is completed, thereby achieving automation of task execution. The following types of automated program startup are supported:

- Starting a specified program when file transmission is performed by a specified user

- Starting a specified program when a specified file is transmitted

(3) Checking file transmission logs

You can check transmission logs from either the server or the client. Supported operations include viewing transmission logs and checking for errors when transmission has terminated abnormally. You can also select the information to be included in the logs, such as displaying logs of abnormal termination information only.

(4) Using an API to link with user programs

You can use an API to link with user programs to perform file transmission. This feature enables you to achieve file transmission that is appropriate to the environment in use and to automate task execution after transmission.

(5) Saving and restoring definition information

You can save the JP1/FTP definition information items and distribute them to other hosts. You can also restore definition information from the saved items. By restoring the definition information of one host at multiple different hosts, you can simplify the setup procedure.

1.2.2 Operations-Manager function (not applicable to the IPF version)

The Operations-Manager function enables you to reference the logs of multiple JP1/FTP hosts that are linked in a network and check their definition information from a single host, thereby reducing the administrator's workload.

1.2.3 JP1 program linkage function

(1) Linking to JP1/AJS3 to perform scheduling transmissions

You can link to JP1/AJS3 to execute jobs when transmission occurs. This function enables you to automate execution of a series of jobs.

(2) Linking to JP1/IM to check transmission results

You can link to JP1/IM to check the JP1/FTP service status and the results of file transmission. Normally, JP1/IM is used to monitor operations. In the event of an error, you can use the JP1/FTP logs to check the details.

1.3 Flow of JP1/FTP operations

To start each function of JP1/FTP, from the **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then a function menu.

This section uses the following application example to describe the flow of the file transmission operations.

Figure 1-2: Example of application

Example of application:
(1) At each branch host, the sales report files are stored by Sales Sections 1 and 2.
(2) At each branch host, the sales report files are summed up and then JP1/FTP is used to transmit them to the New York headquarters.
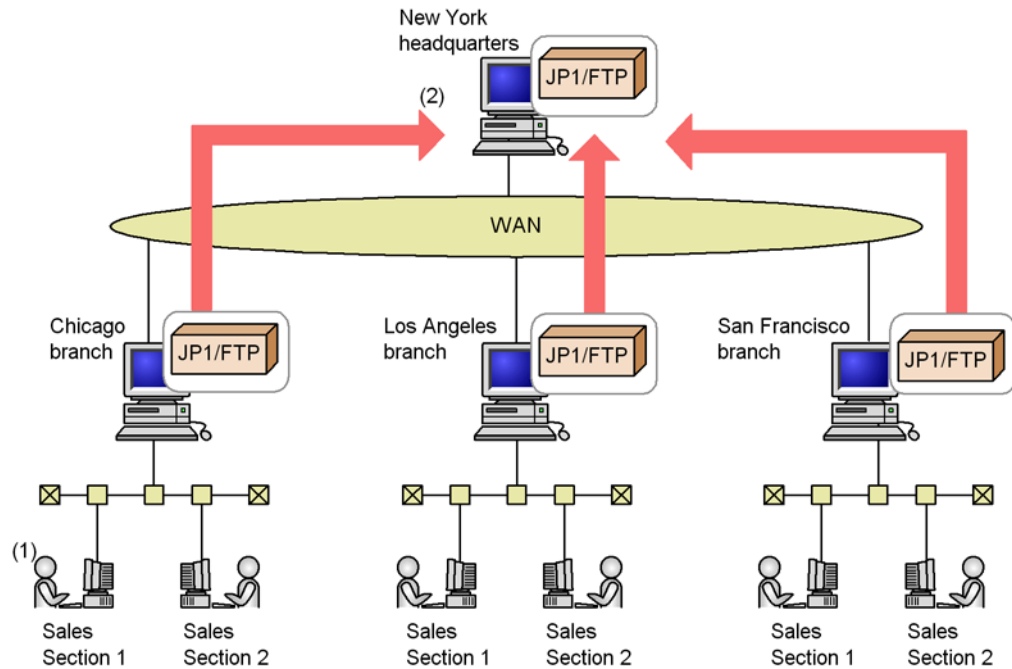
1.3.1 Registering JP1/FTP definition information

The following definition information must be registered:

- Environment definition information

- Transmission execution information (auto-start program information, transmission information, and login user information)

Figure 1-3: Example of registering definition information

Type of information	Overview of operation	Executing host	Menu selection
Environment definition information	Defining environment definition information: Defines a JP1/FTP environment, such as the buffer size during transmission and the log file size.	Server/ client	**Environment Definition** (see *3.1 Defining an environment for JP1/FTP*)
Transmission execution information	Registering login user information: Registers the users who are permitted to log in to the server during file transmission. In the example, a user (`sales`) who logs in to the server at the New York headquarters from the Chicago branch is registered.	Server	**User-To-Login Registration** (see *3.2 Registering the users who can log in to a JP1/FTP server*)
	Registering auto-start program information: Registers programs that are started automatically at the server when file transmission to the server is completed. The example registers into the server at the New York headquarters that the *Totaling program* is to be started when a *Sales report* file is received from `sales`.	Server	**Auto-Start Program Registration** (see *3.3 Registering auto-start programs*)

Type of information	Overview of operation	Executing host	Menu selection
	Registering transmission information: Registers in transmission cards the information to be transmitted (such as remote server names and transmission file names). A command can also be used to register transmission information. In this example, information about file transmission from the Chicago branch to the New York headquarters is registered.	Client	**Transmission Regist. & Exe.** (see *3.4 Registering transmission information*)

1.3.2 Transmitting a file

You register transmission information onto a *transmission card* and then execute transmission. Logs can be used to check the transmission results.

Figure 1-4: Example of file transmission
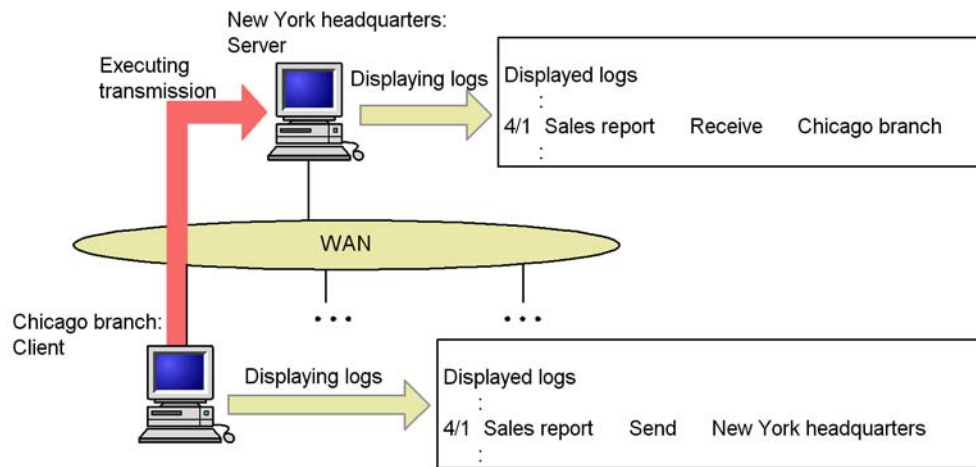
Overview of operation	Executing host	Menu selection
Transmitting a file: Specifies a registered transmission card and then executes transmission. A command can also be used to execute transmission. This example transmits a file from the Chicago branch to the New York headquarters.	Client	**Transmission Regist. & Exe.** (see *3.5 Transmitting files*)

Overview of operation	Executing host	Menu selection
Displaying logs: Displays logs to check the result of file transmission. In this example, reception logs can be checked at the New York headquarters and transmission logs can be checked at the Chicago branch.	Server/client	**Log Information** (see *3.6 Checking the transmission logs*)

1.3.3 Saving and recovering JP1/FTP settings

You can save and recover JP1/FTP settings and output them in text format.

Figure 1-5: Example of saving and recovering JP1/FTP settings

Overview of operation	Executing host	Menu selection
Saving and recovering JP1/FTP settings: You can save the definition information created at one host and then recover it at other hosts. Definition information that can be saved and recovered: • Environment settings • User-to-login settings • Auto-start program settings • Transmission settings This example recovers definition information for the Chicago branch at the Los Angeles and San Francisco branches. This makes it easy to set up environments.	Server/client where the information is registered	**Saving and Recovering Settings** (see *3.7 Saving and recovering JP1/FTP settings*)

9

Overview of operation	Executing host	Menu selection
Outputting definition information as text: You can output the registered information in text format. For the output format, use the provided sample. Definition information that can be output as text: • User-to-login settings • Auto-start program settings • Transmission settings • Log information	Server/client where the information is registered	*menu-item-for-type-of-information* (see *3.8 Outputting definition information as text*)

1.3.4 Checking the JP1/FTP definition information for other hosts

You can use the Operations-Manager Console to check and change other hosts' JP1/FTP definition information and to reference their logs.

Note

The Operations-Manager function is not supported in the IPF version.

Figure 1-6: Example of checking the JP1/FTP definition information for other hosts

Overview of operation	Executing host	Menu selection

Operations-Manager Console:
 	
    Enables you to check, register, change, and delete definition information for other hosts and to reference log information.
    The end that checks definition information is called the *Operations-Manager Console*, and the end whose definition information is checked is called the *Operations-Manager Agent*.
 	
In the above example, the New York headquarters can reference each branch's log information and check its definition information.
	Operations-Manager Console	**Manager Console**
		(see *4. JP1/FTP Operations Management*)

Chapter

2. Installation and Setup

This chapter describes the setup of JP1/FTP and the procedures required before JP1/FTP can be used.

2.1 JP1/FTP system configuration

This section describes the JP1/FTP system configuration.

2.1.1 Supported OSs

The following OSs are supported:

- Windows Server 2003
- Windows Server 2008

2.1.2 Basic system configuration

JP1/FTP must be installed at both the server and the client in order to transmit files. Files are transmitted from the client to the server.

When you have finished installing JP1/FTP, you assign the client and server functions to individual machines at the time that you start services. You can also start the services of both the client and the server on the same machine. For details about starting services, see *2.3 Starting and stopping services*.

Figure 2-1: Example of a basic system configuration for using JP1/FTP to transmit files

14
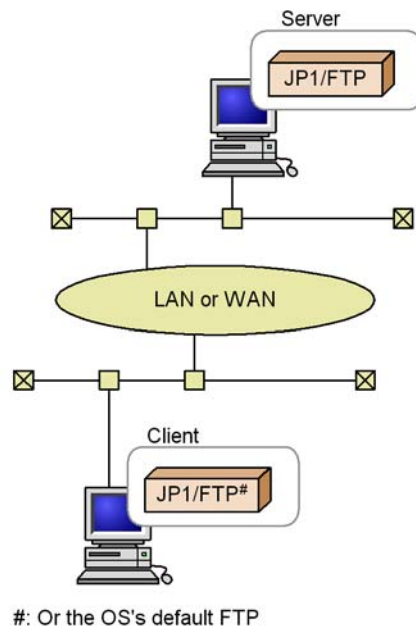
2.2 Installing and setting up

This section describes how to install and set up JP1/FTP.

2.2.1 Installing JP1/FTP

A distribution medium is provided for installing JP1/FTP, or you can use JP1/SD to perform remote installation.

To install JP1/FTP from the distribution medium:

1. Log in to the machine on which JP1/FTP is to be installed as a user with Administrator permissions (or as an administrator in Windows Server 2008).

2. Terminate all programs.

3. Insert the distribution medium.

   The installer starts. Perform installation by following the installer's instructions.

   You will define the following information during installation:

   - User information

     Enter your user name and organization name.

   - Installation target

     Specify the directory in which JP1/FTP is to be installed.

     The default is *OS-installation-drive*:\Program Files\Hitachi\FTSFTP.

2.2.2 Setting the port numbers

After you have finished installing JP1/FTP, you must specify in the following file the port numbers to be used by JP1/FTP.

File used for setting the port numbers

   OS-installation-directory\system32\drivers\etc\services

Settings

```
ftssdata   aaaaa-1/tcp   #Used by the server during data transmission
ftss       aaaaa/tcp     #Used by the server during reception
ftsc       bbbbb/tcp     #Used by the client
ftsclog    ccccc/tcp     #Used by the client to obtain log information
ftsslog    ddddd/tcp     #Used by the server to obtain log information
ftsagent   eeeee/tcp     #Used by the Operations-Manager function (agent)
```

Legend:

> *aaaaa*, *bbbbb*, *ccccc*, *ddddd*, *eeeee*: Unique port numbers. Each must be different from any port numbers used by any other programs.

- *aaaaa-1* can be set automatically, but we recommend that you specify the number explicitly, as shown above.

- If you plan to use the host only as a server or only as a client, specify one of the following sets of port numbers:

  To use the host only as a server: `ftssdata`, `ftss`, `ftsslog`

  To use the host only as a client: `ftsc`, `ftsclog`

Example of setting port numbers

```
ftssdata  20124/tcp   #Used by the server during data transmission
ftss      20125/tcp   #Used by the server during reception
ftsc      20126/tcp   #Used by the client
ftsclog   20127/tcp   #Used by the client to obtain log information
ftsslog   20128/tcp   #Used by the server to obtain log information
ftsagent  20252/tcp   #Used by the Operations-Manager function (agent)
```

A sample file is provided in *JP1/FTP-installation-directory*\\`services.sample`.

Specification during transmission

To use JP1/FTP at the server, the client must specify the port number that was assigned to `ftss` during file transmission (in the above example, `20125`).

When transmitting files from the OS's default FTP to JP1/FTP

If JP1/FTP is at the server and the OS's default FTP is used at the client to transmit files, the port specifications are as shown below.

Figure 2-2: Example of file transmission from the OS's default FTP to JP1/FTP

2.2.3 Uninstalling JP1/FTP

To uninstall JP1/FTP (the following example is for Windows Server 2003):

1. Terminate all programs.

2. Stop all services of JP1/FTP.

   For details about how to stop services, see *2.3 Starting and stopping services*.

3. From the Windows **Start** menu, choose **Control Panel**, and then **Add or Remove Programs**.

   A dialog box for selecting the programs to be uninstalled is displayed.

4. While **Change or Remove Programs** is selected, select **JP1/File Transmission Server/FTP** from the list of currently installed programs, and then click the **Remove** button.

   A dialog box for confirming the deletion request is displayed.

5. Click the **Yes** button.

   The program is uninstalled.

2.3 Starting and stopping services

To use JP1/FTP, you must start its services.

2.3.1 Types of services

To use JP1/FTP, you must start the services for the desired functions. The types of services are as follows:

- JP1/File Transmission Server/FTP Server

    Start this service to perform file transmission as the server.

- JP1/File Transmission Server/FTP Client

    Start this service to perform file transmission as the client.

- JP1/File Transmission Server/FTP Log

    Start this service to obtain log information.

- JP1/File Transmission Server/FTP Agent

    Start this service to use the Operations-Manager function.

Note

JP1/File Transmission Server/FTP Agent is not supported in the IPF version.

2.3.2 Starting services

Notes about starting services

- The services of JP1/FTP are used with the account specified during logon. Permissions, such as file access permissions, depend on the account.

- Use the same account to start all the desired JP1/FTP services.

Start the services to be used. You can also set services so that they will be started automatically when the system is started.

To start services (the following example is for Windows Server 2003):

1. From the Windows **Start** menu, choose **Control Panel**, **Administrative Tools**, and then **Services**.

    The Services dialog box is displayed.

2. Right-click the name of a service to be started, and then from the displayed pop-up menu, choose **Start**.

    The service starts. If an error is displayed when the service starts, check the event log that is displayed in Event Viewer. For details about the event log, see *8.2*

Messages displayed in Event Viewer.

To start services automatically when the system starts:

> In the Properties dialog box for the service to be started, on the **General** page, set **Startup type** to **Automatic**. The service will start automatically whenever the system starts.

2.3.3 Stopping services

To stop services (the following example is for Windows Server 2003):

1. From the Windows **Start** menu, choose **Control Panel**, **Administrative Tools**, and then **Services**.

    The Services dialog box is displayed.

2. Right-click the name of the service to be stopped, and then from the displayed pop-up menu, choose **Stop**.

    A confirmation message is displayed.

3. Click the **OK** button.

    The service stops. If any file is being transmitted, transmission processing is terminated forcibly, resulting in abnormal termination.

Chapter

3. File Transmission by JP1/FTP

This chapter describes how to use JP1/FTP to transmit files.

3.1 Defining an environment for JP1/FTP

You must define an environment for JP1/FTP.

To define an environment, you choose **Environment Definition** at both the server and the client, and then use the Environment Definition dialog box.

How to display the Environment Definition dialog box

From the Windows **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then **Environment Definition**.

The following figure shows the Environment Definition dialog box.

Figure 3-1: Environment Definition dialog box
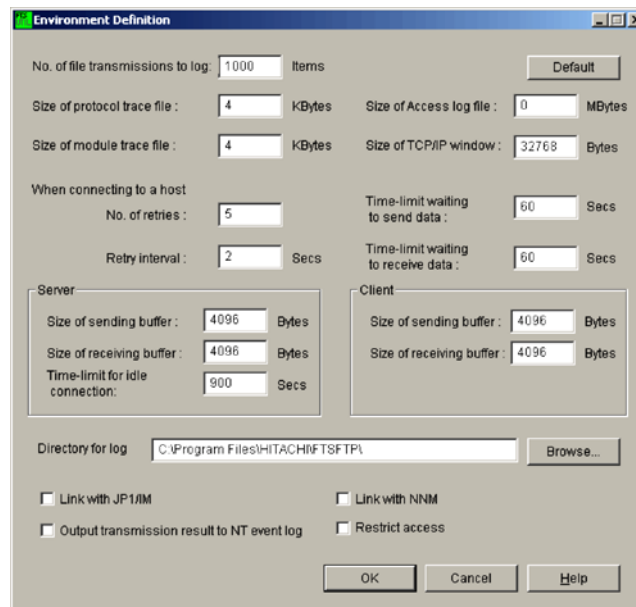
3.1.1 Defining an environment for JP1/FTP

The default values are set during installation. We recommend that you change these values only if necessary.

To use the Environment Definition dialog box to define an environment for JP1/FTP:

1. Change settings as desired in the Environment Definition dialog box, and then click **OK**.

    After you have changed the settings, restart all services.

The following table lists and describes each item in the Environment Definition dialog box.

Table 3-1: Items in the Environment Definition dialog box

Item	Setting
No. of file transmissions to log ((0 to 100,000)) <<1,000>> (in IPF version: <<2,000>>)	Specifies the number of log entries to retain. One file transmission is counted as one entry. When the number of files transmitted exceeds the number of entries being retained, the oldest information is overwritten. Because the size of one entry is 1,500 bytes, the required file size equals *number of retained entries* x *1,500 bytes* (in IPF version, the size of one entry is 1,504 bytes, so the required file size equals *number of retained entries* x *1,504 bytes*). Increasing the number of log entries to be retained: If you increase the number of log entries to be retained, it might take longer to display logs, depending on the CPU and hardware performance as well as on the amount of memory that is installed. If you want to retain log information over a long period of time, we recommend that you copy the log information file (*JP1/FTP-installation-directory*\history) and then store the copy.
Default	Clicking this button resets all environment definition settings to their default values.
Size of protocol trace file ((4 to 1,000 KB)) <<4 KB>> (in IPF version: ((4 to 3,000 KB)) <<50 KB>>)	Specifies the size of a file to be used to collect FTP protocol trace information. The protocol trace files enable you to check the operation of commands at the FTP level. When the amount of trace information for a file exceeds the specified file size, the oldest information is overwritten. You need 120 files, each of the specified size. You can use a text editor such as Notepad to view the trace files.
Size of Access log file ((0 to 100 MB)) <<0 KB>>	Specifies the size of the file to be used to store access logs. When the amount of access log information exceeds the specified size, the old information is backed up and a new file is created. If there already is a backup file, that file is overwritten. You can use a text editor such as Notepad to view the access log file.
Size of module trace file ((4 to 1,000 KB)) <<4 KB>> (in IPF version: ((4 to 3,000 KB)) <<50 KB>>)	Specifies the size of a file to be used to collect module trace information. Module traces are collected as maintenance information. When the amount of trace information for a module trace file exceeds the specified file size, the oldest information is overwritten. You need 128 files, each of the specified size. The module trace files cannot be viewed.

Item	Setting

No. of retries (**When connecting to a host**) **Retry interval** (**When connecting to a host**)	Specifies the number of and interval for retries in the event connection for file transmission cannot be established (for a reason such as busy status). Retries are attempted whenever a `connect` system call results in one of the following error codes:
	When attempting to establish control connection:
	　　`WSAECONNREFUSED (10061)`
	When attempting to establish data connection:
	　　`WSAEADDRINUSE (10048)`
	• **No. of retries** (**When connecting to a host**) ((0 to 100,000)) <<5>>
	　If you specify `0`, no retries will be attempted.
	• **Retry interval** (**When connecting to a host**) ((0 to 86,400 seconds)) <<2 seconds>>
	　If you specify `0`, retries are attempted immediately (without any interval between retry attempts).

Size of TCP/IP window ((0 to 65,535 bytes)) <<32,768 bytes>>	Specifies the size of a TCP/IP window. If the specified value is 0 or smaller than the system's window size (TCP/IP registry setting), the system's window size is assumed. Note that various factors affect transmission efficiency, such as the line speed, usage status, and CPU performance. Specify a value that is appropriate for the system being used.
Time-limit waiting to send data ((1 to 3,600 seconds)) <<60 seconds>>	Specifies the amount of time to wait for the sending buffer to become available after a package has been sent during data transmission. If the buffer is still not available when the specified amount of time elapses, the transmission terminates abnormally.
Time-limit waiting to receive data ((1 to 3,600 seconds)) <<60 seconds>>	Specifies the amount of time to wait for a packet to be received during data reception (a packet is transmitted by a remote target). If no data is received after the specified amount of time has elapsed, the transmission terminates abnormally.

Item	Setting
Server/Client	• **Size of sending buffer/Size of receiving buffer** ((512 to 65,535 bytes)) <<4,096 bytes>> Specifies the size of the buffer (memory) for file transmission (sending) at both the server and the client. You might want to change this value if the amount of memory is limited or when you want to improve transmission efficiency. This value must be no greater than the value specified as the TCP/IP window size (**Size of TCP/IP window**). Note that various factors affect transmission efficiency, such as the line speed, usage status, and CPU performance. Specify a value that is appropriate for the system being used. The memory size that should be allocated for the transmission buffer equals *maximum number of concurrent transmissions* x *specified buffer size*. Buffers for sending and receiving are not allocated at the same time. Allocation occurs only during transmission. • **Time-limit for idle connection** ((30 to 7,200 seconds)) <<900 seconds>> If there is no request from the client for a specific period of time, the server releases the connection with the client. This item specifies the amount of time before the connection is to be released.
Directory for log ((2 to 230-byte character string)) <<JP1/FTP installation directory>>	Specifies the directory in which to create the log information files (`history`) and the trace information output directory (`trace`). The specified directory must be on the local drive. If you change this setting, the previous files and directory are retained. If you no longer need those files and directory, delete them.
Link with JP1/IM	Specifies that JP1 events are to be issued. If you select this item, JP1 events will be issued when the service status changes and when transmission ends. If you link to JP1/IM, you can monitor the status on JP1/IM. For details about linkage with JP1/IM, see *5.2 Linking to JP1/IM*. The default is that this item is not selected.
Link with NNM	Specifies whether to link to HP NNM (version 7.5 or earlier). When you link to HP NNM (version 7.5 or earlier), you can issue traps that change the color of the HP NNM symbol when the service status changes or when transmission is completed, enabling you to monitor the status on HP NNM. For details about linkage with HP NNM, see *G. Linking to HP NNM Version 7.5 or Earlier*. The default is that this item is not selected. This item cannot be selected in the IPF version and on Windows Server 2008.

Item	Setting
Output transmission result to NT event log	Specifies whether to output file transmission results (normal or abnormal termination) and the start of file transmission to the event log. If you select this item, event IDs 33, 34, and from 24 to 27 are output. All other event IDs are always output to the event log, regardless of this setting. The default is that this item is not selected.
Restrict access	Specifies whether a user who logs in to the server is allowed to access only the home directory specified during user registration and the files under that home directory. Because the highest directory becomes the root directory of each drive, no access between drives is permitted. This setting applies to all users. When **Restrict access** is selected, the system's root directory becomes the root directory for the absolute path names of files and directories that are displayed and set. However, if you register the absolute path name format beforehand, you can change the root directory for absolute path names to the home directory. For details about how to change the root directory for absolute path names to the home directory, see *3.13 Function for using the access control function to change the root directory for absolute path names*. The default is that this item is not selected.

Note

> If the value set in the Environment Definition dialog box in **No. of file transmissions to log**, **Size of protocol trace file**, and **Size of module trace file** is smaller than the current value for that item, the corresponding information files are deleted when the service is restarted. This means that the information existing before the restart will be deleted. The log information is backed up to the file *log-information-directory*\FTSLOGSAVE.

Suppressing automatic display at the HP NNM console

> If you select **Link with NNM** in the Environment Definition dialog box and then save the environment definition, the linkage batch starts. The default is that the HP NNM console is displayed automatically. To suppress this display, add ovw to the registry
> HKEY_LOCAL_MACHINE\SOFTWARE\Hewlett-Packard\OpenView\Network Node Manager\OVConsole\CannotLaunchViewer. For details, see ovconsole in the HP NNM version 7.5 Help.

3.1.2 Using a definition file to define an environment for JP1/FTP

You can use a definition file to define some of the environment settings for JP1/FTP.

You create a definition file and specify the definition information as described below.

(1) Creating a definition file

Create a definition file with the following path name:
JP1/FTP-installation-directory\ftsenv.ini

(2) Contents of the definition file

Specify the definition information in the format of a Windows initialization file
(.ini), as shown below:

```
[ENV_INFO_VIEW]
GEN_USER=ON|OFF
[WELL_KNOWN_PORTS]
Enable=ON|OFF
[ANOTHER_ADDRESS]
Enable=ON|OFF
[MASK_CMD]
PORT=ON|OFF
```

The following table lists and describes the sections, keys, and values that can be
specified.

Table 3-2: Contents of the definition file (ftsenv.ini)

Section	Key	Value	Description
[ENV_INFO_VIEW]	GEN_USER	ON|OFF <<OFF>>	Specifies whether a non-Administrator user or a user who does not have the administrator role can reference the definition information.[1] - ON: Make the definition information referenceable. - OFF: Do not display the definition information.
[WELL_KNOWN_PORTS]	Enable	ON|OFF <<OFF>>	Specifies whether to permit connection when a well-known port (0 to 1023) is specified in the PORT command at the FTP server.[2] - ON: Permit connection. - OFF: Reject connection.
[ANOTHER_ADDRESS]	Enable	ON|OFF <<OFF>>	Specifies whether to permit connection when the IP address specified in the PORT command at the FTP server does not belong to the client that established the control connection.[2] - ON: Permit connection. - OFF: Reject connection.

Section	Key	Value	Description
[MASK_CMD]	PORT	ON|OFF <<OFF>>	Specifies whether to suppress reception of the PORT command at the FTP server.[#2, #3] • ON: Suppress. • OFF: Do not suppress.

#1

In version 8 or earlier, a non-Administrator user or a user who does not have the administrator role cannot reference some of the definition information. If ON is specified, all the definition information becomes referenceable, including the information that was not referenceable in version 8 or earlier.

When the Operations-Manager Console is used to reference definition information, the user must be an administrator or have the administrator role.

#2

This registration information takes effect the next time the JP1/File Transmission Server/FTP Server service starts.

#3

If ON is specified and the FTP server receives the corresponding command, the FTP server sends to the FTP client the response message 500 '*command-name*': command not understood.

Note that Help for this command is not disabled.

3.2 Registering the users who can log in to a JP1/FTP server

You must register all login users who will be logging in to the server during file transmission. The server will reject reception requests from any other users. To register login users, you choose **User-To-Login Registration** at the server and then register the users in the User-To-Login Registration window.

How to display the User-To-Login Registration window

From the Windows **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then **User-To-Login Registration**.

The following figure shows the User-To-Login Registration window.

Figure 3-2: User-To-Login Registration window
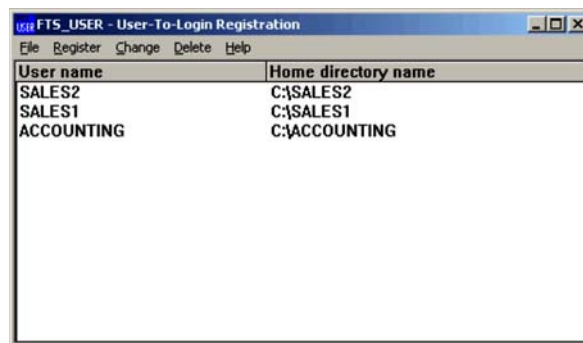
Note

The login users that you register here are not the same as the Windows login users.

3.2.1 Registering the login users

To register the login users:

1. In the User-To-Login Registration window, choose **Register**.

The Register User To Login dialog box is displayed.

29

Figure 3-3: Register User To Login dialog box

2.   Specify each item and then click **Register**.

You can register multiple users one after another until you click **Close**.

3.   After you have finished registering users, click **Close**.

The following table lists and describes each setting item in the Register User To Login dialog box.

Table 3-3: Setting items in the Register User To Login dialog box

Item	Description
User name ((1 to 50-byte character string))	Specifies the name of a user from whom the server can receive data. This item is mandatory. None of the following characters can be used: \, ", /, :, <, >, |, *, ? (all single-byte characters) A user name cannot be a string that begins or ends with a single-byte space.
Password ((0 to 50-byte character string))	Specifies the password to be used by this user to log in to the server. If entry of a password will not be required, enter nothing in this item, in which case password checking will not be performed during file reception.
Re-enter password	For confirmation purposes, this field is used to re-enter the password that was specified in **Password**. If you have not specified a password, do not enter anything in this item.
Home directory ((2 to 259-byte character string))	Specifies the directory to be used by this user to receive data during file transmission. If a file to be transmitted is specified by its relative path, the home directory specified here is assumed. You can also click **Browse** to find a directory in the system to use. This item is mandatory.

3.2.2 Changing login user information

You can change a user's password and home directory in login user information that has been registered.

To change login user information:

1. From the list in the User-To-Login Registration window, select a user and then choose **Change**.

    The Change User Information dialog box is displayed.

    Figure 3-4: Change User Information dialog box

2. Select an item you wish to change, and then enter the new information.

    You can change a user's password and/or home directory.

3. Click **Change**.

3.2.3 Deleting login user information

You can delete a user's registered login user information from the User-To-Login Registration window. When you delete a user's login information, any auto-start programs that have been set for that user are also deleted.

To delete login user information:

1. From the list in the User-To-Login Registration window, select a user to delete.

    To delete multiple users at the same time, select the users while holding down the **Shift** or **Ctrl** key.

2. Choose **Delete**.

   A confirmation message is displayed.

3. Click **Yes**.

3.3 Registering auto-start programs

You can register a program to start at the server after file transmission is finished.
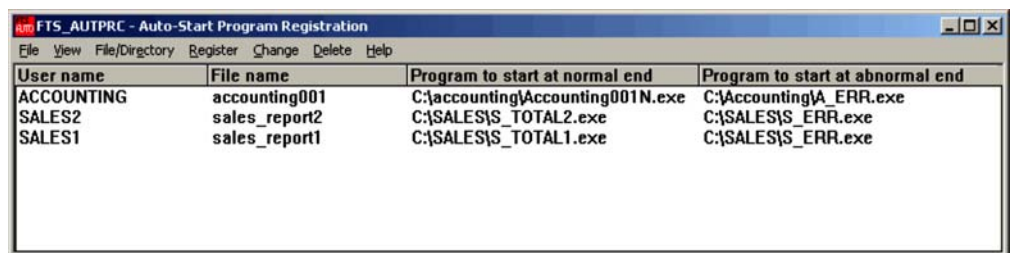
To register auto-start programs, you start **Auto-Start Program Registration** at the server and then register auto-start programs in the Auto-Start Program Registration window.

How to display the Auto-Start Program Registration window

From the Windows **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then **Auto-Start Program Registration**.

The Auto-Start Program Registration window is displayed. The following figure shows the Auto-Start Program Registration window.

Figure 3-5: Auto-Start Program Registration window

3.3.1 Registering auto-start programs

The following features characterize auto-start programs:

- You can register different programs to start in the event of normal termination and abnormal termination of transmission.

- The time at which a specified program starts depends on how the transmission file is specified:

  file-name is specified

  The program starts when the specified file is transmitted.

  directory-name is specified

  The program starts when a file is transmitted to the specified directory.

- An auto-start program is executed when transmission is completed for the registered user. To register an auto-start program for all users, specify .default in **User name**.

- You can either specify from scratch an auto-start program to start, or you can edit

existing registration information to specify a different auto-start program.

To register auto-start programs:

1. In the Auto-Start Program Registration window, from the **Register** menu, choose **For File Trigger** or **For Directory Trigger**. Alternatively, select existing registration information, and then from the **Register** menu, choose **For File Trigger** or **For Directory Trigger**.

    The Register Auto-Start Program dialog box appears.

    Figure 3-6: Register Auto-Start Program dialog box (for files)
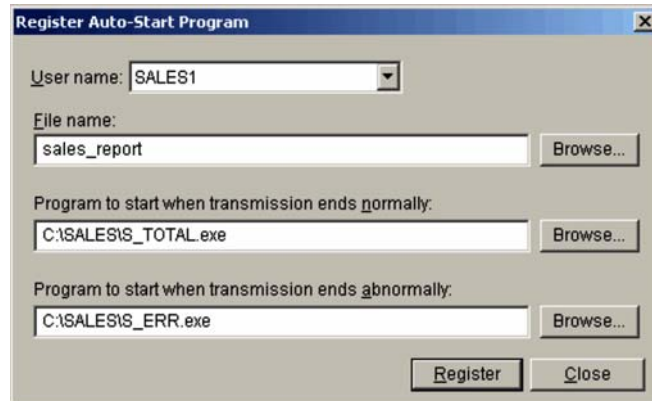
2. Specify the items and then click **Register**.

    You can make entries for multiple auto-start programs one after another until you click **Close**.

3. After registering the programs, click **Close**.

The following table lists and describes each item in the Register Auto-Start Program dialog box.

Table 3-4: Items in the Register Auto-Start Program dialog box

Item	Setting

User name
((user displayed in the list))
	Specifies a user name for registering an auto-start program. This item is mandatory.
	The following users displayed in the drop-down list can register auto-start programs.
	• Users who have been registered as JP1/FTP login users
	• .default (default users): All users who have been registered as login users
	    When there is no registration information that corresponds to an individual user, JP1/FTP references the default user registration information. If such an item is found, JP1/FTP starts those programs automatically.
	When a user name is already set in **User name**:
	    If a user has been specified in **Info. For Specific User** in the **View** menu, that user name is displayed here. From the **View** menu, choose **Info. For All Users**.

File name/Directory name ((1 to 259-byte character string))	Specifies the name of the file or directory that is to be subject to automatic start. This item is mandatory. If you specify a file, specify its full path or only the file name. If you specify a directory, specify its full path. For the directory delimiter, use \.

Program to start when transmission ends normally
Program to start when transmission ends abnormally
((2 to 259-byte character string))
	Specifies the program to start when transmission terminates normally and/or when transmission terminates abnormally.
	For the name of a program to start, specify its full path. When the program starts, transmission information can be passed as arguments. For details, see *(1) Parameter keywords*. Note that if the length of the expanded parameter keywords exceeds 2,047 bytes, start processing of the specified auto-start program will fail.
	When a program name contains a space:
	    If the specified program name contains a space, enclose the entire program name in double-quotation marks (").
	    Example: When specifying c:\aaa Δ bbb\ccc Δ ddd.exe as the name of an auto-start program:
	    "c:\aaa Δ bbb\ccc Δ ddd.exe:" (Δ : Single-byte space)
	    Note that in the case of a batch file, if you enclose both the program name and the arguments in double-quotation marks, the arguments will not be passed correctly.

Notes about the programs to start

Because the specified programs are started from the JP1/File Transmission Server/FTP Server service, we recommend that you note the following:

• Make sure that the account (user) used to start the JP1/File Transmission Server/FTP Server service is authorized to execute the specified programs.

- Because automatic start of programs is executed in a service session that is independent of the user's logon session, some of the information might not be readable (such as the registry settings specified during the user's logon session).

- If you specify a program that has a graphical user interface, specify **Allow service to interact with desktop** in the Properties dialog box for the JP1/FTP service (**Logon** page) (applicable to Windows Server 2003). Before you use the program, make sure that it runs normally, because programs are run according to Windows specifications.

Priority of program start

If multiple auto-start programs have been registered, the start condition (file name or directory name) might be applicable to more than one of the programs. In such a case, JP1/FTP searches the programs based on the priority order described below and starts only the first program that satisfies a priority condition. The following figure shows the priorities.

Figure 3-7: Priority of starting auto-start programs
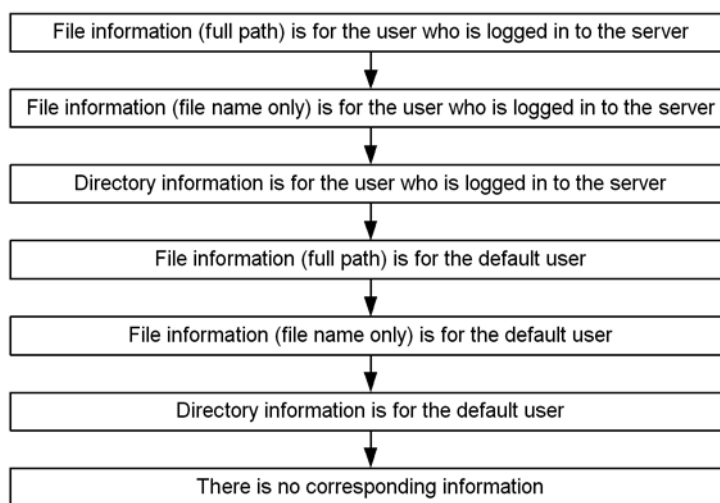
File information (full path) is for the user who is logged in to the server
File information (file name only) is for the user who is logged in to the server
Directory information is for the user who is logged in to the server
File information (full path) is for the default user
File information (file name only) is for the default user
Directory information is for the default user
There is no corresponding information

How to start programs when multiple files are transmitted

If a wildcard is used to transmit multiple files, an auto-start program is started as many times as there are file transmissions. Information is inherited to the auto-start program separately for each transmission. The transmission information cannot be inherited to all instances of the auto-start program at once.

(1) Parameter keywords

You can pass all the transmission-end information items to the user program by

specifying a keyword in the auto-start program. You can also use keywords to pass specific transmission-end information items. The following table lists and describes the keywords.

Table 3-5: List of parameter keywords

Parameter keyword	Information that is output	Client	Server
ALL	All the following items	Y	Y
TRNO	Transmission number	Y	Y
TCNO	Connection number	Y	Y
CARD	Card name	Y	--
HOST	Connection-target host name or IP address	Y	--
	Connecting client's IP address	--	Y
PORT	Connection-target host's port number	Y	--
USER	Login user name	Y	Y

TRTP	Transmission mode:
	  1: ASCII
	  2: Binary
		Y	Y

TRCM	Transmission command:
	  1: Send
	  2: Receive
	  3: Append
		Y	Y

COMP	Compression mode:
	  1: Stream
	  2: Compress
		Y	Y

LCFN	Local file name	Y	Y
RMFN	Remote file name	Y	--
STTM	Transmission start time (return value of time())	Y	Y
SPTM	Transmission end time (return value of time())	Y	Y
TRSZ	Transmission data size (bytes)	Y	Y
CMNT	Comment	Y	--

TRST	Transmission end status:
	  1: Success
	  2: Failure
		Y	Y

Parameter keyword	Information that is output	Client	Server
ERKD	Error type: 　1: System call error 　2: Logical error 　3: Protocol error	Y	Y
SYCN	System call name	Y	Y
SYKD	System call type: 　1: Win32 API 　2: C runtime 　3: Winsock API	Y	Y
ERNO	Error number	Y	Y
PLMG	Protocol message	Y	--

Legend:

    Y: Enabled

    --: Disabled

About keyword specification

- If any keyword other than the ones shown in the table above or an invalid keyword is specified, the specified keyword is passed to the user program.

- If arguments to be passed to an auto-start program contain any spaces, you must enclose the keywords in double-quotation marks.

Example: `"ALL"`

When keywords are enclosed in double-quotation marks, the arguments are passed differently between `.exe` and `.bat` files, as shown below:

Example: `A.exe "PLMG"  aargv[1]=aaa  bbb`
Example: `A.bat "PLMG"  a%1="aaa  bbb"`

Example of argument specification

The following shows an example of specifying arguments.

All transmission-end information:

    `C:\USERS\accounting\PROC ALL`

Selected transmission-end information:

```
C:\USERS\accounting\PROC1 TRNO USER TRCM STTM SPTM
C:\USERS\accounting\PROC2 "PLMG"
```

Command line during execution

Example 1: Specifying keywords (without double-quotation marks):

Specification:
```
C:\USERS\accounting\PROC1 TRNO USER TRCM STTM SPTM
```

Execution command line:
```
C:\USERS\accounting\PROC1 12 accounting 1 12:45:35
12:45:45
(Transmission connection number: 12, login user name:
accounting, transmission command: send(1), transmission
start time: 12:45:35, transmission end time: 12:45:45)
```

Example 2: Specifying keywords (with double-quotation marks):

Specification:
```
C:\USERS\WAKA\PROC2 "PLMG"
```

Execution command line:
```
C:\USERS\WAKA\PROC2 "550 D:\temp\test.dat:The system
cannot find the path specified."
(Protocol message: 550 D:\temp\test.dat:The system
cannot find the path specified.)
```

The user can obtain the entire command line character string by using the
`GetCommandLine` function within the termination procedure. If the user program
is a C runtime process, you can use the mechanism of `argc` and `argv`.

3.3.2 Changing the auto-start programs

You can use the Auto-Start Program Registration window to change registered
auto-start programs.

To change an auto-start program:

1. From the Auto-Start Program Registration window, select the information that
   you wish to change, and then click **Change**.

   The Change Auto-Start Program dialog box appears.

Figure 3-8: Change Auto-Start Program dialog box
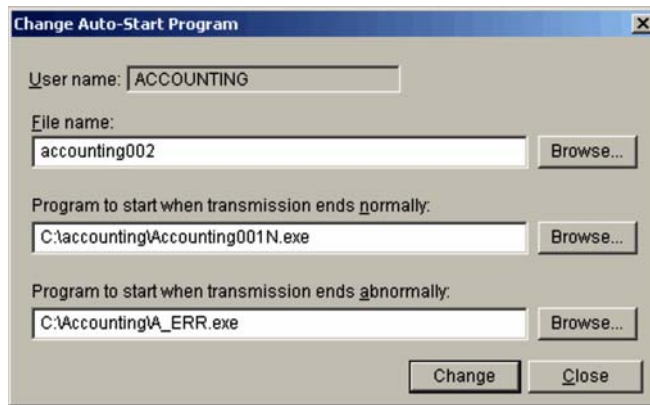
2. Enter the desired information in the applicable items.

3. Click **Change**.

3.3.3 Deleting auto-start programs

You can delete auto-start programs from the Auto-Start Program Registration window.

To delete auto-start programs:

1. From the Auto-Start Program Registration window, select the information that you wish to delete.

    To select multiple items, select them while holding down the **Shift** or **Ctrl** key.

2. Choose **Delete**.

    A configuration message is displayed.

3. Click **Yes**.

3.3.4 Changing the information displayed in the Auto-Start Program Registration window

You can change how information is displayed in the Auto-Start Program Registration window, as follows:

*   Display by user who is registered for the auto-start programs (all users, specified user, or default user)

*   Display by program start trigger target (file or directory)

(1) Displaying the auto-start programs by user

To display the auto-start programs by user:

1. From the **View** menu, choose **Info. For All Users**, **Info. For Specific User**, or

Info. For .default User.

- **Info. For All Users**

  Displays all the information that has been registered.

- **Info. For Specific User**

  Specify a desired user in the Specify User name dialog box. The following figure shows the Specify User name dialog box.

Figure 3-9: Specify User name dialog box
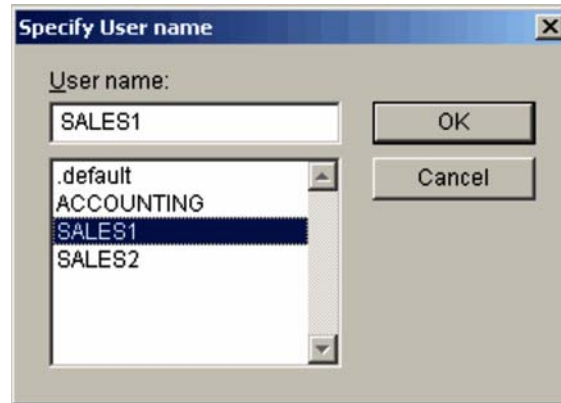
- **Info. For .default User**

  Displays only the information registered for the default user.

(2) Displaying the auto-start programs by program start trigger target (file or directory)

To display the auto-start programs by program start trigger target:

1. Select **File/Directory**, and then select either **Trigger Is File** or **Trigger Is Directory**.

   - **Trigger Is File**

     Displays only the information associated with files.

   - **Trigger Is Directory**

     Displays only the information associated with directories.

3.4 Registering transmission information

You register information about a transmission (such as the remote host name, remote user name, and transmission file) onto a *transmission card*. You can also specify a program to be started by the client when transmission finishes.

To register transmission information, you use **Transmission Regist. & Exe.** at the client to display the Registration And Execution Of Transmission Requests window. Alternatively, you can use a command.

How to display the Registration And Execution Of Transmission Requests window

From the Windows **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then **Registration And Execution Of Transmission Requests**.

The Registration And Execution Of Transmission Requests window is displayed. The following figure shows the Registration And Execution Of Transmission Requests window.

Figure 3-10: Registration And Execution Of Transmission Requests window

3.4.1 Registering transmission information onto a transmission card

You register transmission information onto a transmission card. This subsection describes two methods, one that uses the Registration And Execution Of Transmission Requests window and one that uses the command.

Alternatively, you can edit an existing transmission card and register it as a new transmission card.

(1) Using the Registration And Execution Of Transmission Requests window

To register transmission information onto a transmission card:

1. In the Registration And Execution Of Transmission Requests window, choose **Register**, or select an existing transmission card, and then choose **Register**.

   The Register Transmission Information dialog box appears.

Figure 3-11: Register Transmission Information dialog box

2.   Specify the items and then click **Register**.

       You can register multiple sets of transmission information until you click **Close**.

3.   After you have finished with the registration, click **Close**.

The following table lists and describes each item in the Transmission Information
dialog box.

Table 3-6: Items in the Register Transmission Information dialog box

Item	Setting
Transmission card name ((1 to 20-byte character string))	Specifies a name for the transmission information. If you link to JP1/AJS3, make sure that the specified transmission card name does not contain any spaces. This item is mandatory.
Remote host name ((1 to 256-byte character string))	Specifies the name of the remote host. This must be a host name that has been defined in the system (a host name specified in *OS-installation-directory*\system32\drivers\etc\hosts) or an IP address. This item is mandatory.

Item	Setting

Port number
((1 to 65,535))
<<21>>
	Specifies the port number of the remote host. If this item is omitted, 21 is assumed.
	• For transmitting to the JP1/FTP server:
	  Specify the port number that was specified in `ftss` in the port number settings.
	• For transmitting to the OS's default FTP server:
	  Specify the default value (21).

Remote user name ((1 to 50-byte character string))	Specifies the name of the login user at the transmission target. This item is mandatory.
Password ((0 to 50-byte character string))	Specifies the password registered for the login user. If no password was specified during the registration process, leave this item blank.
Send/receive type	Specifies the transmission type: • **Send** • **Receive**
Transmission mode	Specifies the transmission mode according to the file to be transmitted. • **ASCII**: In this transmission mode, the receiving end adjusts linefeed codes according to the local system. Use this mode to transmit text files. • **BINARY**: This mode achieves transparent transmission without having to be aware of the data contents. Use this mode to transmit data files and executable files.
Output type	Specifies how to output files after transmission: • **Append**: If a file with the same name already exists, the transmitted data will be appended to that file. If there is no file with the same name, a new file will be created. This option is not available when the send/receive type is Receive. • **Overwrite**: If a file with the same name already exists, that file will be overwritten (in which case the file's existing contents will be destroyed). If there is no file with the same name, a new file will be created.
Compression mode	Specifies whether to compress the transmitted files. About the compression specification: • If the remote FTP host does not support the compression mode, data is not compressed during transmission even if you specify compression. • The run-length compression method defined in RFC 959 (FILE TRANSFER PROTOCOL) is used as the compression method.
Size check	Specifies whether to check the size of a transmitted file at the sending and receiving ends for errors after file transmission. If a file's transmission data size does not match between the sending and receiving ends, a transmission error results. Note that in order to check data size, the remote FTP host must be running JP1/FTP (06-00 or later).

Item	Setting
Single/Multiple-file transmission	Specifies whether to transmit is to be of a single file or of multiple files. • **Auto**: If the remote file name contains * or ?, JP1/FTP is to perform multiple-file transmission. If the file name does not contain * or ?, JP1/FTP is to perform single-file transmission. • **Multiple**: JP1/FTP is to perform multiple-file transmission exactly as dictated by the wildcard. • **Single**: JP1/FTP is to perform single-file transmission. If a wildcard is specified, JP1/FTP treats it as a character and transmits a single file.
Local file name	Specification depends on the transmission type, as described below. This item is mandatory. • **Send** transmission type ((1 to 259-byte character string)) Specifies the name of the file to be sent from the local system. You can use wildcard characters to specify multiple files. If you use a wildcard character, the length of the expanded path name must not exceed 259 bytes. To specify multiple files: You can use the following wildcard characters to specify multiple files: *: Any number of any characters, including no characters ?: Any single character If you send multiple files, specify a directory for the remote files. Files with the same names as local files will be created in the specified directory. • **Receive** transmission type ((1 to 259-byte character string)) Specifies the name of the file to be output at the local system after the file is received. If you have specified a wildcard in the remote file name, specify a directory name (other than the root directory). Note that the length of the expanded path name must not exceed 259 bytes. When specifying a relative path: If the specified directory and file exist under *JP1/FTP-installation-directory*\temp, the file is transmitted. If there is no such directory or file, the transmission terminates abnormally. Local file name: No shortcut can be specified for local file names.

Item	Setting

Remote file name	Specification depends on the transmission type, as described below. This item is mandatory.
	• **Send** transmission type ((1 to 259-byte character string))
	    Specifies the name of the output file at the remote system. If you have used a wildcard character in the local file name, specify a directory name. Note that the length of the expanded path name must not exceed 259 bytes.
	• **Receive** transmission type ((1 to 259-byte character string))
	    Specifies the name of the input file at the remote system.
	    You can use wildcard characters (* and ?) to specify multiple files. Note that the length of the expanded path name must not exceed 259 bytes.
	    If you receive multiple files, specify a directory for the local files. Files with the same names as the remote files will be created in the specified directory.
	How wildcard characters are interpreted:
	    A wildcard is specified in the `NLST` command and then sent to the remote FTP server. The file that is transmitted is determined by the response from the FTP server. Therefore, interpretation of the wildcard depends on the remote FTP server.
	    JP1/FTP supports only * and ? as wildcard characters. Wildcard characters cannot be used in directory names. If a directory name contains a wildcard, set **Single/Multiple-file transmission** to **Single**.
	When specifying a relative path:
	    For both sending and receiving, the specified path is relative to the current directory.
	
	About the specification of remote files:
	• **Browse** displays files as viewed from the local system. For the remote file name, specify a file name that is viewed from the remote system.

Program to start at normal end ((0 to 259-byte character string))	Specifies the full path name of a program to start automatically at the client when transmission terminates normally. You can also specify arguments to pass as transmission information to the program when the program starts. For details about the arguments, see *3.3.1(1) Parameter keywords*. Note that if the length of the converted parameter keywords exceeds 2,047 bytes, the specified auto-start program will not start.
Program to start at abnormal end ((0 to 259-byte character string))	Specifies the full path name of a program to start automatically at the client when transmission terminates abnormally. You can also specify arguments to pass as transmission information to the program when the program starts. For details about the arguments, see *3.3.1(1) Parameter keywords*. Note that if the length of the converted parameter keywords exceeds 2,047 bytes, the specified auto-start program will not start.

Item	Setting

FTP command
((0 to 300-byte character string))
	Specifies an FTP command to be executed prior to transmission after connection is established with the server. To specify multiple commands, separate them with the semicolon (;).
	Example: `CWD C:\users\user1;SITE` *xxxx*
	You can specify only commands that do not establish a data connection. Whether the specified commands can be executed at the FTP server depends on the FTP server.
	When the FTP server is JP1/FTP:
	• Commands that can be specified:
	  `CDUP, CWD, DELE, HELP, MDTM, MKD, NOOP, PWD, RMD, SITE, SIZE, STAT, SYST, XCUP, XCWD, XMKD, XPWD, XRMD`
	• Commands that can reference the result by means of a protocol trace:
	  `HELP, MDTM, SIZE, STAT, SYST`
	About the specification of FTP commands:
	• Some commands require consecutive command transmission. Before using commands, check the FTP specifications.

Comment ((0 to 80-byte character string))	Specifies any comment. Because the comment is displayed in the log information, this option is useful for setting a memo about the transmission. A comment is not passed to the transmission target.

About the programs that are specified as auto-start programs

Because auto-start programs are started from the JP1/File Transmission Server/ FTP Client service, we recommend that you note the following:

- Make sure that the account (user) used to start the JP1/File Transmission Server/FTP Server service is authorized to execute the specified programs.

- Because automatic start of programs is executed in a service session that is independent of the user's logon session, some of the information might not be readable (such as the registry settings specified during the user's logon session).

- If you specify a program that has a graphical user interface, specify **Allow service to interact with desktop** in the Properties dialog box for the JP1/ FTP service (**Logon** page) (applicable to Windows Server 2003). Before you use the program, make sure that it runs normally, because programs are run according to Windows specifications.

How to start programs when multiple files are transmitted

If a wildcard is used to transmit multiple files, an auto-start program is started as many times as there are file transmissions. Information is inherited to the auto-start program separately for each transmission. The transmission information cannot be inherited to all instances of the auto-start program at once.

(2) Using the ftsregc command

The following figure shows an example of using a command to register new transmission information:
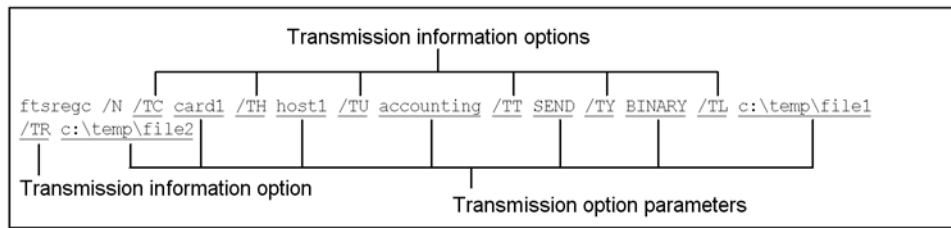
This example registers the following information:

- /TC: The transmission card name is `card1`.
- /TH: The connection-target host name is `host1`.
- /TU: The login user name is `accounting`.
- /TT: The send/receive type is `SEND`.
- /TY: The transmission mode is `BINARY`.
- /TL: The local file name is `c:\temp\file1`.
- /TR: The remote file name is `c:\temp\file2`.

The following figure shows an example of a command that registers transmission information using an existing transmission card:
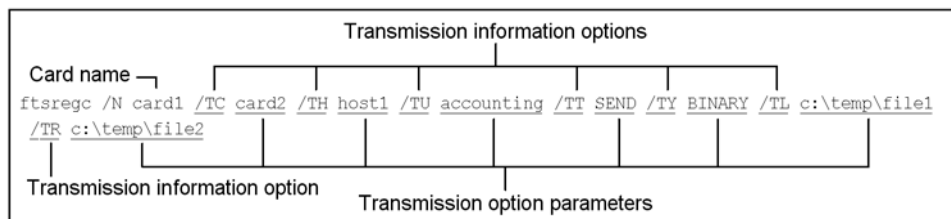
This example registers the following information:

- The name of the existing transmission card that is being used is `card1`.
- /TC: The name specified for the new transmission card is `card2`.
- /TH: The connection-target host name is `host1`.
- /TU: The login user name is `accounting`.
- /TT: The send/receive type is `SEND`.

- /TY: The transmission mode is BINARY.
- /TL: The local file name is c:\temp\file1.
- /TR: The remote file name is c:\temp\file2.

For details about the ftsregc command, see *ftsregc - registers, changes, deletes, and displays transmission information* in *6. Commands*.

3.4.2 Changing the information registered on a transmission card

You can change the information registered on a transmission card. This subsection describes two methods, one that uses the Registration And Execution Of Transmission Requests window and one that uses a command.

(1) Using the Registration And Execution Of Transmission Requests window

To change the information registered on a transmission card:

1. In the Registration And Execution Of Transmission Requests window, select the transmission card to be edited, and then choose **Change**.

   The Change Transmission Information dialog box appears.

   Figure 3-12: Change Transmission Information dialog box

2. Enter new information in the applicable items.
3. Click **Change**.

(2) Using the ftsregc command

The following example changes information on a transmission card:
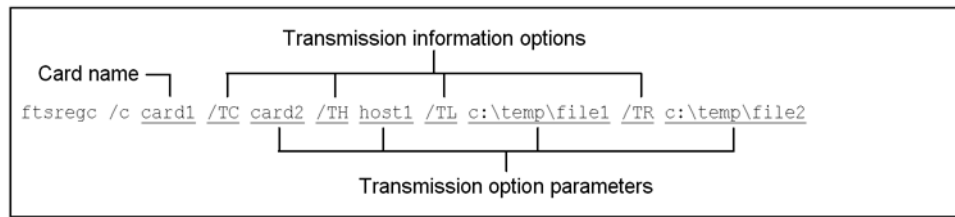
This example changes the following transmission information on `card1`:

- `/TC`: The card name is `card2`.
- `/TH`: The connection-target host name is `host1`.
- `/TL`: The local file name is `c:\temp\file1`.
- `/TR`: The remote file name is `c:\temp\file2`.

For details about the `ftsregc` command, see *ftsregc - registers, changes, deletes, and displays transmission information* in *6. Commands*.

3.4.3 Deleting transmission cards

You can delete registered transmission cards from the Registration And Execution Of Transmission Requests window. This subsection describes two methods, one that uses the Registration And Execution Of Transmission Requests window and one that uses a command.

(1) Using the Registration And Execution Of Transmission Requests window

To delete transmission cards:

1. In the Registration And Execution Of Transmission Requests window, select a transmission card to be deleted.

   To select multiple transmission cards, select them while holding down the **Shift** or **Ctrl** key.

2. Choose **Delete**.

   A configuration message is displayed.

3. Click **Yes**.

(2) Using the ftsregc command

The following example deletes information on a transmission card:

```
ftsregc /D card1
              Card name
```

For details about the `ftsregc` command, see *ftsregc - registers, changes, deletes, and displays transmission information* in *6. Commands*.

3.4.4 Checking the contents of a transmission card

You can check the contents of a transmission card before you start transmission. This subsection describes two methods, one that uses the Registration And Execution Of Transmission Requests window and one that uses a command.

(1) Using the Registration And Execution Of Transmission Requests window

To check the contents of a transmission card:

1. In the Registration And Execution Of Transmission Requests window, select a transmission card whose contents are to be displayed, and then choose **Details**.

    The Transmission Card Details dialog box appears.

2. After checking the contents, click **OK**.

(2) Using the ftsregc command

The following example displays the contents of a transmission card:

```
ftsregc /L card1
              Transmission card name
```

For details about the `ftsregc` command, see *ftsregc - registers, changes, deletes, and displays transmission information* in *6. Commands*.

3.5 Transmitting files

There are two ways to transmit files:

- Select Card method of file transmission

  This method specifies a registered transmission card in the Registration And Execution Of Transmission Requests window and then executes transmission.

- Enter Information method of file transmission

  For this method, you start **Transmission Regist. & Exe.** at the client to open the Registration And Execution Of Transmission Requests window. Alternatively, you can use a command.

How to display the Registration And Execution Of Transmission Requests window

From the Windows **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then choose **Registration And Execution Of Transmission Requests**.

The Registration And Execution Of Transmission Requests window appears. The following figure shows the Registration And Execution Of Transmission Requests window.

Figure 3-13: Registration And Execution Of Transmission Requests window

3.5.1 Executing transmission by specifying a transmission card (Select Card method of file transmission)

This method specifies a transmission card. You can specify multiple transmission cards.

This subsection describes two methods, one that uses the Registration And Execution Of Transmission Requests window and one that uses a command.

(1) Using the Registration And Execution Of Transmission Requests window

To execute transmission:

1. In the Registration And Execution Of Transmission Requests window, select a transmission card to be transmitted.

2. Choose **Exe.(Select Card)**.

    The Execute Transmission (Select Card) dialog box appears.

    Figure 3-14: Execute Transmission (Select Card) dialog box
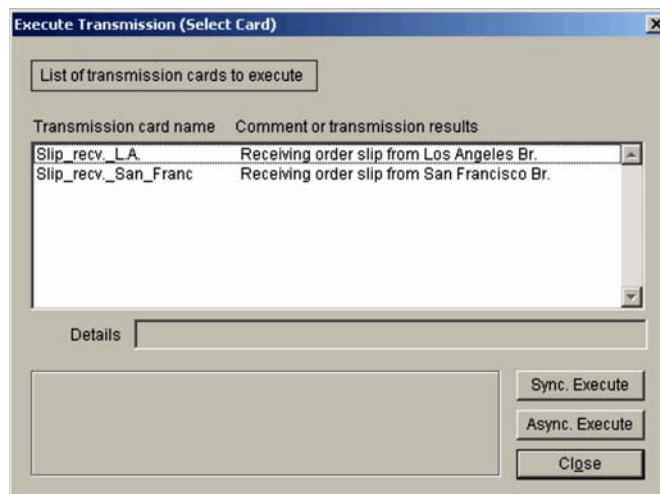
    To change the sequence of transmission

        The Select Card method of file transmission transmits sequentially in the order that the files are listed in the Execute Transmission (Select Card) dialog box. To change the sequence, double-click a desired transmission card. The double-clicked transmission card is moved to the top of the list and will be transferred first.

3. Click either **Sync. Execute** or **Async. Execute**.

    *   Synchronous execution

        Transmission is executed sequentially for each card (each card name). Transmission of one file must be completed before the next file can be transmitted, thereby preventing line overloading.

        The transmission result is displayed under the details in the Execute Transmission (Select Card) dialog box. The numbers in parentheses indicate the sequential transmission numbers of the file transmissions. If an error occurs before transmission, no transmission number is displayed.

    *   Asynchronous execution

        All cards are transmitted in the batch mode. You can transmit a maximum of 64 files concurrently. If you select asynchronous execution, the message `Registration ended` is displayed, and no transmission results are displayed. You must check the logs for the results.

4. After executing transmission, click **Close**.

How to cancel file transmission

When you click **Sync.** or **Async.**, **Stop** or **Force Stop** is displayed.

- **Stop**

  Synchronous execution: The request is canceled after the current file transmission is finished.

  Asynchronous execution: The request is canceled after the current file transmission request is registered.

  If connection is established with the JP1/File Transmission Server/FTP Client service, the request is canceled after the connection is released.

- **Force Stop**

  Cancels the transmission immediately. When asynchronous execution is specified, transmissions that have already been registered are not canceled. Note that the file transmission log might not be output.

  If possible, try to avoid using this option because the system might not be able to release the resources.

About the display of file transmission errors when a wildcard is used

Only the first error that occurred is displayed in **Comment or transmission results**.

(2) Using the ftstran command

The following figure shows an example of using a command to execute the Select Card method of file transmission:

```
ftstran card1
          Card name
```

Transmission by the `ftstran` command is applicable only to synchronous execution. For details about the `ftstran` command, see *ftstran - executes transmission* in *6. Commands*.

3.5.2 Executing transmission by entering a transmission card (Enter Information method of file transmission)

This method transmits the contents of a transmission card as is. You can enter a new transmission card or use an existing transmission card and edit its contents. The Enter Information method of file transmission does not register the transmission card.

This subsection describes two methods, one that uses the Registration And Execution

Of Transmission Requests window and one that uses a command.

(1) Using the Registration And Execution Of Transmission Requests window

To execute transmission:

1. In the Registration And Execution Of Transmission Requests window, choose **Exe.(Enter Info.)**. Alternatively, in the Registration And Execution Of Transmission Requests window, specify the transmission card to use, and then choose **Exe.(Enter Info.)**.

   The Execute Transmission (Enter Information) dialog box appears.

   Figure 3-15: Execute Transmission (Enter Information) dialog box

2. Enter or edit the transmission contents.

   For details about the settings of the items, see *3.4.1 Registering transmission information onto a transmission card*.

3. Click either **Sync. Execute** or **Async. Execute**.

   - Synchronous execution

     Transmission is executed sequentially for each card (each card name). Transmission of one file must be completed before the next file can be transmitted, thereby preventing line overloading.

   - Asynchronous execution

All cards are transmitted in the batch mode. You can transmit a maximum of 64 files concurrently. If you select asynchronous execution, the message `Registration ended` is displayed, and no transmission results are displayed. You must check the logs for the results.

4. After executing transmission, click **Close**.

How to cancel file transmission

When you click **Sync.** or **Async.**, the **Now executing** dialog box is displayed. Clicking **Force Stop** in this dialog box cancels the transmission immediately. Note that the file transmission log might not be output.

If you execute synchronous execution after forced cancellation, there might be a delay before transmission begins.

About the display of file transmission errors when a wildcard is used

Only the first error that occurred is displayed in the message that is displayed after transmission.

(2) Using the ftstran command

The following figure shows an example of using a command to execute the Enter Information method of file transmission:
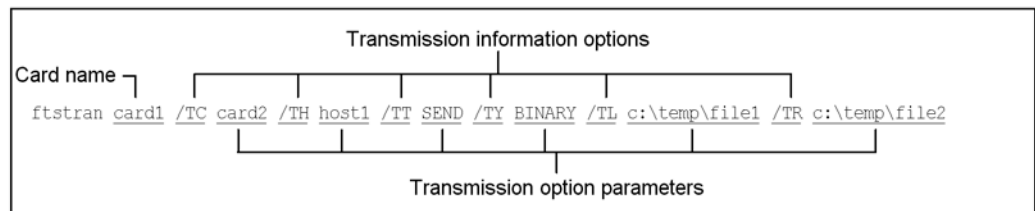
This example changes the following transmission information on `card1` and then executes transmission:

- /TC: The card name is `card2`.
- /TH: The connection-target host name is `host1`.
- /TT: The send/receive type is `SEND`.
- /TY: The transmission mode is `BINARY`.
- /TL: The local file name is `c:\temp\file1`.
- /TR: The remote file name is `c:\temp\file2`.

Transmission by the `ftstran` command is applicable only to synchronous execution. For details about the `ftstran` command, see *ftstran - executes transmission* in *6. Commands*.

3.6 Checking the transmission logs

You can check the logs of file transmissions (such as for the transmission times, the names of the transmitted files, the results and details of the transmissions, and the details of errors).
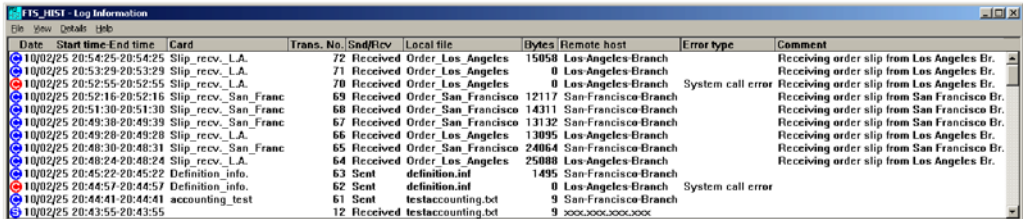
Logs can be displayed by both the server and the client. Start **Log Information** to display the Log Information window, or use the `ftshistory` command.

How to display the Log Information window

From the Windows **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then **Log Information**.

The Log Information window is displayed. The following figure shows the Log Information window.

Figure 3-16: Log Information window

Legend:

🔵 (Blue) : Transmission that terminated normally at the client
🔴 (Red)   : Transmission that terminated abnormally at the client
🟢 (Green): Program that cannot be started automatically at the client
🔵 (Blue) : Transmission that terminated normally at the server
🔴 (Red)   : Transmission that terminated abnormally at the server
🟢 (Green): Program that cannot be started automatically at the server

3.6.1 Checking the details of transmission results and errors

To display detailed information from the Log Information window:

1. From the Log Information window, select the log information whose details are to be displayed, and then choose **Details**.

   The Log Details dialog box appears. If a protocol trace and errors have been output, you can check the details of the errors.

Figure 3-17: Log Details dialog box
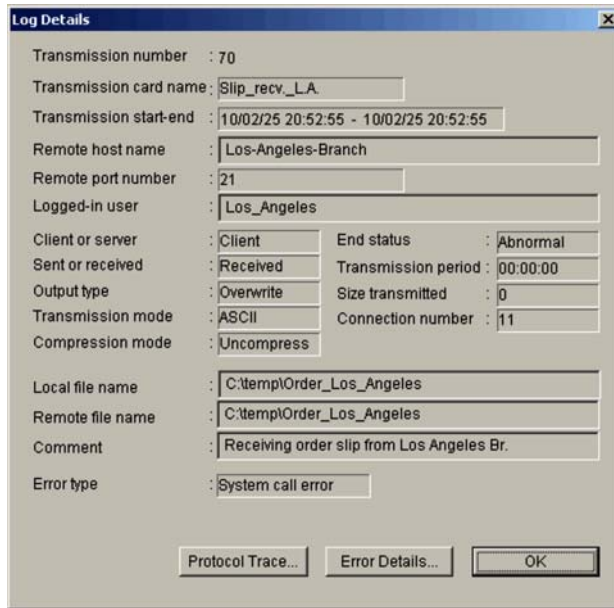
2. Check the detailed information, and then click **OK**.

The following table lists and describes each item in the Log Details dialog box.

Table 3-7: Items in the Log Details dialog box

Item	Description
Transmission number	Displays the transmission number. This number is determined separately at the server and the client. Because this is a unique number assigned to each transmission, you can use it as an identifier when you view logs. The largest transmission number is 999,999 (if this value is exceeded, the counter is reset to 0).
Transmission card name	• Client: Displays the name of the card that was transmitted. • Server: Not displayed.
Transmission start-end	Displays the date and time transmission started and the date and time transmission ended.
Remote host name	Displays the remote host name that was specified in the transmission request. This is a host name or IP address defined in the system.
Remote port number	• Client: Displays the remote port number that executed transmission. • Server: Not displayed.

58

Item	Description
Logged-in user	• Client: Displays the name of the remote login user that executed transmission. • Server: Displays the name of the login user that received the transmission.
Client or server	• `Client`: Displayed when file transmission was executed by the client. • `Server`: Displayed when file transmission was executed by the server.
Sent or received	Displays the send/receive type (`Send` or `Receive`) that was specified during the transmission request.
Output type	Displays the output type (`Append` or `Overwrite`) that was specified in the transmission request.
Transmission mode	Displays the transmission mode (`ASCII` or `BINARY`) that was specified in the transmission request.
Compression mode	Displays the compression mode (`Compress` or `Uncompress`) that was specified in the transmission request.
End status	Displays the termination status of the file transmission (`Normal` or `Abnormal`). If automatic program start fails but file transmission itself was successful, `Normal` is displayed.
Transmission period	Displays the amount of time required for the file transmission. If this value is 24 hours or more, the number of days is not displayed.
Size transmitted	Displays the data size (in bytes) of the transmitted file.
Connection number	Displays a transmission identifier based on when JP1/FTP established connection with the remote system. This is a separate number for the server and the client in the range from 1 to 60 (the maximum value depends on the maximum number of connections). Because various traces (such as the protocol trace) are output for each connection number, you can use this number as a guide for viewing traces of the corresponding transmission. Example: When **Connection number** is 2: Client's protocol trace file: `CSProtocolTrace2` Server's protocol trace file: `SSProtocolTrace2`
Local file name	• For sending: Displays the name of the file sent from the local system. • For receiving: Displays the name of the file received by the local system.

Item	Description
Remote file name	• Client For sending: Displays the output file name at the remote system. For receiving: Displays the name of the input source file as is. • Server: Not displayed.
Comment	• Client: Displays the comment that was specified in the transmission request. • Server: Not displayed.
Error type	When the transmission status is Abnormal, displays one of the errors listed below. To view the details of an error, click **Error Details**. • System call error • Protocol error • Logical error
Protocol Trace	Displays internal processing from the start to the end of the transmission. A response code that is preceded by an asterisk (*) means that the response was generated internally by the JP1/FTP client, and that it is not an actual response received from the remote server. For the protocol traces output by the IPF version and version 07-50 or later, traces for the corresponding transmission are displayed. If there is no trace for the corresponding transmission, all traces are displayed.
Error Details	Displays error details, such as the error types and locations.

3.6.2 Changing the information displayed in the Log Information window

You can change the information that is displayed in the Log Information window, such as by refreshing the information or displaying only those logs that satisfy specified conditions.

To change the information:

1. In the Log Information window, from the **View** menu, choose the information that you wish to have displayed:

   Entire Log or **Specify Log Info.**

   > Specifies either all logs or only those logs that satisfy specific conditions.

   > If you choose **Specify Log Info.**, the View Range dialog box is displayed.

   Sort By End Time or **Sort By Start Time**

   > Specifies whether the logs are to be sorted by file transmission end time

(starting with the most recent) or by file transmission start time (starting with the most recent).

Newest Log Info.

Refreshes the log information.

Figure 3-18: View Range dialog box

The following table lists and describes each item in the View Range dialog box.

Table 3-8: Items in the View Range dialog box

Item	Setting

Date/time range	Specifies the time period for which log information is to be displayed. The left column specifies whether the display is to be sorted based on start time or end time. The right column specifies the date/time range.
	• Left column (sort order)
	  Specifies whether the log information is to be searched by start time or by end time.
	• Right column (time period)
	  Specifies the beginning and ending dates and times of the period for which log information is to be displayed, using the following format:
	  YYYY/MM/DD HH:MM:SS

All Info.	Sets the time period so that it is from the oldest log to the most recent log in the log file.
Today's Info.	Changes the time period settings to today's date.

Item	Setting
Client or server	Specifies **Client** or **Server** as the log type to display. If there is no need to make this distinction, select **Client and server**.
Sent or received	Specifies **Sent** or **Received** as the log type to display. If there is no need to make this distinction, select **Sent and received**.
Transmission end status	Specifies **Normal** or **Abnormal** as the log type to display. If there is no need to make this distinction, select **Normal and abnormal**.

3.6.3 Changing the log file that is displayed

You can specify to have a different log file displayed in the event of a failure.

Note that log files for the IPF version of JP1/FTP cannot be displayed by a non-IPF version of JP1/FTP.

Conversely, log files for a non-IPF version of JP1/FTP cannot be displayed by the IPF version of JP1/FTP.

To load a different log file in the event of a failure:

1. In the Log Information window, from the **File** menu, choose **Specify Log File**.

    A dialog box for loading a log file is displayed.

2. Specify the log file to be loaded and then click **Open**.

    The specified log file is loaded.

    To return to the current log file, from the **File** menu, choose **Current Log File**.

3.6.4 Using the ftshistory command to display logs

The following example displays the details of all log information (default format):

```
ftshistory
```

For details about the `ftshistory` command, see *ftshistory - displays log information* in *6. Commands*.

3.7 Saving and recovering JP1/FTP settings

Definition information can be saved and then restored in a different environment. You can achieve a standardized system environment by specifying definition information in one system and then distributing it to multiple systems. You can save and recover the following four types of definition information:

- Environment settings
- User-to-login settings
- Auto-start program settings
- Transmission settings

To save or recover definition information, you start **Saving and Recovering Settings** to display the Saving and Recovering Settings dialog box. Alternatively, you can use a command.

How to display the Saving and Recovering Settings dialog box

From the Windows **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then **Saving and Recovering Settings**.

The following figure shows the Saving and Recovering Settings dialog box.

Figure 3-19: Saving and Recovering Settings dialog box
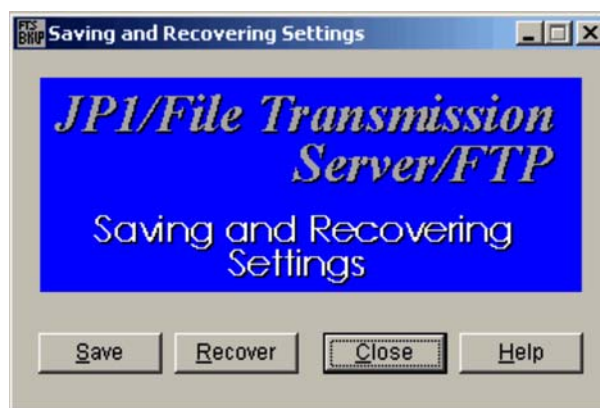
3.7.1 Saving definition information

To save definition information, you can use the Saving and Recovering Settings dialog box or you can execute a command.

(1) Using the Saving and Recovering Settings dialog box

To save settings:

1. In the Saving and Recovering Settings dialog box, click **Save**.

   The Select Settings To Save dialog box is displayed. The following figure shows the Select Settings To Save dialog box.

   Figure 3-20: Select Settings To Save dialog box
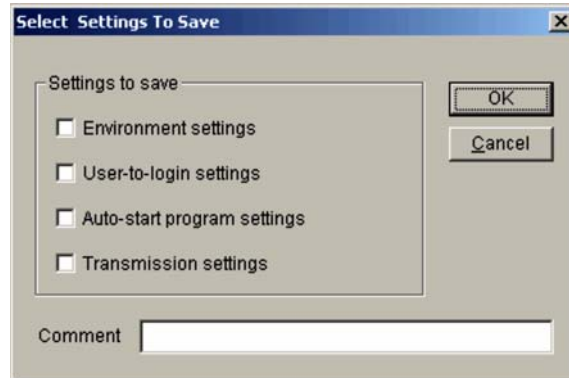
2. Select the boxes for the types of settings that you wish to save. You can also enter a comment (a character string of up to 40 bytes).

   This comment will be displayed when the settings are recovered. Entry of a comment is optional.

   When nothing is specified in the settings that are selected

   The settings are saved as is with no information specified and are recovered as is with nothing specified. You can specify applicable settings information during recovery processing.

3. Click **OK**.

   A dialog box for specifying a file name is displayed.

4. Specify the storage location and a name for the settings file, and then click **Open**.

5. In the Saving and Recovering Settings dialog box, click **Close**.

(2) Using the ftssave command

The following figure shows an example of the command that saves definition information:

```
ftssave definition1
        File name
```

This example saves all definition information (environment settings, user-to-login settings, auto-start program settings, and transmission settings). You can also select the types of settings that are saved.

For details about the `ftssave` command, see *ftssave - saves definition information* in *6. Commands*.

3.7.2 Recovering definition information

To recover saved definition information, you can use the Saving and Recovering Settings dialog box or you can execute a command.

Note that definition information saved using the IPF version cannot be recovered using a non-IPF version.

Conversely, definition information saved using a non-IPF version cannot be recovered using the IPF version.

You must select one of the following formats for recovering definition information:

- **Do not delete settings at destination**

  This format recovers the definition file without deleting the existing settings at the destination.

- **Delete settings at destination**

  This format deletes the existing settings at the destination and then recovers the definition file.

In the event of a failure during recovery processing

If a failure occurs during recovery processing, the definition information is not recovered. We recommend that you always save the existing settings before you perform recovery with **Delete settings at destination** specified.

About the log information directory during recovery of an environment definition

The log information directory specified in the environment definition is not created automatically. If you are using a non-default log information directory, use the Environment Definition utility to update the environment definition. Without this directory, you will not be able to start various JP1/FTP services.

(1) Using the Saving and Recovering Settings dialog box

To recover settings:

1. In the Saving and Recovering Settings dialog box, click **Recover**.

65

A dialog box for selecting the file to recover is displayed.

2. Specify the file to be recovered, and then click **Open**.

    The Select Settings For Recovery dialog box is displayed.

    Figure 3-21: Select Settings For Recovery dialog box
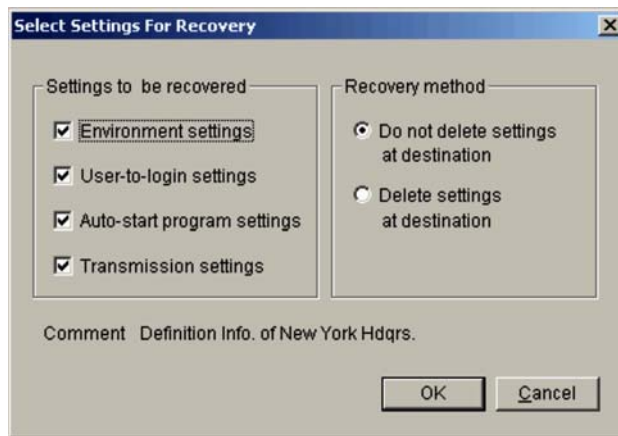
3. Select the boxes for the types of settings recover, and then select the radio button for the recovery method to use.

4. Click **OK**.

    A message is displayed.

5. Click **OK**.

6. In the Saving and Recovering Settings dialog box, click **Close**.

The following table lists and describes each setting item in the Select Settings For Recovery dialog box.

Table 3-9: Setting items in the Select Settings For Recovery dialog box

Item	Setting

Settings to be recovered	Selects the types of settings to be recovered:
	• **Environment settings**
	  Recovers information that was set by the Environment Definition utility.
	• **User-to-login settings**
	  Recovers information that was specified when login users were registered.
	• **Auto-start program settings**
	  Recovers information that was specified when auto-start programs were registered.
	• **Transmission settings**
	  Recovers information that was registered when transmissions were registered and executed.

Recovery method	Specifies whether to delete the existing settings.
	• **Do not delete settings at destination**
	  Recovers settings in the saved definition file without deleting the existing settings at the destination.
	  If the destination contains key information identical to that given below, the settings at the destination are updated to those in the saved file. If the destination does not contain the same key information, the settings in the saved file are added.
	  The keys are as follows:
	  Environment settings: All environment settings become a single key.
	  User-to-login settings: User name
	  Auto-start program settings: File name, directory name
	  Transmission settings: Card name
	• **Delete settings at destination**
	  Deletes the settings at the destination and then recovers the information in the saved file. Because the information in the saved file becomes the settings, no unneeded settings information remains. The existing settings are deleted one at a time after being checked. Note that environment settings will not be deleted. When user information is deleted, any associated auto-start program settings are also deleted.

Comment	Displays the comment that was specified when the settings were saved.

(2) Using the ftsload command

The following figure shows an example of a command for recovering saved definition information:

```
ftsload definition1
         File name
```

This example recovers all definition information (environment settings, user-to-login settings, auto-start program settings, and transmission settings) without deleting the existing settings at the destination. You can also select specific types of settings to recover, and you can specify to delete the existing settings.

For details about the `ftsload` command, see *ftsload - recovers definition information* in *6. Commands*.

```
ftsload definition1
```

3.8 Outputting definition information as text

You can output the following four types of definition information to a text file:

- Login user information
- Auto-start program information
- Transmission information
- Log information

When you output definition information, you can use a sample format file that was set up during installation. You can edit the format file to a desired format. For details about format files, see *E. Format Files Used for Output of Definition Information*.

3.8.1 Outputting definition information as text

To output definition information as text, you use the **File** menu in each registration window.

You can select one of the following text output formats:

Output text

This format outputs information to a specified file. If the specified file already exists, its contents are overwritten.

Append text

This format adds the information after the last line of the specified file.

To output definition information as text:

1. From the Windows **Start** menu, choose **JP1_File Transmission Server_FTP**, and then choose the registration window from which to output definition information as text.

2. From the **File** menu, choose **Output To Text File** or **Append To Text File**.

   A dialog box for specifying the output destination file is displayed.

3. Specify the output destination file and then click **Open**.

   The following figures show a format file for auto-start programs and an example of text output.

Figure 3-22: Format file

```
//////////  Auto-Start Program Registrations ////////   No.$ICNT /////////////

 User name: $USER
 Trigger key: $AKEY
   Auto-start program at normal end: $ANML
   Auto-start program at abnormal end: $AERR
```

Figure 3-23: Example of text output

```
/////////////  Auto-Start Program Registrations ///////////  No.1 //////////////

User name: ACCOUNTING
Trigger key: accounting001
  Auto-start program at normal end: C:\accounting\Accounting001N.exe
  Auto-start program at abnormal end: C:\Accounting\A_Err.exe

/////////////  Auto-Start Program Registrations ///////////  No.2 //////////////

User name: SALES1
Trigger key: salesreport3
  Auto-start program at normal end: JP1EVENT 1124 ALL
  Auto-start program at abnormal end: JP1EVENT 1144 ALL
```

3.9 File transmission in the PASV mode

At the client, you can transmit files in the PASV mode.

File transmission in the PASV mode can be enabled separately for each host at the remote FTP server.

To transmit files in the PASV mode, you must register in advance the names of the hosts at the remote FTP server to which you wish to transfer files in the PASV mode.

This registration information takes effect the next time the client service starts.

3.9.1 Registering the host names

Create a definition file as shown below and then specify the host names.

(1) Creating a definition file

Create a definition file with the following path name:

JP1/FTP-installation-directory\FTPPASV.INI

(2) Contents of the definition file

Specify information in the format of a Windows initialization file (.ini), as shown below:

```
[PasvMode]
MaxInfoCount=maximum-number-of-hosts|ALL
HostName[1]=host-name-1
HostName[2]=host-name-2
  :
HostName[X]=host-name-X
```

The following table lists and describes the section, keys, and values that can be specified.

Table 3-10: Contents of the definition file in the PASV mode

Section	Key	Value	Description
[PasvMode]	MaxInfoCount	*maximum-number-of-hosts* | ALL	Specifies the number of remote FTP server hosts to which transmission of files in the PASV mode will be permitted: • *maximum-number-of-hosts*: Specifies a maximum value for X in the HostName[X] lines that follow this line. • ALL: Specifies that file transmission in the PASV mode is to be permitted for all remote FTP server hosts. When ALL is specified, any HostName[X] lines are ignored.
	HostName[X]	*host-name*	Specifies the host name of a remote FTP server to which file transmission in the PASV mode will be permitted. Specify on a separate line each host that is to be registered. For a host name, specify the same remote host name as is used in the transmission information. • For X, specify a value of 1 or greater but no greater than the value of MaxInfoCount. If the specified value is greater than the value of MaxInfoCount, the specification is ignored. • The X value on each line must be unique. • The X values can be specified in any order.

Examples

Example 1: Enable transmission of files to HOST1 and HOST2 in the PASV mode:

```
; JP1/File Transmission Server/FTP
; PASV mode configuration file
;
[PasvMode]
MaxInfoCount=2
HostName[1]=HOST1
HostName[2]=HOST2
```

Example 2: Enable transmission of files to all hosts in the PASV mode:

```
; JP1/File Transmission Server/FTP
; PASV mode configuration file
;
[PasvMode]
MaxInfoCount=ALL
```

3.10 Function for controlling remote host connections

At the FTP server, you can limit the FTP clients that are permitted to establish connection.

When the IP addresses or host names of FTP clients whose connection is to be permitted are defined in a permission list, transmission can be performed only by those FTP clients. You can also control connection by defining in a rejection list the IP addresses or host names of FTP clients whose connection requests are to be rejected.

This function checks the definitions in effect when an FTP client attempts to establish connection with the FTP server. If the connection request is rejected, the control connection is lost and no control connection response message is sent.

Note that you can change definitions while the JP1/File Transmission Server/FTP Server service is running.

3.10.1 Registering host names

You create a definition file as shown below and then specify host names.

(1) Creating a definition file

Create a definition file with the following path name:

JP1/FTP-installation-directory\FTPHOSTACC.INF

(2) Contents of the definition file

Use a text editor to specify the definition file (FTPHOSTACC.INF) according to the following method:

```
#  comment
definition-name
     :
```

Begin by specifying a definition name, and then specify values on the following lines. If you specify multiple values, make sure that you specify only one value on each line. Any characters following a hash mark (#) through a linefeed are treated as a comment.

The following table lists and describes the definition names and values that can be specified.

Table 3-11: Definition names and values that can be specified in the definition file (FTPHOSTACC.INF)

Definition name	Description	Value
[allow_list]	Specifies hosts whose connection is to be permitted.	IP address or host name
[deny_list]	Specifies hosts whose connection is to be rejected.	IP address or host name

Example

```
[allow_list]                        # Defines hosts whose connection is permitted.
192.168.10.2                        # IP address. Connection is OK if the IP address matches exactly.
192.169.20.                         # Multiple IP addresses. Connection is OK for any IP address that
                                      begins with the specified value.
192.169.20.0/255.255.255.0          # Same as above, but uses mask specification.
192.169.30.*                        # Specifies multiple IP addresses.
192.169.30.0/255.255.255.0          # Same as above, but uses mask specification.
192.170.                            # Multiple IP addresses. Connection OK for any IP address that
                                      begins with the specified value.
192.170.0.0/255.255.0.0             # Same as above, but uses mask specification.
192.171.17.68-71                    # Specifies a range of IP addresses.
                                    # Permits 192.171.17.68 through 192.171.17.71.
192.171.17.68/255.255.255.252       # Same as above, but uses mask specification.
192.172.18-19.*                     # Specifies a range of IP addresses.
                                    # Permits 192.172.18.1 through 192.172.18.255 and 192.172.19.1
                                      through 192.172.19.255.
192.173.*.10                        # Specifies a range of IP addresses.
                                    # Permits 192.173.1.10 through 192.173.255.10.
192.173.*.10/255.255.0.255          # Same as above, but uses mask specification.
host1.aname.com                     # Specifies host names.
.sample.co.jp                       # Specifies multiple host names. Connection is OK for any host name
                                      that ends with the specified value.

[deny_list]                         # Defines hosts to be rejected (among the hosts that are permitted).
192.169.20.3                        # 192.169.20.1 through 192.169.20.255 are permitted, except for
                                      192.169.20.3.
192.170.10.                         # 192.170.0.0 through 192.170.255.255 are permitted, except for
                                      192.170.10.0 through 192.170.10.255.
www.sample.co.jp                    # Hosts whose name ends with .sample.co.jp are permitted, except for
                                      www.sample.co.jp.
```

(3) Notes

- If there is no definition file, connection is permitted from all hosts.

- If there is a definition file but it does not contain any valid definitions, connection requests from all hosts are rejected.

- A connection request from a host that is not specified in the definition file or a

host that is specified in both `[allow_list]` and `[deny_list]` is rejected.

3.11 Using JP1/FTP in a multiple IP address environment

In an environment in which multiple IP addresses can be used, such as an environment that uses multiple NICs or a cluster environment, the following functions are available:

- Function that enables you to specify the local IP address of the FTP client

  Setting the local address for the FTP client's source address is enabled by defining YES in the FTP client definition and specifying the logical host name in the API, in an argument of the ftstran command, or in the input field for the client host name in a custom job.

- Function for setting the FTP server host name in a response message sent by the FTP server to the address that accepted the connection

  Specifying the connected IP address or the host name obtained by converting the connected IP address as the FTP server's host name in a response message that is sent from the FTP server is enabled by defining either YES or NO in the FTP server definition.

- Function for specifying the destination of JP1 events

  Sending to a specified host the JP1 events that report start and stop of services (FTP client, FTP server, log, or agent) is enabled by defining the logical host name or logical IP address in the JP1 event definition.

These functions take effect after the definition file is created, and then each service is started.

3.11.1 Creating a definition file

Create a definition file as shown below.

(1) Creating a definition file

Create a definition file with the following path name:

JP1/FTP-installation-directory\HOSTINFO.INI

(2) Contents of the definition file

Specify information in the format of a Windows initialization file (.ini), as shown below:

```
[CSHOST]
CSHost=YES|NO
[RSPMSG]
Reverse=YES|NO|(omitted)
[JP1EVENT]
HostName=host-name|IP-address|(omitted)
AgentInSame=YES|NO
```

The following table lists and describes the sections, keys, and values that can be specified.

Table 3-12: Contents of the definition file (HOSTINFO.INI)

Section	Key	Value	Description
[CSHOST]	CSHost	YES|NO <<NO>>	At the FTP client, specifies whether the `ftstran` command's `/H` specification and the `fts_ftp_open()` function's `hostname` specification are to be effective: • YES: Set the FTP client's source address to the IP address of the host that is specified in `/H` in the `ftstran` command or in `hostname` in the `fts_ftp_open()` function. If you specify YES but `/H` is omitted in the `ftstran` command, the physical host name is assumed. Also, if you specify YES but NULL is specified in `hostname` in the `fts_ftp_open()` function, the physical host name is assumed. • NO: Set the FTP client's source address to the value that is assigned automatically by the OS.
[RSPMSG]	Reverse	YES|NO|(omitted) <<omitted>>	Specifies the output format for the FTP server's host name in a response message that is sent from the FTP server: • YES: Output the host name obtained by converting the connected IP address. • NO: Output the connected IP address. • Omitted: Output the physical host name.

Section	Key	Value	Description
[JP1EVENT]	HostName	*host-name*|*IP-address* | (omitted) <<omitted>>	Specifies the destination for output of JP1 events: • *host-name*|*IP-address*: Specifies the destination for JP1 events that report start and stop of services (client, server, log, or agent). The destination (logical or physical address) of a JP1 event that is generated during termination of a transmission is set to the host that executed the transmission. • Omitted: Send all JP1 events to the physical host.
	AgentIsSame	YES|NO <<YES>>	Specifies whether to set the destination of the JP1 events reporting the start and stop of the agent service to the host specified in HostName. • YES: Set the destination of JP1 events to the host specified in HostName. • NO: Set the destination of JP1 events to the physical host.

Example

- This example enables the /H specification in the ftstran command and the hostname specification in fts_ftp_open().

- This example sets the host name obtained by converting the connected IP address as the FTP server's host name in the FTP server's response message.

- This example sets the destination of JP1 events reporting start and stop of services (client, server, log, or agent) to Host1 (logical host name = Host1).

```
;JP1/File Transmission Server/FTP
;For logical host configuration file
;
[CSHOST]
CSHost=YES
[RSPMSG]
Reverse=YES
[JP1EVENT]
HostName=Host1
AgentInSame=YES
```

(3) Note

If there is no definition file, these functions are disabled, and the physical host name is assumed in all cases.

3.12 Collecting access logs

At the FTP server, you can log invalid or unsuccessful access attempts by an FTP client until it successfully logs in (achieves user authentication) after establishing a connection.

3.12.1 Settings for collecting access logs

To set JP1/FTP to collect access logs, you must specify a value of at least 1 megabyte in **Size of Access log file** in the Environment Definition dialog box. For details about the Environment Definition dialog box, see *3.1 Defining an environment for JP1/FTP*.

3.12.2 Log output file

Access logs are output as text to the access log file. The following table shows the access log file and its backup file.

Table 3-13: Access log output file and backup file

Description	File name
Access log file	*directory-for-log-information*\ftsaccess.log
Backup file	*directory-for-log-information*\ftsaccess.log.old

The file size is from 0 bytes to the size specified in **Size of Access log file** in the Environment Definition dialog box. When the output exceeds the size specified in **Size of Access log file**, JP1/FTP saves the file into the backup file, initializes the file size to 0 bytes, and then writes data from the beginning of the file.

If the backup file already exists when a backup is needed, JP1/FTP overwrites the existing backup file.

3.12.3 Messages that are output to the access logs

The following table lists and describes the messages that are output to the access logs.

Table 3-14: Messages that are output to the access logs

Message	Description
FTP-command[#1] is invalid because it was sent by a user who was not logged in. [Remote host:*IP-address*[#2]] [Remote port:*port-number*[#3]] [Connection number:*connection-number*[#4]]	An FTP command that becomes executable after login was accepted before login.

81

Message	Description
`Login of user` *user-name*[#5] `failed. [Remote host:`*IP-address*[#2]`] [Remote port:`*port-number*[#3]`]` `[Connection number:`*connection-number*[#4]`]`	Login failed.
`The max. number of FTP clients was reached. No more clients can use the service.`	More connections were accepted than the maximum permissible number of concurrent transmissions.
`The connection was closed without login. [Remote host:`*IP-address*[#2]`] [Remote port:`*port-number*[#3]`]` `[Connection number:`*connection-number*[#4]`]`	The FTP client disconnected itself without logging in.

#1

FTP-command: Indicates the FTP command.

#2

IP-address: Indicates the IP address of the FTP client.

#3

port-number: Indicates the port number of the FTP client.

#4

connection-number: Indicates the connection number.

#5

user-name: Indicates the user name.

3.13 Function for using the access control function to change the root directory for absolute path names

When you use the access control function, you can change the root directory for the absolute path names of files and directories to the user's home directory.

This function enables you to hide the directory hierarchy above the user's home directory when the user views and sets files and directories.

To use this function, you must have already registered the absolute path name format.

The registered information takes effect the next time the JP1/File Transmission Server/FTP Server service starts.

3.13.1 Registering the absolute path name format

Create a definition file and specify the absolute path name format as described below.

(1) Creating a definition file

Create a definition file with the following path name:

JP1/FTP-installation-directory\AccessLimitation.ini

(2) Contents of the definition file

Specify information in the format of a Windows initialization file (.ini), as shown below:

```
[HomeDir]
Display=Root|FullPath
```

The following table lists and describes the section, key, and values that can be specified.

Table 3-15: Contents of the definition file (AccessLimitation.ini)

Section	Key	Value	Description
[HomeDir]	Display	Root|FullPath <<FullPath>>	Specifies the absolute path name format for files and directories: • Root: Format in which the root directory is the home directory. • FullPath: Format in which the root directory is the system's root directory (full path format).

(3) Example of display and specification format

This subsection describes the display and specification formats using examples based on the following directory structure:

```
C:
 └ Dir01
     ├─Dir02          ← Home directory during login
     │    └File01
     └─File02
```
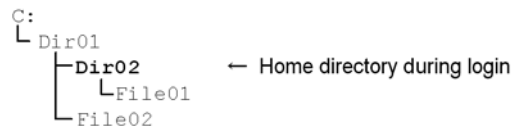
Example 1

Response message that is displayed when the `pwd` command is entered at the standard FTP client when the current directory is the home directory (`Dir02`):

- When `Root` is set:

  ```
  257 "\" is current directory.
  ```

- When `FullPath` is set:

  ```
  257 "C:\Dir01\Dir02" is current directory.
  ```

Example 2

Specification for deleting `File01` at the standard FTP client when the current directory is the home directory (`Dir02`):

- When `Root` is set:

  ```
  delete \File01
  ```

- When `FullPath` is set:

  ```
  delete C:\Dir01\Dir02\File01
  ```

(4) Notes

- If there is no definition file, the full path format is assumed.

- If you do not use the access control function, this definition file is ignored.

- Messages are always output to the event log in the full path format regardless of this definition.

3.14 FTP connection response message control function

Normally, the following response message is displayed at the time of an FTP connection:

```
220 HHH FTP server (JP1/File Transmission Server/FTP VV-RR-SS MMM DD YYYY) ready.
   Host name              Product name                      Version information#
```

```
      #
         VV-RR-SS: Version (-SS might not be displayed.)
         MMM: Month (Jan for January, Feb for February, etc.)
         DD: Date
         YYYY: Year
```

You can set that the response message is not to display the host name, product name, and version information. You can also set the response message to display any optional character string.

To change the FTP connection response message, you must have already registered the definition information.

The registered information takes effect the next time the JP1/File Transmission Server/FTP Server service starts.

3.14.1 Registering the definition information

Create a definition file and specify the definition information as described below.

(1) Creating a definition file

Create a definition file with the following path name:

JP1/FTP-installation-directory\FtsBanner.ini

(2) Contents of the definition file

Specify information in the format of a Windows initialization file (.ini), as shown below:

```
[BANNER]
Display=ON|OFF
```

The following table lists and describes the section, key, and values that can be specified.

85

Table 3-16: Contents of the definition file (FtsBanner.ini)

Section	Key	Value	Description
[BANNER]	Display	ON|OFF <<ON>>	Specifies whether to display the host name, product name, and version information in the FTP connection response message: • ON: Display. • OFF: Do not display.

(3) Creating an FTP connection response message file

To set a character string of your choosing for the FTP connection response message, first set Display to OFF in the definition file, and then create an FTP connection response message file with the following path name:

JP1/FTP-installation-directory\FtsBanner.txt

(4) Contents of the FTP connection response message file

Specify a text for the FTP connection response message as follows:

```
FTP-connection-response-message-text
```

Notes

- The FTP connection response message file must consist of at least one line.

- A maximum of 256 bytes of characters can be specified per line. Any additional characters are ignored.

- The maximum file size is 512 bytes. The file is ignored if it exceeds 512 bytes.

- A line consisting of a linefeed only is valid.

- You cannot specify a comment.

- If the file size is 0 bytes, the file is ignored.

- Depending on the connecting FTP client, some limitations might apply to the format of a response message. In the FTP connection response message file, make sure that you specify text that can be recognized by the connecting FTP client.

3.14.2 FTP connection response message that is displayed

This subsection shows and explains the FTP connection response message that is displayed.

If Display is set to OFF in the definition file (FtsBanner.ini), but there is no FTP

connection response message file (`FtsBanner.txt`), the following FTP connection response message is displayed:

```
220 FTP server ready.
```

If there is an FTP connection response message file (`FtsBanner.txt`), the FTP connection response message is set as follows according to the FTP protocol specifications:

- If the file contains only one line of data, response code `220` is added at the beginning of the line.

- If the file contains multiple lines, `220-` is added at the beginning of the first line, `220` is added at the beginning of the last line, and five single-byte spaces are added at the beginning of each of the intervening lines.

The following figures show an example of an FTP connection response message.

Contents of the FTP connection response message file (FtsBanner.txt)

```
Welcome to FTP server.
Anonymous users cannot connect to this server.
Please enter the username and password.
```

FTP connection response message

```
220- Welcome to FTP server.
     Anonymous users cannot connect to this server.
220 Please enter the username and password.
```

87

4. JP1/FTP Operations Management

The Operations-Manager Console enables you to check the definition information for other JP1/FTPs and view transmission logs. This chapter describes how to use the Operations-Manager Console.

Note

The Operations-Manager Console is not supported in the IPF version.

4.1 Setting up the Operations-Manager Console

To use the Operations-Manager function, you must run the program at both the managing host and the managed hosts. Note that only a user with Administrator permissions (or an administrator in Windows Server 2008) can start the Operations-Manager Console.

■ Managing host: Start the Operations-Manager Console.

Start the Operations-Manager Console at the managing host. It enables you to view transmission logs of the remote and local JP1/FTP servers and to register, update, and view definition information items.

How to start the Operations-Manager Console

From the Windows **Start** menu, choose **Programs**, **JP1_File Transmission Server_FTP**, and then **Manager Console**.

Figure 4-1: Operations-Manager Console window
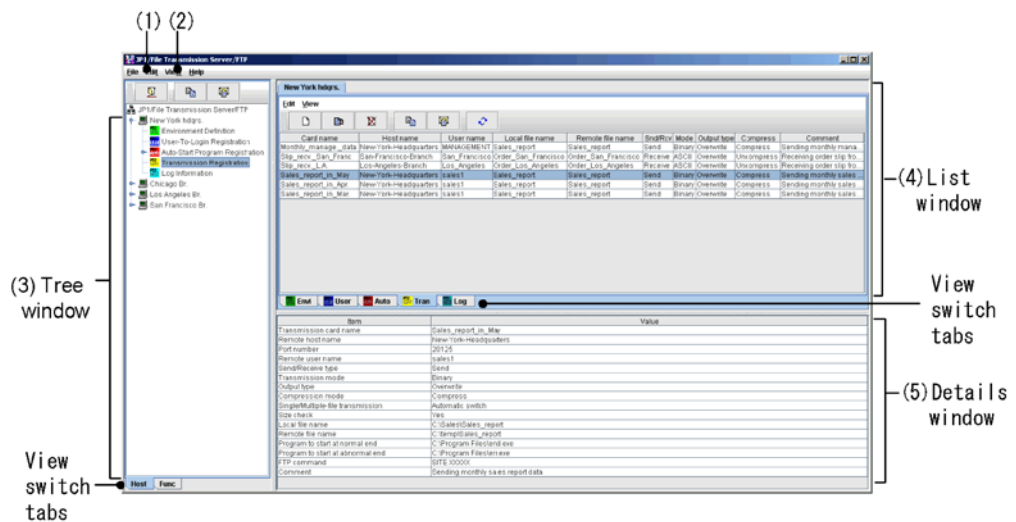
1. Choosing **Host List** from the **Edit** menu: See *4.1.1 Adding managed hosts*.

2. Choosing **Display Log Count** from the **View** menu:

   Set the number of logs to be displayed in the Log Information window. When the Display Log Count dialog box appears, specify the number of logs that you wish to display, in the range from 1 to 10,000.

3. Tree window:

This window displays a list of the managed hosts and corresponding information. The view switch tabs enable you to switch between displaying by hosts and displaying by functions.

If there are too many managed hosts to fit in the tree window, information about four hosts before and after the selected host is displayed.

4. List window:

This window provides a listing of the information selected in the tree window. You can use the view switch tabs to change the display for each function.

5. Details window:

This window displays details of the information selected in the list window. Note that nothing is displayed for the Environment Definition utility.

■ Managed host: Start the Operations-Manager Agent.

Start the Operations-Manager Agent on each host where the Operations-Manager Agent is to be run.

How to start the Operations-Manager Agent

To start a manager agent that is to be managed by the Operations-Manager Console, start the JP1/File Transmission Server/FTP Agent service. For details about how to start the service, see *2.3 Starting and stopping services*.

4.1.1 Adding managed hosts

You use the Operations-Manager Console to set the hosts that are to be managed.

To add managed hosts:

1. At the Operations-Manager Console, from the **Edit** menu, choose **Host List**.

The Define Managed Hosts dialog box appears.

Figure 4-2: The Define Managed Hosts dialog box
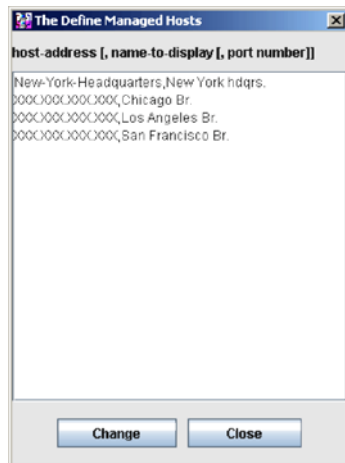
2. Specify the address and display name, separated by a comma, of a managed host that is to be added.

   host-address[,*name-to-display*[,*port-number*]]

   host-address

   > Specifies the host name defined in the system definition (host name specified in *OS-installation-directory*\system32\drivers\etc\hosts) or the IP address.

   > This item is mandatory.

   name-to-display ((0 to 15-byte character string))

   > Specifies a name to be displayed for the managed host on the Operations-Manager Console window.

   > This item is optional. If it is omitted, the specified host address is displayed.

   port-number

   > Specifies the port number of the managed host.

   > Specification of a port number is optional. If it is omitted, the port number of the local host in ftsagent is assumed.

   When the host address or name to be displayed contains a comma (,) or double-quotation mark (")

   > Enclose the entire host address or name to be displayed in double-quotation marks (").

   > Example: Specifying aaa,bbb as the name to be displayed:

92

```
myhost,"aaa,bbb",20252
```

Example: Specifying `aaa"bbb` as the name to be displayed:
```
myhost,"aaa""bbb",20252
```

3. Repeat step 2 for each additional host that is to be registered.

4. Click **Change**.

The specified host names are displayed in the tree window.

4.1.2 Deleting managed hosts

To delete a managed host:

1. At the Operations-Manager Console, from the **Edit** menu, choose **Host List**.

The Define Managed Hosts dialog box appears.

2. Select the managed host that you want to delete, and then press the **Delete** key.

3. Click **Change**.

Other editing method

Information about the managed hosts is saved in the (comma-delimited) file *JP1/FTP-installation-directory*\manager\console\hostdef.csv. You can use a text editor such as Notepad to edit this file. To apply the edited information, you must restart the Operations-Manager Console.

4.2 Organization and functions of the Operations-Manager Console windows

The Operations-Manager Console provides different windows for displaying various types of information. This section presents the windows of the Operations-Manager Console that are used to display information.

4.2.1 Environment Definition window

The figure below shows an example of the Environment Definition window for another host that is displayed in the Operations-Manager Console. This subsection describes the functions that you can use in the Environment Definition window.

Figure 4-3: Environment Definition window
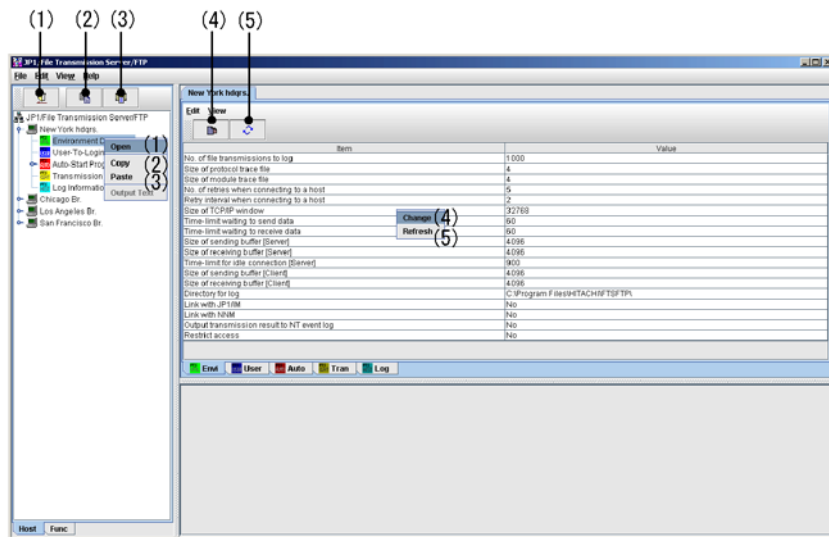
1. Click [ ], or right-click in the tree window: Opens host information.

2. Click [ ], or right-click in the tree window: Copies host information.

3. Click [ ], or right-click in the tree window: Pastes the copied information.

4. Click [ ], or right-click in the list window: Changes the definition information.

5. Click [ ], or right-click in the list window: Refreshes the information.

Notes

- Definition information cannot be copied between Windows hosts and UNIX hosts that have been set as managed hosts.

- If definition information is copied from a version earlier than 07-50 to version 07-50 or later, single-byte spaces can no longer be entered in the file path names.

4.2.2 User-To-Login Registration window

The figure below shows an example of another host's login user registration status that is displayed from the Operations-Manager Console. This subsection describes the functions that you can use in the User-To-Login Registration window.

Figure 4-4: User-To-Login Registration window
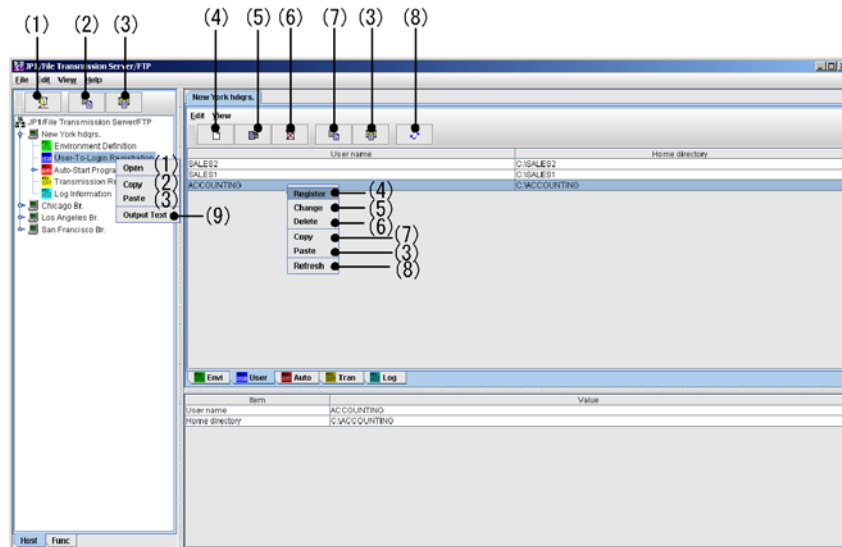
1. Click [icon], or right-click in the tree window: Opens host information.

2. Click [icon], or right-click in the tree window: Copies all login user definition information.

3. Click [icon], or right-click in the tree or list window: Pastes the copied login user information.

4. Click [icon], or right-click in the list window: Registers a new login user.

5. Click [icon], or right-click in the list window: Changes the information registered for the specified login user.

6. Click [🗙] , or right-click in the list window: Deletes the specified login user.

7. Click [📋] , or right-click in the list window: Copies the specified login user information.

8. Click [🔄] , or right-click in the list window: Refreshes the information.

9. Right-click in the tree window: Outputs the login user information as text.

Notes

- When **Cancel** is clicked while **Register** or **Change** processing is underway, the message `Canceled` is displayed, but the registration or change processing might have already been completed.

- Login user information cannot be copied between Windows hosts and UNIX hosts that have been set as managed hosts.

4.2.3 Auto-Start Program Registration window

The figure below shows an example of an Auto-Start Program Registration window that displays from the Operations-Manager Console the registration status of the auto-start programs at another host. This subsection describes the functions that you can use in the Auto-Start Program Registration window.

*Figure 4-5:* Auto-Start Program Registration window (for files)
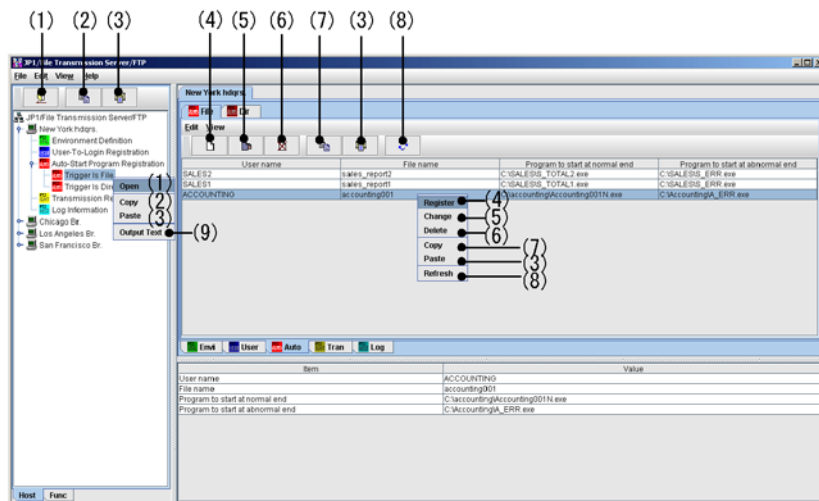
1. Click [🗒] , or right-click in the tree window: Opens host information.

2. Click [📋] , or right-click in the tree window: Copies all auto-start program definition information.

3. Click [icon], or right-click in the tree or list window: Pastes the copied information.

4. Click [icon], or right-click in the list window: Registers new auto-start programs.

5. Click [icon], or right-click in the list window: Changes the registration details of auto-start programs.

6. Click [icon], or right-click in the list window: Deletes auto-start programs.

7. Click [icon], or right-click in the list window: Copies information about a specified auto-start program.

8. Click [icon], or right-click in the list window: Refreshes information.

9. Right-click in the tree window: Outputs information about auto-start programs as text.

Notes

- When **Cancel** is clicked while **Register** or **Change** processing is underway, the message `Canceled` is displayed, but the registration or change processing might have already been completed.

- If the manager agent is UNIX, whether the login user name has been registered is not checked when auto-start programs are registered.

- Information about auto-start programs cannot be copied between Windows hosts and UNIX hosts that have been set as managed hosts.

4.2.4 Transmission Registration window

The figure below shows an example of a window that displays from the Operations-Manager Console the transmission information registration details at another host. This subsection describes the functions that you can use in the Transmission Registration window.

Figure 4-6: Transmission Registration window
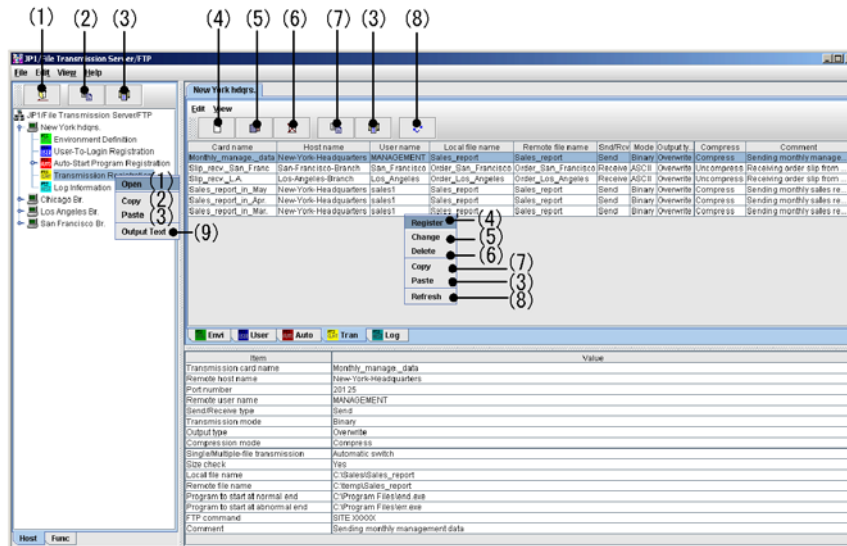
1. Click [icon], or right-click in the tree window: Opens host information.

2. Click [icon], or right-click in the tree window: Copies all transmission definition information.

3. Click [icon], or right-click in the tree or list window: Pastes the copied information.

4. Click [icon], or right-click in the list window: Registers new transmission information.

5. Click [icon], or right-click in the list window: Changes registered transmission information.

6. Click [icon], or right-click in the list window: Deletes transmission information.

7. Click [icon], or right-click in the list window: Copies the specified transmission information.

8. Click [icon], or right-click in the list window: Refreshes information.

9. Right-click in the tree window: Outputs the transmission information as text.

Notes

- When **Cancel** is clicked while **Register** or **Change** processing is underway, the message `Canceled` is displayed, but the registration or change

processing might have already been completed.

- Transmission information cannot be copied between Windows hosts and UNIX hosts that have been set as managed hosts.

4.2.5 Log Information window

The figure below shows an example of a window that displays from the Operations-Manager Console another host's log information. This subsection describes the functions that can be used in the Log Information window.

Figure 4-7: Log Information window
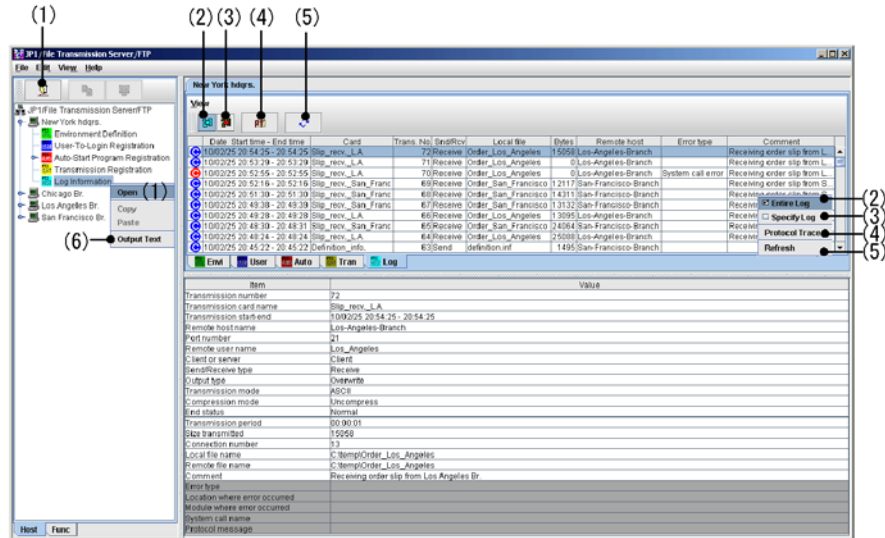
1. Click [ ], or right-click in the tree window: Opens host information.

2. Click [ ], or right-click in the list window: Displays all log information.

3. Click [ ], or right-click in the list window: Displays specific log information.

4. Click [ ], or right-click in the list window: Displays protocol trace.

5. Click [ ], or right-click in the list window: Refreshes information.

6. Right-click in the tree window: Outputs log information as text.

Notes

- If there are multiple logs with the same time, the order in which the information is displayed in the Operations-Manager Console's Log Information window might be different from the display order in the

stand-alone Log Information window.

- The Log Information window displays all trace information, even if there is a trace of a transmission. This differs from when a protocol trace is displayed from the Windows **Start** menu by choosing **Programs**, **JP1_File Transmission Server_FTP**, and then **Log Information**.

- The Operations-Manager Console does not support a transmission size of 4 gigabytes or greater. If an attempt is made to reference a transmission log whose transmission size is 4 gigabytes or greater, the displayed value will be smaller than the actual transmission size.

4.3 Examples of Operations-Manager Console menu operations

The operations when you use the Operations-Manager Console to register and edit information are the same in all windows. This section presents four examples of menu operations for reference purposes.

4.3.1 Example of registering login user information

This example registers login user information in the New York headquarters.

To register login user information:

1. In the tree window, double-click New York headquarters.

2. Under New York headquarters, select **User-To-Login Registration**, and then click ⬛ .

   The login user information that has been registered in the New York headquarters is displayed in the list window.

3. In the list window, click ⬛ .

   A dialog box for registering a login user is displayed. If login user information is selected in the list window, the selected login user information is displayed. You can also register new information by using the displayed information as a model.

   Figure 4-8: Dialog box for registering a login user

4. Enter the login user information and then click **Register**.

   For details about the information to be registered, see *3.2.1 Registering the login users*.

   You can register multiple sets of login user information one after another until you click **Close**.

5. Click **Close**.

Changing and deleting login user information

You can change and delete login user information in the same manner.

Changing: Specify the desired login user information and then click ▢ .

Deleting: Specify the desired login user information and then click ▢ .

4.3.2 Example of distributing (copying) transmission information

This example copies transmission information by distributing it from the New York headquarters to three branches (Chicago, Los Angeles, and San Francisco). If the same information already exists, it will be overwritten.

To copy information:

1. In the tree window, double-click New York headquarters.

2. Under New York headquarters, select **Transmission Registration**, and then click ▢ .

3. In the tree window, click Chicago, and then click Los Angeles and San Francisco while holding down the **Shift** or **Ctrl** key.

4. In the tree window or the list window, click ▢ .

   A dialog box for copying and pasting information is displayed.

   Figure 4-9: Dialog box for copying and pasting information
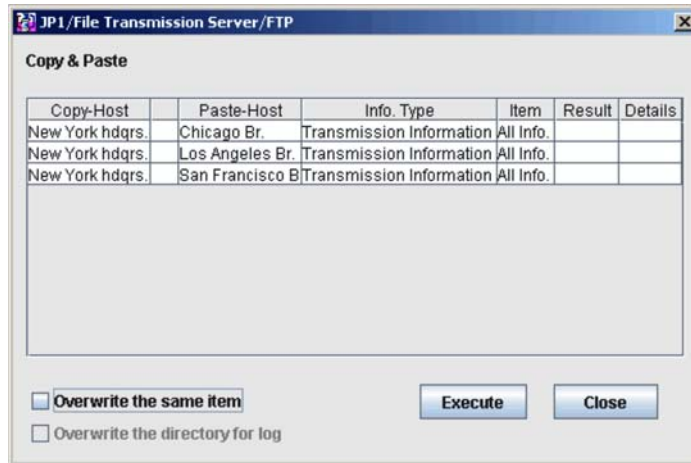
About **Overwrite the directory for log**

This option is enabled only when environment definition information is being copied. Select it only if you want to overwrite the existing log

information directory.

5. Select **Overwrite the same item** and then click **Execute**.

    When the copy and paste operation is finished, **Result** and **Details** are displayed.
    By clicking **Details**, you can view the copied information and error information.

6. Click **Close**.

4.3.3 Example of displaying log information

This example displays the log information for the New York headquarters.

To display log information:

1. In the tree window, click the **Func** tab at the bottom.

    Information is displayed in the tree window by function.

2. In the tree window, double-click **Log Information**.

3. Select New York under the log information, and then click 　　 .

    Log information is displayed in the list window.

To display only specific log information:

    In the list window, click 　　 . In the displayed dialog box, specify a condition for
    displaying information.

Figure 4-10: Dialog box for displaying specific information

4.3.4 Example of outputting multiple definition information items as text

This example outputs definition information for the Chicago, Los Angeles, and San Francisco branches as text. You can select for the output method either **Output Text** or **Append Text**.

A sample format for text that is output is set up during installation. You can edit the format file to create a desired format. For details about how to edit the format file, see *E. Format Files Used for Output of Definition Information*.

To output multiple definition information items as text:

1. In the tree window, click Chicago branch, and then click Los Angeles branch and San Francisco branch while holding down the **Shift** or **Ctrl** key.

2. From the right-click menu, choose **Output Text**.

   The Output or Append To Text File dialog box appears.

Figure 4-11: Output or Append To Text File dialog box
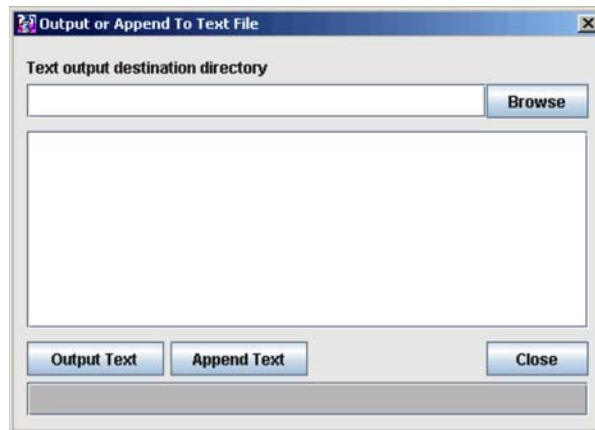
3. Specify the directory to which the text is to be output, and then click either **Output Text** or **Append Text**.

   Output Text

   Outputs the registration information to the specified file. If the specified file already exists, its contents are overwritten.

   Append Text

   Outputs the definition information at the end of the specified file.

   The text output status is displayed.

4. Click **Close**.

File name for the output text

The following table shows the name of the output file depending on the type of information.

Table 4-1: Names of output text files

Type of information	File name[1]
User information[2]	*host-name-to-be-displayed*_user.txt
Auto-start program information based on file	*host-name-to-be-displayed*_autof.txt
Auto-start program information based on directory	*host-name-to-be-displayed*_autod.txt
Transmission information	*host-name-to-be-displayed*_tran.txt
Log information	*host-name-to-be-displayed*_hist.txt

#1

If the host name part of the file name to be displayed contains any illegal character for a file name ([\ / : ; , * ? < > |]), each such illegal character will be replaced with # to create the file name.

#2

The information cannot be output when the target host is UNIX.

Chapter

5. Linkage with Other JP1 Programs

This chapter describes the settings required for linking JP1/FTP to other JP1 programs and the respective operation methods.

5.1 Linking to JP1/AJS3

You can link JP1/FTP to JP1/AJS3 to perform scheduled file transmissions.

This section describes the settings for linking to JP1/AJS3 and the operation method.

5.1.1 System configuration for linking to JP1/AJS3

Required programs

Install the following programs on the computer where JP1/FTP is installed:

- JP1/AJS3 - Manager or JP1/AJS3 - Agent

- JP1/AJS3 - View

For a system configuration in which JP1/FTP is installed on multiple computers

All JP1/FTP versions within the system configuration must be the same.

When installing JP1/FTP and JP1/AJS3 - View on separate computers

JP1/FTP and JP1/AJS3 - View might be installed on separate computers. In such a case, you must copy the definition program (`fts_card.exe`) to the computer on which JP1/AJS3 - View is installed. For details, see *5.1.2 Specifying the settings for linking to JP1/AJS3*.

The IPF version does not support the definition program (`fts_card.exe`).

Figure 5-1: Example of a system configuration for linking to JP1/AJS3
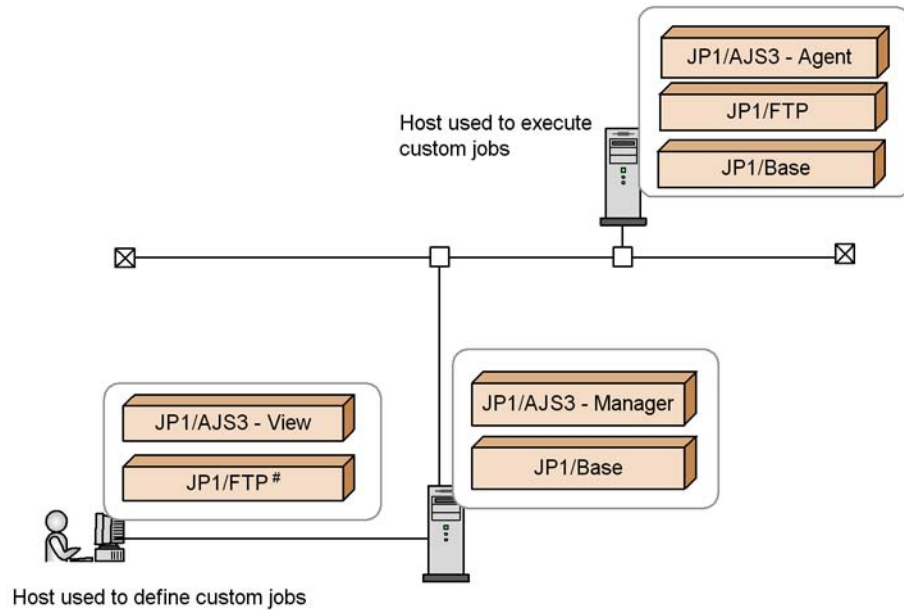
#: Instead of JP1/FTP, the definition program (fts_card.exe) can be copied and the copy can be used.

5.1.2 Specifying the settings for linking to JP1/AJS3

To link JP1/FTP to JP1/AJS3, you must specify the following settings in JP1/AJS3:

- Register JP1/FTP as a custom job

  Register JP1/FTP into JP1/AJS3 as a custom job so that the job can be used in JP1/AJS3.

- Copy the transmission information for JP1/FTP

  If the host used to define jobs differs from the host used to execute the jobs, copy the transmission information from the host used to execute jobs into the host used to define jobs.

(1) Registering JP1/FTP as a custom job

To register JP1/FTP into JP1/AJS3 as a custom job in order to link JP1/FTP to JP1/AJS3:

1. From the Windows **Start** menu, choose **Programs**, **JP1_Automatic Job Management System 3 - View**, and then **Register Custom Job**.

    The Register Custom Job dialog box appears.

2. Click **Add**.

   The Set Properties of Custom Job dialog box appears.

3. Set each item and then click **OK**.

4. Restart JP1/AJS3.

   The custom job is registered. The following shows the Set Properties of Custom Job dialog box and the settings.

   Figure 5-2: Set Properties of Custom Job dialog box
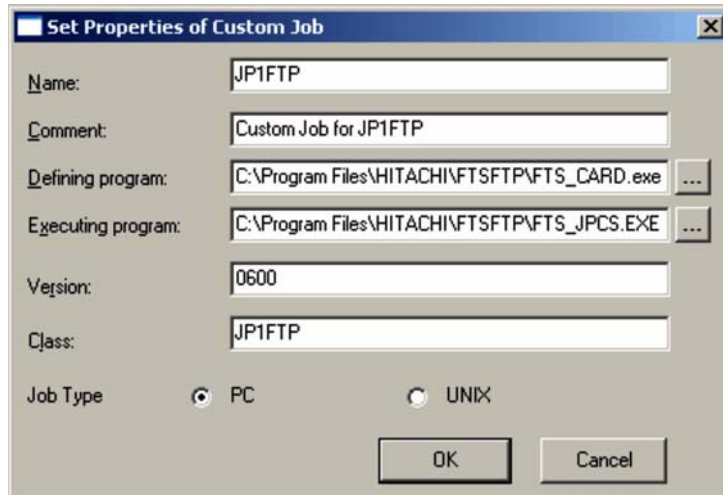
   Table 5-1: Settings in the Set Properties of Custom Job dialog box

Item	Setting
Name ((1 to 8-byte character string)) <<blank>>	Specify any name for the custom job. This item is mandatory.
Comment ((0 to 40-byte character string)) <<blank>>	Specify any desired comment. The forward slash (/) and the space cannot be used in a comment.

Item	Setting
Defining program	Specify the following definition program name: *JP1/FTP-installation-directory*\FTS_CARD.EXE (fixed) If JP1/FTP is not installed on the same computer where JP1/AJS3 - View is installed, you must copy the definition program and required DLL files to the computer where JP1/AJS3 - View is running. In such a case, make sure that the copy target is C:\Program Files\HITACHI\FTSFTP\Lang. The following six DLL files are required: Fts_card_0000.dll, Fts_card_0409.dll, Fts_card_0411.dlll, Fts_cmn_msg_0000.dll, Fts_cmn_msg_0409.dll, and Fts_cmn_msg_0411.dll.
Executing program	Specify the name of the following executable program: *JP1/FTP-installation-directory*\FTS_JPCS.EXE (fixed) This executable program must be located on the executing host. If the executable program exists in multiple JP1/AJS3 - Agents and their installation paths are different, specify *xxx\name-of-executable-file* (*xxx*: variable). In this case, you must register (define) the variables at the JP1/AJS3 - Agent hosts. For details about the registration method, see the *Job Management Partner 1/Automatic Job Management System 3 Linkage Guide*.
Version	0600 (fixed)
Class	JP1FTP (fixed)
Job Type	**PC**

(2) Copying the transmission information for JP1/FTP

When you create a jobnet, you specify a transmission card for JP1/FTP. If the host used to define jobs differs from the host used to execute jobs, you must specify a transmission card for the executing host at the host used to define jobs. Therefore, copy the definition information for the executing host to the host used to define jobs. When the definition is copied, a list of transmission cards is displayed during jobnet creation, enabling you to select the desired transmission card name. If JP1/FTP is not installed on the host used to define jobs, transmission information cannot be copied. In such a case, you must enter a transmission card name directly because a list of transmission cards is not displayed during jobnet creation.

To copy transmission information, use the functions for saving and recovering settings or the Operations-Manager Console. For details, see *3.7 Saving and recovering JP1/ FTP settings* or *4.3.2 Example of distributing (copying) transmission information*.

5.1.3 Performing scheduled transmissions

To perform scheduled transmissions, you must first create a jobnet and then register the schedule in the jobnet.

(1) Creating a jobnet

To create a jobnet:

1. From the Windows **Start** menu, choose **Programs**, **JP1_Automatic Job Management System 3 - View**, and **Job System Management**, and then log in.

    The JP1/AJS3 - View window is displayed.

2. From the **Edit** menu, choose **New**, and then **Jobnet** to create a jobnet.

3. Specify each setting and then click **OK**.

    The following figure shows an example of the settings. For details, see the *Job Management Partner 1/Automatic Job Management System 3 Linkage Guide*.

    Figure 5-3: Example of the settings in the Define Details - [Jobnet] dialog box

4. Double-click the created jobnet.

    The Jobnet Editor window appears.

5. Select **Exclusive edit.**

6. From the icon list, drag the required job icon to the map area.
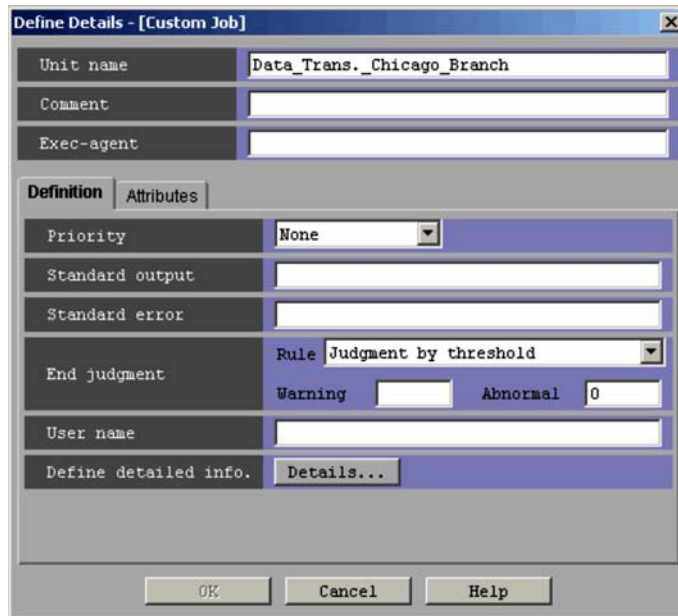
   The JP1/FTP icon is the ![FTP icon] icon on the **Custom Jobs** page.

   The Define Details - [Custom Job] dialog box appears.

7. Specify each setting.

   The figure below shows an example of the settings. For details, see the *Job Management Partner 1/Automatic Job Management System 3 Linkage Guide*.

   Figure 5-4: Example of the settings in the Define Details - [Custom Job] dialog box

8. Click **Details**.

   The Specify Transmission Card dialog box is displayed. This dialog box lists information about the transmission cards that have been registered in the Registration And Execution Of Transmission Requests dialog box or by the Operations-Manager Console.

9. Specify each setting and then click **OK**.

   The following figure and table show an example of settings and the items in the Specify Transmission Card dialog box.

Figure 5-5: Example of the settings in the Specify Transmission Card dialog box
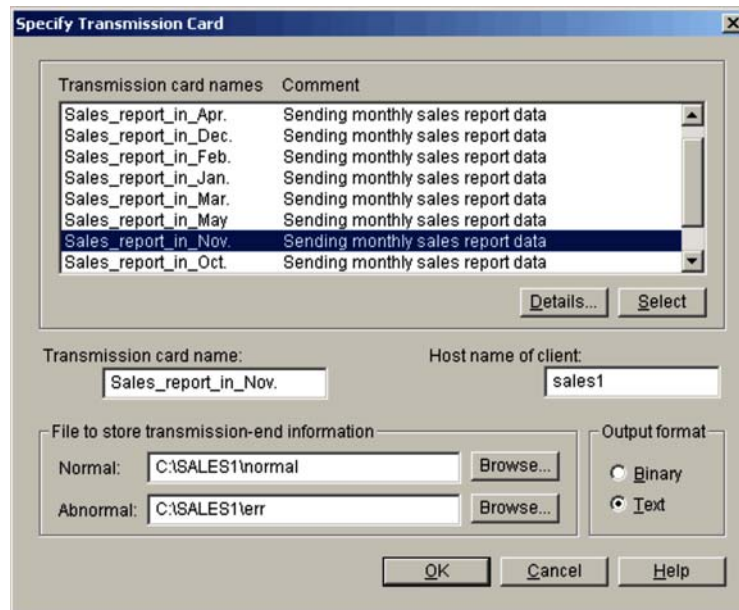
Table 5-2: Items in the Specify Transmission Card dialog box

Item	Description
Transmission card name	Select a transmission card from the list and then click **Select**, or double-click the desired transmission card. A transmission card whose name contains a single-byte space cannot be specified. To check the contents of a transmission card, select the card and then click **Details**. If JP1/FTP is not installed, no list of transmission cards is displayed. In such a case, enter a transmission card name.
Host name of client	Specify the host name (physical or logical host) that is to be set as the FTP client's IP address. If local IP address specification is enabled at the FTP client, the host name specified in this option becomes the FTP client's local IP address. If this option is omitted, the name of the FTP client's physical host is assumed. If local IP address specification is disabled at the FTP client, the address assigned automatically by the OS is used. For details about the definition for enabling local IP address specification at the FTP client, see *3.11 Using JP1/FTP in a multiple IP address environment*.
File to store transmission-end information ((0 to 259-byte character string))	Specify the name of the file to which the transmission results are to be output. Express this file name as a full path. This item is optional.

114

Item	Description
Output format	Specify the format of the transmission results output file.

10. If necessary, set the job type as a PC job and associate the jobs.

    The following figure shows an example of the settings.

    Figure 5-6: Example of the jobnet settings
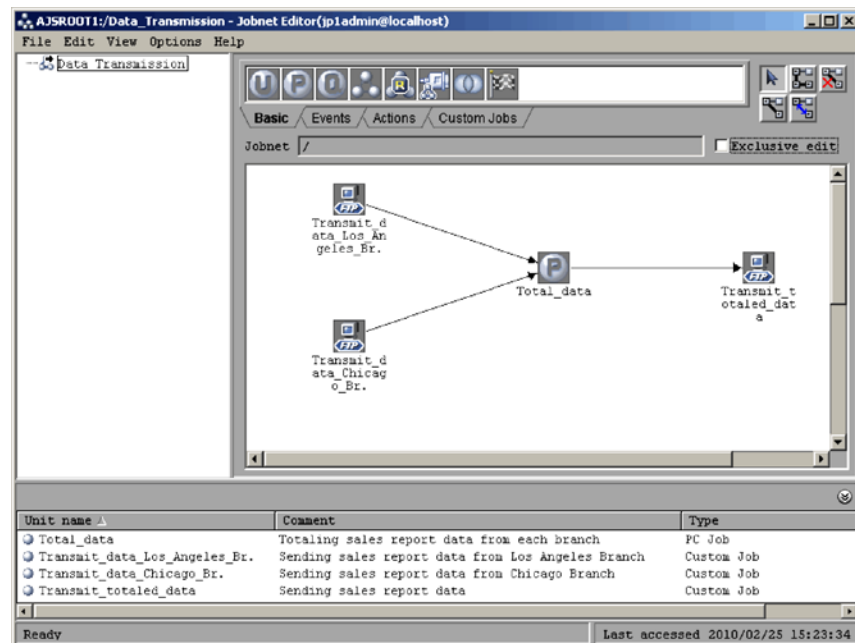
11. Close the Jobnet Editor window.

(2) Registering a schedule

To register a schedule:

1. From the list area of the JP1/AJS3 - View window, select the jobnet that is to be scheduled, and then from the **Edit** menu, choose **Schedule**.

   The Schedule Settings dialog box is displayed.

2. Specify each setting and then click **OK**.

   The figure below shows an example of the settings. For details, see the *Job Management Partner 1/Automatic Job Management System 3 Linkage Guide*.

Figure 5-7: Example of the settings in the Schedule Settings dialog box
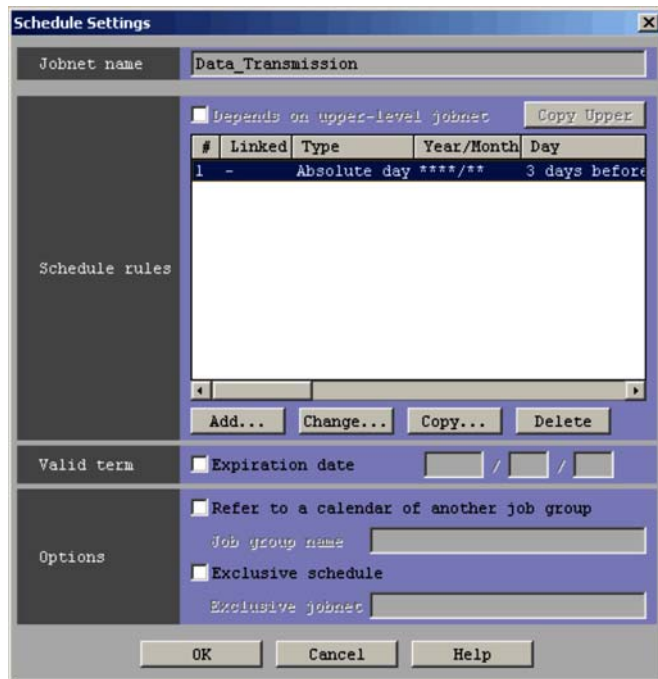
3. From the list area of the JP1/AJS3 - View window, select the jobnet to be registered for execution, and then from **Operations**, choose **Register for Execution**.

   The Register for Execution dialog box is displayed.

4. Specify each setting and then click **OK**.

   The figure below shows an example of the settings. For details, see the *Job Management Partner 1/Automatic Job Management System 3 Linkage Guide*.

Figure 5-8: Example of the settings in the Register for Execution dialog box
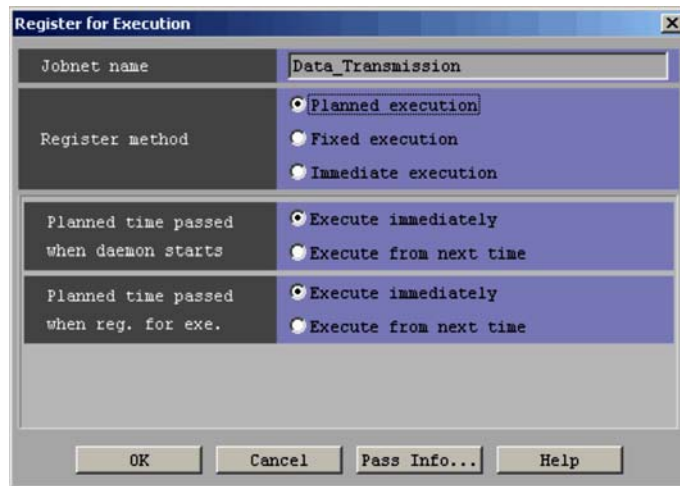
5.2 Linking to JP1/IM

You can link JP1/FTP to JP1/IM in order to use JP1/IM's Event Console window to perform centralized monitoring of the start and stop of the JP1/FTP service and the termination of transmissions (normal, warning, abnormal). It will also become possible to start JP1/FTP programs directly from JP1/IM's Tool Launcher window.

5.2.1 System configuration for linking to JP1/IM

Required programs

Install the following program on the computer where JP1/FTP is installed:

- JP1/Base

Additionally, install the following programs on the computer that is to be used to monitor JP1/FTP:

- JP1/IM - Manager
- JP1/IM - View
- JP1/Base

Figure 5-9: Example of a system configuration for linking to JP1/IM
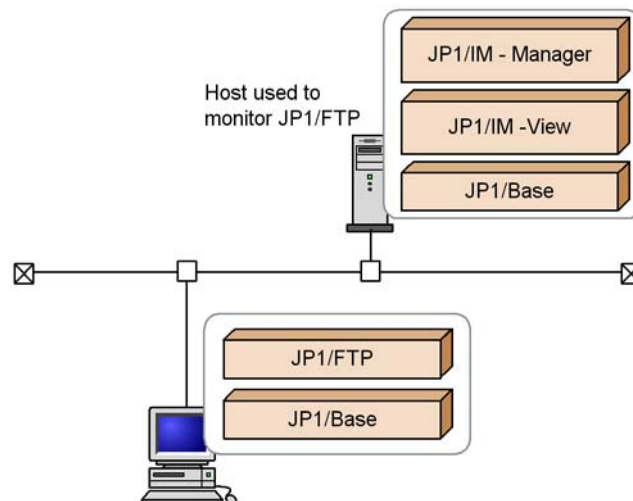
5.2.2 Specifying the settings for linking to JP1/IM

To specify the settings for linking to JP1/IM:

1. In the Environment Definition dialog box, select **Link with JP1/IM**, and then click **OK**.

   For details about the Environment Definition dialog box, see *3.1 Defining an environment for JP1/FTP*.

5.2.3 Starting the services

Start the services of JP1/IM and JP1/FTP that are listed below. This subsection describes how to start services using Windows Server 2003 as an example. If either service is already running, stop it and then restart it.

To start services:

1. From the Windows **Start** menu, choose **Control Panel**, **Administrative Tools**, and then **Services**.

2. Right-click the following services, and then from the displayed pop-up menu, choose **Start**:

   - JP1/IM event service: JP1/Console

   - JP1/FTP service

   The services start. Thereafter, JP1 events will be issued to report the status of the JP1/FTP service and the status of file transmissions.

When JP1 events cannot be issued

   Issuance of JP1 events might fail depending on the status of the JP1/FTP service and the JP1/IM event service. If this happens, enter the following command at the command prompt to establish dependence:

   ```
   ftsdpnd.exe /D BASE
   ```

   To release the dependence, enter the following command at the command prompt:

   ```
   ftsdpnd.exe /I BASE
   ```

5.2.4 Monitoring transmission results by JP1/IM

To monitor transmission results in the Event Console window of JP1/IM:

1. From the Windows **Start** menu, choose **Programs**, **JP1_Integrated Management - View**, and then **Integrated View**.

   The Login window is displayed.

2. In the Login window, enter the user name, password, and name of the connected host.

3. Click **OK**.

   The Event Console window is displayed.

For the list of JP1 events that are output by JP1/FTP and details about their attributes, see *D. JP1 Events*.

Chapter

6. Commands

This chapter describes the commands provided by JP1/FTP.

List of commands
Details of commands

List of commands

The following table lists and describes the commands supported by JP1/FTP.

Table 6-1: Commands supported by JP1/FTP

Function	Command name
Executes transmission	`ftstran`
Registers, changes, deletes, and displays transmission information	`ftsregc`
Displays log information	`ftshistory`
Saves definition information	`ftssave`
Recovers definition information	`ftsload`

These commands are all executed as MS-DOS commands.

Details of commands

Storage location for commands:

JP1/FTP-installation-directory

The default is as follows:

OS-installation-drive:`\Program Files\Hitachi\FTSFTP`

ftstran - executes transmission

Format

ftstran *transmission-card-name*[/L *file-name*] [/N *file-name*] [/E
file-name] [/M [B|T]] [/H *host-name*] [*transmission-information-option
transmission-option-parameter*]

Function

The ftstran command executes file transmission based on the information in a
specified transmission card (Select Card method of file transmission) or by modifying
information in a specified transmission card (Enter Information method of file
transmission).

Arguments

■ *transmission-card-name* ((1 to 20-byte character string))

Specifies the name of a transmission card that has been registered using **Transmission
Regist. & Exe.**.

■ /L *file-name* ((1 to 259-byte character string))

Specifies the name of the file to which the following log information is output when
the ftstran command terminates:

Command termination time, return value, message, transmission card name, local file
name, remote file name

If this option is omitted, no log information is output.

If you specify a relative path for the file name, the command assumes the directory
relative to the command execution directory.

If the size of the file exceeds 1 megabyte, *file-name* is renamed as *file-name*_old. If
*file-name*_old already exists, the existing file is deleted before *file-name* is renamed
as *file-name*_old.

The number of logs that can be stored in the file is as follows:

1 MB/(*length of transmission card name* + *length of local file name* + *length of remote
file name* + 122) + 1

■ /N *file-name* ((1 to 259-byte character string))

Specifies the name of the file to which the results are output when the transmission
terminates normally. If this option is omitted, transmission results are not output when
the transmission terminates normally.

If you specify a relative path for the file name, the command assumes the directory

relative to the command execution directory.

- /E *file-name* ((1 to 259-byte character string))

Specifies the name of the file to which the results are output when the transmission terminates abnormally. If this option is omitted, transmission results are not output when the transmission terminates abnormally.

If you specify a relative path for the file name, the command assumes the directory relative to the command execution directory.

- /M [B|T̲]

Specifies the output format.

- B: Binary format (data consisting of consecutive FTS_FTP_API_DATA_EX and FTS_FTP_API_RETDATA_EX structures)
- T: Text format

- /H *host-name* ((1 to 256-byte character string))

Specifies the FTP client's IP address (physical host or logical host).

If you have enabled specification of the FTP client's local IP address, the value specified in this option becomes the FTP client's local IP address. If you omit this option, the address of the FTP client's physical host is assumed.

If you have disabled specification of the FTP client's local IP address, the address that is assigned automatically by the OS becomes the FTP client's local IP address.

For details about how to enable specification of the FTP client's local IP address, see *3.11 Using JP1/FTP in a multiple IP address environment*.

- *transmission-information-option transmission-option-parameter*

Specifies desired options in order to modify some of the transmission information on the specified transmission card (Enter Information method of file transmission). For details about the transmission information options, see *ftsregc - registers, changes, deletes, and displays transmission information* in this chapter. For details about the transmission option parameters for the transmission information options, see *3.4.1 Registering transmission information onto a transmission card*.

Return values (decimal number)

0	Normal termination.
10*XXXXX*	Normal termination with a warning due to an open error on the transmission-end information storage file. The CreateFile function's extended error information is set in *XXXXX*.

11*XXXXX*	Normal termination with a warning due to an output error on the transmission-end information storage file. The `WriteFile` function's extended error information is set in *XXXXX*.
12*XXXXX*	Normal termination with warning due to a JP1/FTP connection release error. The last byte of the `fts_ftp_close` function's extended error information is set in *XXXXX*.
1300000	Abnormal termination due to unacquired card information.
50*XXXXX*	Abnormal termination due to an error in `fts_ftp_open()`. The last byte of the `fts_ftp_open` function's extended error information is set in *XXXXX*.
51*XXXXX*	Abnormal termination due to an error in `fts_ftp_syn_request_ex()`. The last byte of the `fts_ftp_syn_request_ex` function's extended error information is set in *XXXXX*.
52*XXXXX*	Abnormal termination due to an error in `WSAStartup()`. The `WSAStartup` function's extended error information is set in *XXXXX*.
9000000	Abnormal termination of transmission.
9000001	Abnormal termination due to an argument specification error.
9900000	Abnormal termination (logical error).
9900001	Abnormal termination (not executed by the administrator (applicable to Windows Server 2008)).

For details about the messages that are displayed, see *8.3.1 Messages displayed during execution of the ftstran command*.

Usage examples

- Example of the Select Card method of file transmission:

- Example of the Enter Information method of file transmission:
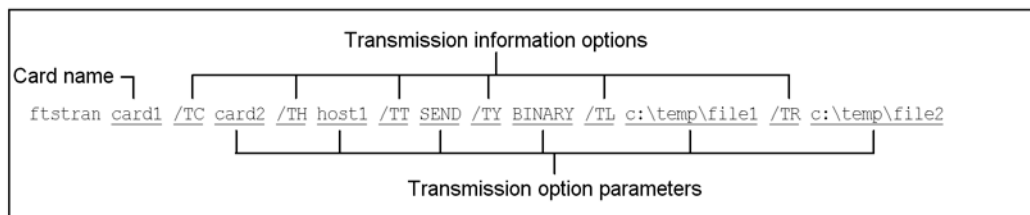
126

This example changes the following transmission information on `card1` and then executes transmission:

- `/TC`: The name for the new card is `card2`.

- `/TH`: The connection-target host name is `host1`.

- `/TT`: The send/receive type is `SEND`.

- `/TY`: The transmission mode is `BINARY`.

- `/TL`: The local file name is `c:\temp\file1`.

- `/TR`: The remote file name is `c:\temp\file2`.

127

ftsregc - registers, changes, deletes, and displays transmission information

Format

Registering:
```
ftsregc /N [transmission-card-name] [transmission-information-option
transmission-option-parameter]
```

Changing:
```
ftsregc /C transmission-card-name [transmission-information-option
transmission-option-parameter]
```

Deleting:
```
ftsregc /D transmission-card-name
```

Displaying:
```
ftsregc /L transmission-card-name
```

Function

The `ftsregc` command registers, changes, deletes, or displays transmission information.

Arguments

■ /N [*transmission-card-name*] [*transmission-information-option transmission-option-parameter*]

There are two ways to register transmission information. One is by registering new transmission information that has been set on a transmission card. The other is by using an existing transmission card as a model and editing its contents in order to register it as a separate transmission card.

- Registering new transmission information onto a transmission card

  ```
  ftsregc /N [transmission-information-option
  transmission-option-parameter]
  ```

  This method creates new transmission information based on the information specified with the transmission information options. Among the available transmission information options, you must always specify /TC, /TH, /TU, /TT, /TY, /TL, and /TR. You must use the /TC transmission information option to specify a name for the transmission card.

128

- Registering transmission information using an existing transmission card

  ftsregc /N [*transmission-card-name*] [*transmission-information-option transmission-option-parameter*]

  This method specifies the name of a transmission card to use as a model and then specifies transmission information options to change. You must specify in /TC a name for the new transmission card that you are registering.

The table below lists and describes the transmission information options.

Table 6-2: Transmission information options

Option name	Transmission option parameter	Value
/TC	Card name	((1 to 20 bytes))
/TH	Connection-target host name	((1 to 256 bytes))
/TP	Connection-target port number	((1 to 65,535))
/TU	Login user name	((1 to 50 bytes))
/TW	Login password	((1 to 50 bytes))
/TT	Send/receive type: • SEND: Sends files (overwrite). • RECV: Receives files. • APPE: Sends files (append).	SEND|RECV|APPE
/TY	Transmission mode: • ASCII: Transmits files in the ASCII mode. • BINARY: Transmits files in the binary mode.	ASCII|BINARY
/TM	Compression mode: • STREAM: Transmits files without compressing them. • COMPRESS: Compresses files during transmission.	STREAM|COMPRESS
/TK	Size check: • CHECK: Checks the size. • UNCHECK: Does not check the size.	CHECK|UNCHECK
/TL	Local file name	((1 to 259 bytes))
/TR	Remote file name	((1 to 259 bytes))
/TS	Name of the program to start when transmission ends normally	((1 to 259 bytes))

Option name	Transmission option parameter	Value
/TF	Name of the program to start when transmission ends abnormally	((1 to 256 bytes))
/TX	FTP command	((1 to 300 bytes))
/TO	Comment	((1 to 80 bytes))
/TA	Single-file or multiple-file transmission during reception: • AUTO: Switches automatically between single-file transmission and multiple-file transmission. • MULTIPLE: Transmits multiple files. • SINGLE: Transmits a single file.	AUTO|MULTIPLE|SINGLE

For details about each transmission option parameter, see *3.4.1 Registering transmission information onto a transmission card*.

■ /C *card-name* [*transmission-information-option transmission-option-parameter*]

Changes from the specified card the transmission information that is specified by the transmission information options.

■ /D *card-name*

Deletes the transmission information identified by the specified card name.

■ /L *card-name*

Displays the transmission information for the specified card.

Return values

0	Normal termination
6100001	Omission of card name specification during registration
6100002	Omission of remote host name specification during registration
6100003	Omission of login user name specification during registration
6100004	Omission of send/receive type specification during registration
6100005	Omission of transmission mode specification during registration
6100006	Omission of local file name specification during registration
6100007	Omission of remote file name specification during registration
6100008	Abnormal termination when an existing card name is specified

| 6100009	Omission of card name specification during registration
6100010	Abnormal termination during registration of card information
6200001	Omission of card name specification during change
6200002	Abnormal termination during acquisition of card information before change
6200003	Abnormal termination during acquisition of card information after change
6200004	Abnormal termination during deletion of card information before change
6200005	Abnormal termination during change of card information
6300000	Abnormal termination when `ftsregc /D` is specified
6400000	Abnormal termination when `ftsregc /L` is specified
6900000	Command line syntax error
9000001	Abnormal termination common to `ftsregc`
9900001	Abnormal termination (not executed by the administrator (applicable to Windows Server 2008))

For details about the messages that are displayed, see *8.3.2 Messages displayed during execution of the ftsregc command.*

ftshistory - displays log information

Format

```
ftshistory
```

Function

The `ftshistory` command displays log information according to the output format defined by a format file.

This command uses the same format file as is used with the function for outputting displayed log information as text.

Return values (decimal number)

`0`	Normal termination
`6400000`	Log information display error
`9000001`	Abnormal termination due to an argument specification error
`9900001`	Abnormal termination (not executed by the administrator (applicable to Windows Server 2008))

For the messages that are displayed, see *8.3.3 Messages displayed during execution of the ftshistory command*.

ftssave - saves definition information

Format

```
ftssave file-name[/E][/U][/A][/T]
```

Function

The `ftssave` command saves definition information to a specified file.

Arguments

■ *file-name*

Specifies a name for the file into which the information is saved. The permitted name is from 1 to 259 bytes of characters. If a relative path is specified, the location relative to the command execution path is assumed.

■ /E

Saves the environment settings.

■ /U

Saves the user-to-login settings.

■ /A

Saves the auto-start program settings.

■ /T

Saves the transmission settings.

Notes

- If /E, /U, /A, and /T are all omitted, all definition information is saved.

- This command does not support specification of a comment.

- If the specified file already exists, the command terminates abnormally.

- If the information to save cannot be found, the command terminates normally with a warning. If there is no information to save in the specified definition information, the command executes save processing with no definition information. In these cases, definition information can be specified for recovery, but nothing will be registered.

- Any message issued by this command is also output to the event log.

Return values

0	Normal termination

1	Normal termination with a warning
2	Abnormal termination

For the messages that are displayed, see *8.3.5 Messages displayed during execution of the ftssave command*.

ftsload - recovers definition information

Format

```
ftsload file-name[/M[N|D]][/E][/U][/A][/T]
```

Function

The `ftsload` command recovers the saved definition information and defines an environment for JP1/FTP.

Arguments

- *file-name*

  Specifies the name of the file to recover. If a relative path is specified, the location relative to the command execution path is assumed.

- /M[N|D]

  Specifies the recovery method:

  - N: Do not delete the original information.

  - D: Delete the original information.

- /E

  Recovers the environment settings.

- /U

  Recovers the user-to-login settings.

- /A

  Recovers the auto-start program settings.

- /T

  Recovers the transmission settings.

Notes:

- If /E, /U, /A, and /T are all omitted, all definition information is recovered.

- If the specified definition information is not in the specified file, the command recovers only the definition information contained in the file.

- If auto-start program registration information is to be recovered, but there is no corresponding user, the command terminates normally with a warning.

- If the specified file contains none of the specified definition information, the command terminates abnormally.

135

- Any message issued by this command is also output to the event log.

Return values

0	Normal termination
1	Normal termination with a warning
2	Abnormal termination

For the messages that are displayed, see *8.3.4 Messages displayed during execution of the ftsload command*.

Chapter

7. API Library

This chapter describes how to use the JP1/FTP API library to link user programs to JP1/FTP and presents an example of library usage.

How to use the library
Example of library usage
List of functions
Details of functions

How to use the library

You use the JP1/FTP API library when you use the file transmission function of JP1/FTP from a user program.

The JP1/FTP API library enables you to do the following:

- Register transmission requests from a single user program to multiple JP1/FTPs that are running on different hosts (or on the same host)

- Select the transmission type when you register transmission requests:

  Synchronous type: Waits until a transmission is completed and the termination result is obtained.

  Asynchronous type: Performs registration only and does not wait for the termination results (obtains the termination results later).

Prerequisites for using the functions

To use the functions provided by JP1/FTP, you need the following:

- JP1/FTP API library

- Compiler: Visual C++

The following languages are supported for user programs:

- C

- C++

The JP1/FTP API library requires the following compilers:

Table 7-1: Compilers required by the JP1/FTP API library

OS	Compiler	Header file	Import library
Windows Server 2003	Visual C++ 4.0	`apihead.h`	`FTSFTP40.lib`
	Visual C++ 5.0	`apihead.h`	`FTSFTP50.lib`
	Visual C++ 6.0	`apihead.h`	`FTSFTP.lib`
	Visual Studio 2005 (SP1)	`apihead.h`	`FTSFTP80.lib`
	Visual Studio 2008	`apihead.h`	`FTSFTP90.lib`
Windows Server 2003 (IPF)	Platform SDK February 2003	`apihead.h`	`FTSFTP.lib`

OS	Compiler	Header file	Import library
	Visual Studio 2005 (SP1)	`apihead.h`	`FTSFTP80.lib`
	Visual Studio 2008	`apihead.h`	`FTSFTP90.lib`
Windows Server 2008	Visual Studio 2005 (SP1)	`apihead.h`	`FTSFTP80.lib`
	Visual Studio 2008	`apihead.h`	`FTSFTP90.lib`
Windows Server 2008 (IPF)	Visual Studio 2005 (SP1)	`apihead.h`	`FTSFTP80.lib`
	Visual Studio 2008	`apihead.h`	`FTSFTP90.lib`

For the header file and import library, use the files provided by JP1/FTP that are appropriate for your OS. For the storage locations, see *A. List of Files and Directories*.

Setting up an environment

■ Setting services

Set the JP1/FTP client's service name as `ftsc`. For details, see *2.2.2 Setting the port numbers*.

■ Setting hosts

Set the host name and IP address of the host on which the client's JP1/FTP program is running. Specify this host name in the first argument of `fts_ftp_open()` and the transmission information structure.

Add the following line to *OS-installation-directory*`\system32\drivers\etc\HOSTS`:

xxx.xxx.xxx.xxx   yyyyyy

Legend:

xxx.xxx.xxx.xxx: IP address

yyyyyy: Host name

Coding

■ Specifying the transmission information

To register a file transmission request, you set the registered transmission card name and the address of the transmission information structure in the arguments of `fts_ftp_syn_request_ex()` and `fts_ftp_asyn_request_ex()`.

- Using the card name to register transmission requests:

  You can register a transmission request by specifying a transmission card name registered using **Registration And Execution Of Transmission Requests**.

- Using the transmission information structure to specify transmission information:

  You can register a transmission request by specifying the information needed for transmission.

- Transmission information structure

```
typedef struct _FTS_FTP_API_DATA_EX {
    char cardname[20+1];
    char host[256+1];
    unsigned int portnum;
    char username[50+1];
    char password[50+1];
    int type;
    int cmd;
    int mode;
    char quote[300+1];
    char localname[260+1];
    char remotename[260+1];
    char end_program[260+1];
    char abend_program[260+1];
    char comment[80+1];
    int fsize;
    char reserve[1240];        /*Reserved area*/
} FTS_FTP_API_DATA_EX;
```

- Description of the transmission information structure members

  cardname

  > Specifies the card name.

  host

  > Specifies the FTP host name: `ftp>open aaaa`

  portnum

  > Specifies the FTP port number: `ftp>open aaaa bbbb`

  username

  > Specifies the login name: `ftp>user aaaa`

  password

  > Specifies the password.

140

`type`

> Specifies the transmission mode.
>
> `FTS_TYPE_A`: Interprets data as being in ASCII code and then sends it (`ftp>ascii`).
>
> `FTS_TYPE_I`: Interprets the data as an image and then sends it (`ftp>binary`).

`cmd`

> Specifies the type of transmission.
>
> By using OR to specify single/multiple-file transmission, you can specify a combination of single-file transmission and multiple-file transmission. Note that this specification is applicable to reception only.
>
> Transmission types:
>
> `FTS_CMD_SEND` (send): `ftp>put aaaa bbbb`
>
> `FTS_CMD_RECV` (receive): `ftp>get cccc ddddd`
>
> `FTS_CMD_APPE` (send with append): `ftp>append eeee fffff`
>
> Single/multiple-file transmission:
>
> `FTS_MLT_AUTO`: Switch automatically between single-file and multiple-file transmission. This is the default.
>
> `FTS_MLT_MULTIPLE`: Perform multiple-file transmission.
>
> `FTS_MLT_SINGLE`: Perform single-file transmission.
>
> `FTS_MLT_AUTO` switches transmission automatically as follows:
>
> ### When sending
>
> The function checks whether `*` or `?` is used in the local file name. If `*` or `?` is used, multiple-file transmission is used. If neither of them is used, single-file transmission is used.
>
> ### When receiving
>
> The function checks whether `*` or `?` is used in the remote file name. If `*` or `?` is used, multiple-file transmission is used. If neither of them is used, single-file transmission is used.
>
> ### Example
>
> Receiving a single file:
>
> `cmd = FTS_CMD_RECV|FTS_MLT_SINGLE;`

mode

Specifies compressed transmission.

`FTS_MODE_S`: Does not perform compressed transmission.

`FTS_MODE_C`: Performs compressed transmission.

quote

Specifies the FTP command to execute.

This structure member is a character string consisting of commands, such as `CWD` and `SITE`, delimited by semicolons (`;`) (the character string must end with `\0`).

localname

Specifies the local file name.

Examples

ftp>put aaaa bbbb

ftp>get cccc dddd

remotename

Specifies the remote file name.

Examples

ftp>put aaaa bbbb

ftp>get cccc dddd

end_program

Specifies the full path name of the program to start when transmission ends normally.

abend_program

Specifies the full path name of the program to start when transmission ends abnormally.

comment

Specifies any character string.

fsize

Specifies whether to check the file size after transmission.

`FTS_FSIZE_TRUE`: Checks the size.

`FTS_FSIZE_FALSE`: Does not check the size.

Note

Make sure that a char-type variable value ends with \0.

Obtaining transmission-end information

You can obtain the termination information for transmission requests registered by fts_ftp_syn_request_ex() and fts_ftp_asyn_request_ex().

- When fts_ftp_syn_request_ex() is used to register requests:

  Specify the address of the transmission-end information structure in the fourth argument of fts_ftp_syn_request_ex().

- When fts_ftp_asyn_request_ex() is used to register requests:

  Specify the address of the transmission-end information structure in the second argument of fts_ftp_event_ex().

■ Transmission-end information structure (applicable to non-IPF versions)

```
typedef struct _FTS_FTP_API_RETDATA_EX {
  /* Data when transmission was successful */
  int trans_status;                 /* Transmission end status:
                                       success (TRANS_SUCCESS) */
                                    /* Transmission end status:
                                       failure (TRANS_FAILURE) */
  char cardname[20+1];              /* Card name */
  unsigned long trno;               /* Transmission number */
  unsigned long trcno;              /* Connection number */

  /* Data when transmission was successful */
  unsigned long trans_size;       /* Transmitted data size */

  /* Data when transmission (compressed) was successful */
  unsigned long trans_size_comp; /* Transmitted data size
                                     after compression */

  /* Data when transmission failed */
  int ab_kind;                       /* System call error
                                        (FTS_ERR_SYSTEM) */
                                     /* Logical error
                                        (FTS_ERR_LOGIC) */
                                     /* Protocol error
                                        (FTS_ERR_PROTOCOL) */
  char ab_place[8];                  /* Location of error */
  char ab_func[32];                  /* Name of module resulting
                                        in error */
  char ab_system[32];                /* System call name */
  int ab_syskind;          /* System call type */
                           /* Win32 API(FTS_SYSKIND_WIN32) */
                           /* C runtime(FTS_SYSKIND_CRUNTIME) */
```

143

```
                            /* WinSock API(FTS_SYSKIND_WINSOCK) */
    unsigned long ab_errno;       /* Error number */
    char ab_promes[256];          /* Protocol message (error) */

    /* Data when transmission of more than 4 gigabytes of */
    /* data was successful  */
    DWORD trans_size_Low;       /* Transmitted data size (value
                                     of the trailing 32 bits). */
    LONG trans_size_High;       /* Transmitted data size (value
                                     of the leading 32 bits). */

    /* Data when transmission of more than 4 gigabytes */
    /* of data (compressed) was successful             */
    DWORD trans_size_comp_Low; /* Transmitted data size
                                     after compression (value
                                     of the leading 32 bits). */
    LONG trans_size_comp_High; /* Transmitted data size
                                     after compression (value
                                     of the trailing 32 bits). */

    char reserve[1668];     /* Reserved area */
} FTS_FTP_API_RETDATA_EX;
```

■ Transmission-end information structure (applicable to IPF)

```
typedef struct _FTS_FTP_API_RETDATA_EX {
  /* Data when transmission was successful */
  int trans_status;                 /* Transmission end status:
                                         success (TRANS_SUCCESS) */
                                    /* Transmission end status:
                                         failure (TRANS_FAILURE) */
  char cardname[20+1];              /* Card name */
  unsigned long trno;               /* Transmission number */
  unsigned long trcno;              /* Connection number */

  /* Data when transmission was successful */
  __int64 trans_size;          /* Transmitted data size */

  /* Data when transmission (compressed) was successful */
  __int64 trans_size_comp;     /* Transmitted data size
                                    after compression */

  /* Data when transmission failed */
  int ab_kind;                      /* System call error
                                       (FTS_ERR_SYSTEM) */
                                    /* Logical error
                                       (FTS_ERR_LOGIC) */
                                    /* Protocol error
```

```
                                              (FTS_ERR_PROTOCOL) */
    char ab_place[8];                /* Location of error */
    char ab_func[32];                /* Name of module resulting
                                        in error */
    char ab_system[32];              /* System call name */
    int ab_syskind;        /* System call type */
                           /* Win32 API(FTS_SYSKIND_WIN32) */
                           /* C runtime(FTS_SYSKIND_CRUNTIME) */
                           /* WinSock API(FTS_SYSKIND_WINSOCK) */
    unsigned long ab_errno;       /* Error number */
    char ab_promes[256];          /* Protocol message (error) */
    char reserve[1684];           /* Reserved area */
} FTS_FTP_API_RETDATA_EX;
```

■ Description of transmission-end information structure members

trans_status

Returns one of the following values indicating the termination status of transmission:

TRANS_SUCCESS: Normal termination

TRANS_FAILURE: Abnormal termination

cardname

Returns the transmission card name.

trno

Returns the transmission number.

trcno

Returns the connection number.

trans_size (Applicable to normal termination only)

Transmitted data size

trans_size_comp (Applicable to normal termination only)

Transmitted data size after compression

ab_kind (Applicable to abnormal termination only)

Returns the error type:

FTS_ERR_SYSTEM: System call error

FTS_ERR_LOGIC: Logical error

FTS_ERR_PROTOCOL: Protocol error

ab_place (Applicable to abnormal termination only)

Returns the location of the error.

ab_func (Applicable to abnormal termination only)

Returns the name of module resulting in the error.

ab_system (Applicable to abnormal termination only)

Returns the system call name.

ab_syskind (Applicable to abnormal termination only)

Returns the system call type:

FTS_SYSKIND_WIN32: Win32 API

FTS_SYSKIND_CRUNTIME: C runtime

FTS_SYSKIND_WINSOCK: WinSock API

ab_errno (Applicable to abnormal termination only)

Returns the system call error number.

ab_promes (Applicable to abnormal termination only)

Returns the protocol message sent from the FTP server.

trans_size_Low (Applicable to normal termination only)

Returns the value of the trailing 32 bits of the transmitted data size.

trans_size_High (Applicable to normal termination only)

Returns the value of the leading 32 bits of the transmitted data size.

trans_size_comp_Low (Applicable to normal termination only)

Returns the value of the trailing 32 bits of the transmitted data size after compression.

trans_size_comp_High (Applicable to normal termination only)

Returns the value of the leading 32 bits of the transmitted data size after compression.

- Notes about coding

Before and after you use the JP1/FTP API library functions, make sure that you call the following functions:

- Before calling

WSAStartUp(): Winsock library

- After calling

  `WSACleanUp()`: Winsock library

If you do not call these functions, the library functions will not run correctly. For details about how to use these functions, see the winsock documentation.

The two parameters `trans_size_Low` and `trans_size_High` are combined to form a single 64-bit value.

The two parameters `trans_size_comp_Low` and `trans_size_comp_High` are combined to form a single 64-bit value.

Linking

When you create programs using the library functions, you must link `FTSFTP.LIB`.

Notes about using libraries

- The following actions are not permitted:
  - Issuing multiple `fts_ftp_open()` functions concurrently by multiple threads in a single process
  - Issuing multiple `fts_ftp_syn_request_ex()` or `fts_ftp_asyn_request_ex()` functions concurrently in a single `fts_ftp_open()` function (issuing `fts_ftp_syn_request_ex()` or `fts_ftp_asyn_request_ex()` functions concurrently by multiple threads)

- When you upgrade JP1/FTP, you must recompile the program with new libraries and headers.

- If a wildcard is specified, `fts_ftp_event_ex()` can obtain the following transmission-end information:

  When the wildcard transmission terminates normally: Transmission-end information for the last file transmitted

  When the wildcard transmission terminates abnormally: Transmission-end information for the first file resulting in an error

147

Example of library usage

This sample program uses registered transmission cards (transmission card names: CARD1 through CARD3) to register asynchronous transmission requests and obtains the termination results. The sample program is for Visual C++ 6.0.

Figure 7-1: Flowchart of sample program
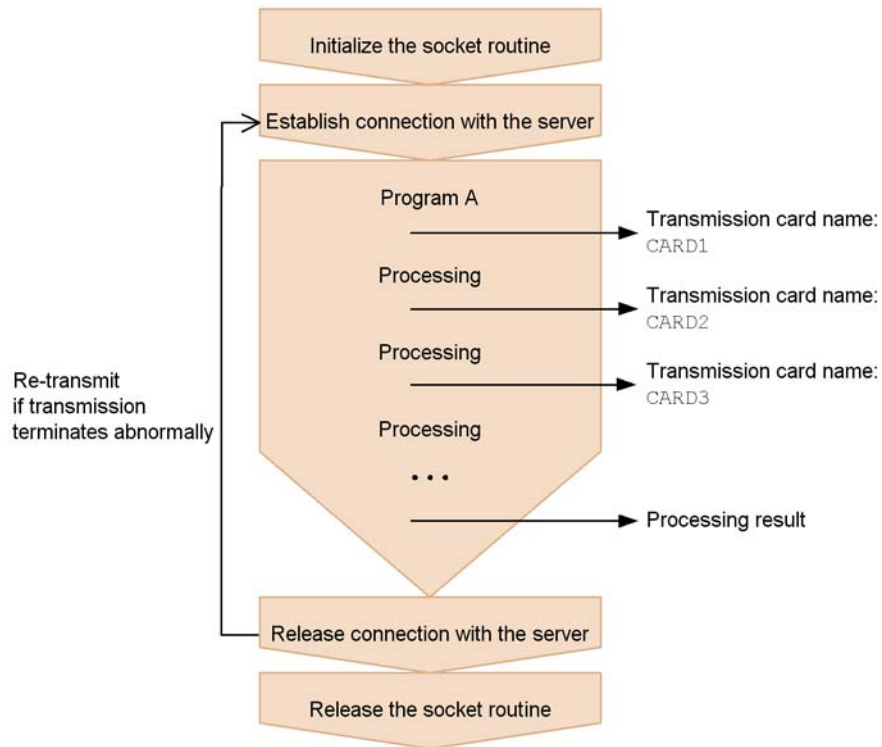

```
/********************************************************/
/* Sample program for registering an asynchronous      */
/* transmission request and obtaining the termination  */
/* results (when a registered card is used)            */
/********************************************************/
#include <windows.h>
#include <stdio.h>
#include <winsock.h>
#include <apihead.h>

#define CARD1    "card1"
#define CARD2    "card2"
```

```
#define CARD3    "card3"

#define FTS_EXECUTION   0
#define FTS_SUCCESS     1

#define FTS_MAX_RETRY   3

int main()
{
    FTS_FTP_API_DATA_EX data1, data2, data3;
                /* Transmission information structure */
    FTS_FTP_API_RETDATA_EX  ret_data;
                /* Transmission-end information structure */
    SOCKET sock;
    WSADATA WSAData;
    DWORD trno1, trno2, trno3;
    DWORD status;
    int flag1, flag2, flag3;
    int err_num;
    int i;

    /***************************************************/
    /* Initialize the socket routine                   */
    /* (make sure that you call this routine)          */
    /***************************************************/
    status = WSAStartup( MAKEWORD(1,1), &WSAData );
    if( status ) {
        /* Error */
        printf( "WSAStartup() error number = %d\n", status );
        return 1;
    }

    flag1 = FTS_EXECUTION;
    flag2 = FTS_EXECUTION;
    flag3 = FTS_EXECUTION;

    for( i = 0; i <= FTS_MAX_RETRY; i++ ) {
        if( i == 0 ) {
            printf( "Transmission is executed. \n" );
        } else {
            printf( "Transmission is executed again.\n" );
        }

        memset( &data1, 0, sizeof(FTS_FTP_API_DATA_EX) );
        memset( &data2, 0, sizeof(FTS_FTP_API_DATA_EX) );
        memset( &data3, 0, sizeof(FTS_FTP_API_DATA_EX) );
```

149

```
/**************************************************/
/* Establish connection with JP1/FTP             */
/**************************************************/
sock = fts_ftp_open( NULL );
if( sock == INVALID_SOCKET ) {
    /* Error */
    err_num = WSAGetLastError();
  printf( "fts_ftp_open() error!! error number = %d\n",
err_num );
    WSACleanup();
    return 1;
}

/************************************/
/* Register the transmission request */
/************************************/
if( flag1 == FTS_EXECUTION ) {
    if( !fts_ftp_asyn_request_ex( sock, CARD1, &data1,
&trno1, FTS_GET_RETURN ) ) {
        /* Error */
        err_num = WSAGetLastError();
        printf( "fts_ftp_request_ex(1) error!! error
number = %d\n", err_num );
    }
}
if( flag2 == FTS_EXECUTION ) {
    if( !fts_ftp_asyn_request_ex( sock, CARD2, &data2,
&trno2, FTS_GET_RETURN ) ) {
        /* Error */
        err_num = WSAGetLastError();
        printf( "fts_ftp_request_ex(2) error!! error
number = %d\n", err_num );
    }
}
if( flag3 == FTS_EXECUTION ) {
    if( !fts_ftp_asyn_request_ex( sock, CARD3, &data3,
&trno3, FTS_GET_RETURN ) ) {
        /* Error */
        err_num = WSAGetLastError();
        printf( "fts_ftp_request_ex(3) error!! error
number = %d\n", err_num );
    }
}

/********************************/
/* Obtain the termination results */
/********************************/
while(1) {
```

150

```
            if( !fts_ftp_event_ex( sock, &ret_data ) ) {
                err_num = WSAGetLastError();
                if( err_num == FTS_API_ERROR_NODATA ) {
                    /* All termination results were obtained */
                    break;
                } else {
                    /* Error */
                 printf( "fts_ftp_event_ex error!! error number
= %d\n", err_num );
                    fts_ftp_close( sock );
                    WSACleanup();
                    return 1;
                }
            }
            if( flag1 == FTS_EXECUTION ) {
                if( ret_data.trno == trno1 ) {
                    /* End of CARD1 */
                  if( ret_data.trans_status == TRANS_SUCCESS ) {
                        /* Transmission terminated normally */
                        printf( "CARD1 trnas success!!\n" );
                        flag1 = FTS_SUCCESS;
                    } else {
                        /* Transmission terminated abnormally */
                        printf( "CARD1 trnas failure!!\n" );
                    }
                    continue;
                }
            }
            if( flag2 == FTS_EXECUTION ) {
                if( ret_data.trno == trno2 ) {
                    /* End of CARD2 */
                  if( ret_data.trans_status == TRANS_SUCCESS ) {
                        /* Transmission terminated normally */
                        printf( "CARD2 trnas success!!\n" );
                        flag2 = FTS_SUCCESS;
                    } else {
                        /* Transmission terminated abnormally */
                        printf( "CARD2 trnas failure!!\n" );
                    }
                    continue;
                }
            }
            if( flag3 == FTS_EXECUTION ) {
                if( ret_data.trno == trno3 ) {
                    /* End of CARD3 */
                  if( ret_data.trans_status == TRANS_SUCCESS ) {
                        /* Transmission terminated normally */
                        printf( "CARD3 trnas success!!\n" );
```

```
                                  flag3 = FTS_SUCCESS;
                          } else {
                             /* Transmission terminated abnormally */
                             printf( "CARD3 trnas failure!!\n" );
                          }
                          continue;
                       }
                   }
               }

               /***********************************************/
               /* Release connection with JP1/FTP             */
               /***********************************************/
               fts_ftp_close( sock );

           if( flag1 == FTS_SUCCESS && flag2 == FTS_SUCCESS && flag3
    == FTS_SUCCESS ) {
                  break;
               }
        }
        /***************************************************/
        /* Release the socket routine                      */
        /* (make sure that you call this routine)          */
        /***************************************************/
        WSACleanup();

        printf( "Transmission is ended. \n" );

        return 0;
    }
```

List of functions

The following table lists and describes the functions supported by the JP1/FTP API library.

Table 7-2: Functions supported by the JP1/FTP API library

Function	Function name
Establish connection with JP1/FTP	`fts_ftp_open()`
Register transmission requests (synchronous)	`fts_ftp_syn_request_ex()`
Register transmission requests (asynchronous)	`fts_ftp_asyn_request_ex()`
Obtain the transmission-end results	`fts_ftp_event_ex()`
Cancel transmission	`fts_ftp_cancel()`
Release connection with JP1/FTP	`fts_ftp_close()`

Note

In addition to the above, `fts_ftp_syn_request()`, `fts_ftp_asyn_request()`, and `fts_ftp_event()` are provided for the purpose of compatibility with the older versions of JP1/FTP.

Details of functions

Call the functions from a user program in the following order:

1. Establish connection with JP1/FTP by calling `fts_ftp_open()`.

2. Set the transmission information in the transmission information structure and then call `fts_ftp_syn_request_ex()` (synchronous) or `fts_ftp_asyn_request_ex()` (asynchronous) to register transmissions. If you use `fts_ftp_syn_request_ex()`, you can obtain the result of each transmission upon termination of the function.

3. If you call `fts_ftp_asyn_request_ex()` in step 2, you can obtain transmission results by calling `fts_ftp_event_ex()`.

4. You can cancel the current transmission (server or client) by calling `fts_ftp_cancel()`. This does not require connection establishment with JP1/FTP.

5. Release connection with JP1/FTP by calling `fts_ftp_close()`.

The details of the functions provided in the following sections describe individual functions in the order they are called.

fts_ftp_open() - establish connection with JP1/FTP

Format

```
#include <apihead.h>
#include <winsock.h>

SOCKET  fts_ftp_open(const char *hostname)
```

Function

This function establishes connection with the JP1/File Transmission Server/FTP Client service.

Arguments

■ *hostname*

Specifies the host name of the host on which the JP1/File Transmission Server/FTP Client service is running. If you specify NULL, the local host name (host name returned by the OS's hostname command: physical host) is assumed.

If you have enabled specification of the FTP client's local IP address, the value specified in this argument becomes the FTP client's local IP address. If you specify NULL, the physical address of the FTP client is assumed.

If you have disabled specification of the FTP client's local IP address, the FTP client's local IP address is assigned automatically by the OS. For details about the definition for enabling specification of the FTP client's local IP address, see *3.11 Using JP1/FTP in a multiple IP address environment*.

Notes

- Call this function before you call fts_ftp_syn_request_ex(), fts_ftp_asyn_request_ex(), and fts_ftp_close().

- This function's return value is needed when you use other functions.

- If you wish to obtain the extended error information, do not call any function before you call the WSAGetLastError function. If you call another function before the WSAGetLastError function, the information might be lost.

Return values

Socket handler	Normal
INVALID_SOCKET	Abnormal

To obtain extended error information, call the WSAGetLastError function. The table below lists and describes the return values for the extended error information. For

155

details about other errors, see the winsock documentation.

Return value of extended error information (hexadecimal, decimal)	Description	Can be retried?
FTS_API_ERROR_NOTSTARTUP (0x2FFFFF00, 805306112)	WSAStartup() has not been called.	No
FTS_API_ERROR_UNDEFFTSHOST (0x2FFFFF01, 805306113)	The specified host name is not defined in the HOSTS file.	No
FTS_API_ERROR_CONNREFUSED (0x2FFFFF02, 805306114)	A connection request was rejected. The JP1/File Transmission Server/FTP Client service might not have been started.	No
FTS_API_ERROR_TIMEOUT (0x2FFFFF03, 805306115)	A connection request to the JP1/File Transmission Server/FTP Client service resulted in a timeout. Connection processing in the JP1/File Transmission Server/FTP Client service might be taking too long or the system on which the JP1/File Transmission Server/FTP Client service is supposed to be running might be down.	Yes
FTS_API_ERROR_UNREACH (0x2FFFFF04, 805306116)	Routing to the host on which the JP1/File Transmission Server/FTP Client service is running might have failed.	No
FTS_API_ERROR_DISCONNECT (0x2FFFFF05, 805306117)	A connection with the JP1/File Transmission Server/FTP Client service was released. If you want to register the transmission request again, you must start the process over from ftp_ftp_open().	No
FTS_API_ERROR_MEMORY (0x2FFFFF0B, 805306123)	Memory allocation failed.	No
FTS_API_ERROR_UNDEFFTSSERV (0x2FFFFF0C, 805306124)	The definition of the JP1/File Transmission Server/FTP Client (ftsc) is missing in the SERVICES file.	No
FTS_API_ERROR_MAXCONNECT (0x2FFFFF0F, 805306127)	The permitted maximum number (64) of concurrent connections (issuances of fts_ftp_open()) has been reached. No more connections can be established until another API releases connection (issues fts_ftp_close()).	Yes
FTS_API_ERROR_NOT_ADMIN (0x2FFFFF13, 805306131)	The user program was not executed by the administrator (applicable to Windows Server 2008).	No

fts_ftp_syn_request_ex() - register transmission requests (synchronous)

Format

```
#include <apihead.h>
#include <winsock.h>

BOOL  fts_ftp_syn_request_ex( SOCKET sock,
                    const char *cardname,
                    FTS_FTP_API_DATA_EX *data,
                    FTS_FTP_API_RETDATA_EX *retdata )
```

Function

This function registers a transmission request to JP1/FTP and returns the termination result when the transmission is terminated. You can specify the details for the transmission request by specifying a transmission information structure or the name of a registered transmission card. The termination result is returned to the transmission-end information structure. You can determine whether the transmission was successful by checking the trans_status member of the transmission-end information structure.

Arguments

- sock

  Specifies the return value of fts_ftp_open().

- *cardname*

  Specifies the name of a registered transmission card. The file transmission request is registered in accordance with the information on the transmission card.

- *data*

  Specifies the address of a transmission information structure.

  If NULL is specified in *cardname*, the file transmission request is registered according to the information specified in *data*.

  If the name of a registered transmission card is specified in *cardname*, the file transmission request is registered according to the information on the transmission card.

- *retdata*

  Specifies the address of a transmission-end information structure. It returns the termination result of transmission.

157

Notes

- Call this function after you have called `fts_ftp_open()`.

- This function does not return control until the requested transmission is terminated.

- If you wish to obtain the extended error information, do not call any function before you call the `WSAGetLastError` function. If you call another function before the `WSAGetLastError` function, the information might be lost.

Return values

`TRUE`	Normal
`FALSE`	Abnormal. Registration of the transmission request or acquisition of the transmission termination result failed.

To obtain extended error information, call the `WSAGetLastError` function. The table below lists and describes the return values for the extended error information. For details about other errors, see the winsock documentation.

Return value of extended error information (hexadecimal, decimal)	Description	Can be retried?
FTS_API_ERROR_NOTSTARTUP (0x2FFFFF00, 805306112)	`WSAStartup()` has not been called.	No
FTS_API_ERROR_DISCONNECT (0x2FFFFF05, 805306117)	A connection with the JP1/File Transmission Server/FTP Client service was released. If you want to register the transmission request again, you must start the process over from `ftp_ftp_open()`.	No
FTS_API_ERROR_NOTREADCARD (0x2FFFFF06, 805306118)	The specified card name cannot be referenced. The card might not have been registered correctly.	No
FTS_API_ERROR_BADFORMAT (0x2FFFFF07, 805306119)	An address with an invalid data type was specified in an argument.	No
FTS_API_ERROR_MAXPALTRANS (0x2FFFFF08, 805306120)	The maximum number of concurrent transmissions has been reached. Register the transmission request after another transmission is finished.	Yes
FTS_API_ERROR_MEMORY (0x2FFFFF0B, 805306123)	Memory allocation failed.	No
FTS_API_ERROR_NOTSOCK (0x2FFFFF0D, 805306125)	The return value of `fts_ftp_open()` might not have been set in the first argument.	No

158

Return value of extended error information (hexadecimal, decimal)	Description	Can be retried?
FTS_API_ERROR_LOGIC (0x2FFFFF10, 805306128)	A logical conflict error occurred in API.	No

fts_ftp_asyn_request_ex() - register transmission requests (asynchronous)

Format

```
#include <apihead.h>
#include <winsock.h>

BOOL  fts_ftp_asyn_request_ex( SOCKET sock,
                       const char *cardname,
                       FTS_FTP_API_DATA_EX *data,
                       unsigned long *trno,
                       int get_return_flag )
```

Function

This function registers a transmission request to JP1/FTP, but does not wait for the transmission to terminate. You must use fts_ftp_event_ex() to obtain the termination result. You can define the transmission request by specifying a transmission information structure or the name of a registered transmission card. You can determine whether the transmission was successful by checking the trans_status member of the transmission-end information structure that is obtained by fts_ftp_event_ex().

Arguments

- sock

  Specifies the return value of fts_ftp_open().

- *cardname*

  Specifies the name of a registered transmission card. The file transmission request is registered in accordance with the information on the transmission card.

- *data*

  Specifies the address of a transmission information structure.

  If NULL is specified in *cardname*, the file transmission request is registered according to the information specified in *data*.

  If the name of a registered transmission card is specified in *cardname*, the information on the transmission card is registered.

- *trno*

  Specifies the address at which the transmission number is stored.

  This matches the transmission number in the transmission-end information that is

obtained from log information or by fts_ftp_event_ex().

◼ get_return_flag

If you have specified FTS_GET_RETURN, you can obtain the transmission-end information by calling fts_ftp_event_ex().

If you have specified FTS_UNGET_RETURN, the transmission-end information cannot be obtained.

Notes

- Call this function after you have called fts_ftp_open().

- If you want to obtain transmission-end information, call fts_ftp_event_ex() with FTS_GET_RETURN specified in the fifth argument. In this case, make sure that you issue fts_ftp_event_ex(). If fts_ftp_event_ex() is not issued, you might not be able to release the system resources (memory) because the transmission-end information remains in the process that issued the function or in JP1/FTP.

- If you do not want to obtain termination information, specify FTS_UNGET_RETURN in the fifth argument.

Return values

TRUE	Normal
FALSE	Abnormal. Registration of transmission request failed.

To obtain extended error information, call the WSAGetLastError function. The table below lists and describes the return values for the extended error information. For details about other errors, see the winsock documentation.

Return value of extended error information (hexadecimal, decimal)	Description	Can be retried?
FTS_API_ERROR_NOTSTARTUP (0x2FFFFF00, 805306112)	WSAStartup() has not been called.	No
FTS_API_ERROR_DISCONNECT (0x2FFFFF05, 805306117)	A connection with the JP1/File Transmission Server/FTP Client service was released. If you want to register the transmission request again, you must start the process over from ftp_ftp_open().	No
FTS_API_ERROR_NOTREADCARD (0x2FFFFF06, 805306118)	The specified card name cannot be referenced. The card might not have been registered correctly.	No

Return value of extended error information (hexadecimal, decimal)	Description	Can be retried?
FTS_API_ERROR_BADFORMAT (0x2FFFFF07, 805306119)	An address with an invalid data type was specified in an argument.	No
FTS_API_ERROR_MAXPALTRANS (0x2FFFFF08, 805306120)	The maximum number of concurrent transmissions has been reached. Register the transmission request after another transmission is finished.	Yes
FTS_API_ERROR_MEMORY (0x2FFFFF0B, 805306123)	Memory allocation failed.	No
FTS_API_ERROR_NOTSOCK (0x2FFFFF0D, 805306125)	The return value of fts_ftp_open() might not have been set in the first argument.	No
FTS_API_ERROR_FTSMISS (0x2FFFFF0E, 805306126)	An error occurred in the JP1/File Transmission Server/FTP Client service.	No
FTS_API_ERROR_LOGIC (0x2FFFFF10, 805306128)	A logical conflict error occurred in API.	No

162

fts_ftp_event_ex() - obtain the transmission-end results

Format

```
#include <apihead.h>
#include <winsock.h>

BOOL  fts_ftp_event_ex( SOCKET sock, FTS_FTP_API_RETDATA_EX
*retdata )
```

Function

This function obtains the termination results of a transmission that was registered by
`fts_ftp_asyn_request_ex()`.

You can determine whether the transmission was successful by checking the
`trans_status` member of the transmission-end information structure.

Arguments

- `sock`

Specifies the return value of `fts_ftp_open()`.

- *retdata*

Specifies the address of a transmission-end information structure. It returns the
termination result of transmission.

Notes

- Call this function after you have called `fts_ftp_open()`.

- If transmission is not finished when this function is issued, the function waits until
the transmission is finished.

- If you wish to obtain the extended error information, do not call any function
before you call the `WSAGetLastError` function. If you call another function
before the `WSAGetLastError` function, the information might be lost.

Return values

TRUE	Normal
FALSE	Abnormal. Acquisition of transmission-end information failed.

To obtain extended error information, call the `WSAGetLastError` function. The table
below lists and describes the return values for the extended error information. For
details about other errors, see the winsock documentation.

Return value of extended error information (hexadecimal, decimal)	Description	Can be retried?
FTS_API_ERROR_NOTSTARTUP (0x2FFFFF00, 8053306112)	WSAStartup() has not been called.	No
FTS_API_ERROR_DISCONNECT (0x2FFFFF05, 8053306117)	A connection with the JP1/File Transmission Server/FTP Client service was released. If you want to register the transmission request again, you must start the process over from ftp_ftp_open().	No
FTS_API_ERROR_BADFORMAT (0x2FFFFF07, 8053306119)	An address with an invalid data type was specified in an argument.	No
FTS_API_ERROR_NODATA (0x2FFFFF09, 8053306121)	There is no registered transmission request.	No
FTS_API_ERROR_NOTSOCK (0x2FFFFF0D, 8053306125)	The return value of fts_ftp_open() might not have been set in the first argument.	No
FTS_API_ERROR_LOGIC (0x2FFFFF10, 8053306128)	A logical conflict error occurred in API.	No

164

fts_ftp_cancel() - cancel transmission

Format

```
#include <apihead.h>
#include <winsock.h>

BOOL  fts_ftp_cancel( int cs_flag, unsigned long trno )
```

Function

This function cancels the transmission (server or client) that is underway.

A canceled transmission terminates abnormally.

Arguments

- cs_flag

  Specifies the service type of the transmission that you wish to cancel.

  If you specify FTS_CAN_SERVER, the function cancels the server's transmission.

  If you specify FTS_CAN_CLIENT, the function cancels the client's transmission.

  If you OR the two values, the function cancels both the server's and the client's transmissions.

- trno

  Specifies the transmission number of the transmission that you wish to cancel.

  If you specify FTS_CAN_ALL, the function cancels all transmissions for the specified service.

Note

This function does not require connection establishment with JP1/FTP.

Return values

TRUE	Normal
FALSE	Abnormal. Cancellation of transmission failed.

To obtain extended error information, call the WSAGetLastError function. The table below lists and describes the return values for the extended error information. For details about other errors, see the winsock documentation.

165

Return value of extended error information (hexadecimal, decimal)	Description	Can be retried?
FTS_API_ERROR_LOGIC (0x2FFFFF10, 805306128)	A logical conflict error occurred in API.	No
FTS_API_ERROR_T_NOT_FOUND (0x2FFFFF11, 805306129)	The specified transmission is not executing.	No
FTS_API_ERROR_ARGUMENT (0x2FFFFF12, 805306130)	An invalid argument value was specified.	No

fts_ftp_close() - release connection with JP1/FTP

Format

```
#include <apihead.h>
#include <winsock.h>

BOOL  fts_ftp_close( SOCKET sock )
```

Function

This function releases connection with JP1/FTP.

Arguments

■ sock

Return value of fts_ftp_open()

Notes

- If fts_ftp_open() has terminated normally, make sure that you call this function after all transmission registration processing is finished.

- If you wish to obtain the extended error information, do not call any function before you call the WSAGetLastError function. If you call another function before the WSAGetLastError function, the information might be lost.

Return values

TRUE	Normal
FALSE	Abnormal

To obtain extended error information, call the WSAGetLastError function. The table below lists and describes the return values for the extended error information. For details about other errors, see the winsock documentation.

Return value of extended error information (hexadecimal, decimal)	Description	Can be retried?
FTS_API_ERROR_INVALIDSOCK (0x2FFFFF0A, 805306122)	An invalid argument was specified. This might not be a return value of fts_ftp_open().	No
FTS_API_ERROR_LOGIC (0x2FFFFF10, 805306128)	A logical conflict error occurred in API.	No

167

Chapter

8. Messages

This chapter describes the messages that are issued by JP1/FTP.

8.1 Format of displayed messages
8.2 Messages displayed in Event Viewer
8.3 Messages displayed during command execution
8.4 Messages output to the access log

8.1 Format of displayed messages

Some messages issued by JP1/FTP are displayed in Event Viewer, while others are displayed during command execution. This section describes the message formats and the formats of the message explanations in this chapter.

8.1.1 Message output formats

This subsection describes the messages for each output timing.

(1) Messages displayed in Event Viewer

To start Event Viewer, from the Windows **Start** menu, choose **Programs**, **Administrative Tools (Common)**, and then **Event Viewer**.

Type

The messages are of the following types:

- `Error`: Processing is canceled.

- `Warning`: Processing continues after the message is displayed.

- `Information`: Provides information about system processing results.

Category

This information is displayed in the format *XXX YYY*.

XXX:

Identifies one of the following as the message output targets:

- `Agent`
- `Backup`
- `Client`
- `Server`
- `Log`

YYY:

Identifies the type of message:

- `Error`: Error
- `Warning`: Warning
- `Info`: Information

(2) Messages displayed during command execution

Only the message text is displayed.

(3) Messages displayed in the access log

The date and time and the message text are output to the access log file.

8.1.2 Formats of message explanations

This subsection describes the formats of the message explanations in this chapter. Variable text is indicated by italic typeface.

(1) Messages displayed in Event Viewer

The messages are presented in table format in the order of the message IDs. The following table shows an example of the message explanations:

Event ID	Type	Category	Description	Notes
Event ID	Type of message	Output target and type of error	Message text	Notes

(2) Messages displayed during command execution

The following table shows an example of the message explanations:

Message that is displayed	Cause	Action
Message text	Cause of message output	Action to be taken when the message is displayed

(3) Messages displayed in the access log

The following table shows an example of the message explanations:

Message that is displayed	Cause
Message text	Cause of message output

8.2 Messages displayed in Event Viewer

The table below lists and describes the messages that can be displayed in Event
Viewer.

Table 8-1: Messages displayed in Event Viewer

Event ID	Type	Category[#19]	Description	Notes

2	Error or Warning	Log Error (107)
		Log Warning (109)
		Agent Error (113)
		Agent Warning (115)
		Server Warning (106)
		Client Error (101)
		Client Warning (103)
			System function error occurred.
			    Function that caused error:[#1]
			    Place where error occurred:[#2]
			    Function name:[#3]
			    Error message:[#4]
			    Details:[#5]
				Error and warning logs in the event of a system call error
				• Action: See Table 8-2.

3	Error	Server Error (104)	System function error occurred.
			    Connection number:[#6]
			    Function that caused error:[#1]
			    Place where error occurred:[#2]
			    Function name:[#3]
			    Error message:[#4]
			    User name:[#7]
			    IP address:[#8]
			    Details:[#5]
				Error log in the event of a system call error

172

Event ID	Type	Category[19]	Description	Notes

4	Error or Warning	Server Error (104) Server Warning (106)	System call error occurred.
			  Connection number:[6]
			  Transmission number:[9]
			  Function that caused error:[1]
			  Place where error occurred:[2]
			  Function name:[3]
			  Error message:[4]
			  User name:[7]
			  IP address:[8]
			  Local file name:[10]
			  Details:[5]
				Error and warning logs in the event of a system call error during file transmission
				• Action: See Table 8-3.

5	Error	Client Error (101) Log Error (107) Server Error (104) Agent Error (113)	Logic error occurred. Function that caused error:[1] Place where error occurred:[2]	Error log in the event of a logical error

6	Warning	Client Warning (103)	Protocol error occurred.
			  Function that caused error:[1]
			  Place where error occurred:[2]
			  Reply message:[11]
			  Connection number:[6]
			  Transmission number:[9]
			  Log-in user name:[12]
			  Log-in host name:[13]
			  Transmission type:[14]
			  Local file name:[15]
			  Remote file name:[16]
				Error log in the event of a protocol error

Event ID	Type	Category[19]	Description	Notes
7	Error or Warning	Client Error (101) Client Warning (103)	System call error occurred. Function that caused error:[1] Place where error occurred:[2] Function name:[3] Error message:[4] Connection number:[6] Transmission number:[9] Log-in user name:[12] Log-in hostname:[13] Transmission type:[14] Local file name:[15] Remote file name:[16] Details:[5]	Error log in the event of a system call error • Action: See Table 8-4.
8	Error	Client Error (101)	Logic error occurred. Function that caused error:[1] Place where error occurred:[2] Connection number:[6] Transmission number:[9] Log-in user name:[12] Log-in hostname:[13] Transmission type:[14] Local file name:[15] Remote file name:[16]	Error log in the event of a logical error
9	Error	Log Error (107)	File system is full, so cannot output log. Delete unnecessary files.	Error log when there was not enough disk space to write the log
10	Warning	Client Warning (103) Server Warning (106)	File system is full, so cannot output trace. Delete unnecessary files.	Warning log when there was not enough disk space to write the trace log

Event ID	Type	Category[19]	Description	Notes
11	Information	Server Info (105)	JP1/File Transmission Server/ FTP Server service started.	Information log when the server service started
12	Information	Server Info (105)	JP1/File Transmission Server/ FTP Server service terminated.	Information log when the server service stopped
14	Information	Client Info (102)	JP1/File Transmission Server/ FTP Client service started.	Information log when the client service started
15	Information	Client Info (102)	JP1/File Transmission Server/ FTP Client service terminated.	Information log when the client service stopped
17	Warning	Client Warning (103) Server Warning (106)	Log server forced to disconnect a connection.	Warning log when the log server forcibly released a connection
18	Warning	Server Warning (106)	Number of concurrent transmissions exceeds the maximum, so the request is rejected. • IP address of requestor:[8]	Warning log when the maximum number of connections was exceeded during server connection
19	Information	Log Info (108)	JP1/File Transmission Server/ FTP Log service started.	Information log when the log service started
20	Information	Log Info (108)	JP1/File Transmission Server/ FTP Log service terminated.	Information log when the log service stopped
21	Error	Client Error (101) Server Error (104) Log Error (107) Agent Error (113)	Port number is not defined in the Services file.[service name for which a port number is not defined]	Error log when the service started
24	Information	Server Info (105)	Transmission was finished normally. Connection number:[6] Transmission number:[9] User name:[7] IP address:[8] Local file name:[10]	Information log when transmission terminated normally

175

Event ID	Type	Category[19]	Description	Notes

25	Error	Server Error (104)	Transmission was finished abnormally.
			    Connection number:[6]
			    Transmission number:[9]
			    User name:[7]
			    IP address:[8]
			    Local file name:[10]
				Error log when transmission terminated abnormally

26	Information	Client Info (102)	Transmission was finished normally.
			    Connection number:[6]
			    Transmission number:[9]
			    Card name:[17]
			    Log-in user name:[12]
			    Log-in hostname or IP address:[13]
			    Local file name:[15]
			    Remote file name:[16]
				Information log when transmission terminated normally

27	Error	Client Error (101)	Transmission was finished abnormally.
			    Connection number:[6]
			    Transmission number:[9]
			    Card name:[17]
			    Log-in user name:[12]
			    Log-in hostname or IP address:[13]
			    Local file name:[15]
			    Remote file name:[16]
				Information log when transmission terminated abnormally

28	Information	Agent Info (114)	JP1/File Transmission Server/ FTP Agent service started.	Information log when the Operations-Manager Agent service started
29	Information	Agent Info (114)	JP1/File Transmission Server/ FTP Agent service terminated.	Information log when the Operations-Manager Agent service ended

Event ID	Type	Category[#19]	Description	Notes
30	Information	Log Info (108)	The existing log information file (history) is being copied. (FTSLOGSAVE) ([#18]) (Log information pointer)	Information log when the log information file was copied
31	Information	Log Info (108)	A new log information file (history) will now be created. (Log information pointer)	Information log when a new log information file was created
33	Information	Server Info (105)	Transmission was started. 　Connection number:[#6] 　Transmission number:[#9] 　User name:[#7] 　IP address:[#8] 　Local file name:[#10]	Information log when transmission started
34	Information	Client Info (102)	Transmission was started. 　Connection number:[#6] 　Transmission number:[#9] 　Card name:[#17] 　Log-in user name:[#12] 　Log-in hostname or IP address:[#13] 　Local file name:[#15] 　Remote file name:[#16]	Information log when transmission started
35	Error	Client Error (101) Server Error (104) Agent Error (113)	The trial version of Job Management Partner 1/File Transmission Server/FTP has passed the expiration date (m/d/y).	Error when the trial version has expired, but an attempt was made to start a service or receive a message at the port
1001	Information Warning	Backup Info (110) Backup Warning (111)	Saved JP1/FTP settings.	Information and warning logs when the ftssave command was used
1002	Information or Warning	Backup Info (110) Backup Warning (111)	Recovered JP1/FTP settings.	Error log when the ftsload command was used

Event ID	Type	Category[19]	Description	Notes
1003	Error	Backup Error (112)	Error occurred when saving JP1/FTP settings.[4]	Error log when the `ftssave` command was used
1004	Error	Backup Error (112)	Error occurred when recovering JP1/FTP settings.[4]	Error log when the `ftsload` command was used
1006	Error	Backup Error (112)	Incorrect parameter for `ftssave command`.[4]	Error log when the `ftssave` command was used
1007	Error	Backup Error (112)	Incorrect parameter for `ftsload command`.[4]	Error log when the `ftsload` command was used

#1: Name of the function that contains the process resulting in the error

#2: Location number in the function where the error was detected

#3: Name of the function resulting in the error

#4: Message indicating the nature of the error

#5: Details of the error (applicable to server and client services)

#6: Connection number managed by JP1/FTP

#7: Name of the connected user (when the server is used)

#8: IP address of the machine used by the connected user (when the server is used)

#9: Transmission number managed by JP1/FTP

#10: Name of the transmission file at the server (when the server is used)

#11: Response message from the connection-target server

#12: User name used for connection (when the client is used)

#13: Host name or IP address of the connection target (when the client is used)

#14: Send/receive type indicated as `send` (overwrite send), `append` (append send), or `recv` (receive)

#15: Name of the transmission file at the client (when the client is used)

#16: Name of the transmission file at the server (when the client is used)

#17: Transmission card name (when the client is used)

#18: One of the following:

   1: The size of the log information has become smaller than the existing log information file.

   2: The existing log information file has become smaller than the previous log information pointer.

   3: The existing log information file is for an old version.

#19: In Windows Server 2008, the number in parentheses is displayed.

Table 8-2: Action to be taken when the event ID is 2

Function name	Error message	Action
IMEventLoad	The library was not found. (50)	Install JP1/Base.
IMEventOpenSender	Cannot connect to the event service. (40)	Start JP1/Base.
Jp1NnmStatusTrap	SNMP service is not installed. (1)	Install the SNMP service.
Jp1NnmStatusTrap	SNMP service is not started. (2)	Start the SNMP service.
Jp1NnmStatusTrap	The community name is not specified. (3)	Set the community name of the SNMP service.
Jp1NnmStatusTrap	SNMP trap trasmission-destination is not defined. (4)	Set the trap destination for the SNMP service.

Table 8-3: Action to be taken when the event ID is 4

Name of function resulting in error	Function name	Error message	Action
--	IMEventLoad	The library was not found. (50)	Install JP1/Base.
--	IMEventOpenSender	Cannot connect to the event service. (40)	Start JP1/Base.
--	Jp1NnmStatusTrap	SNMP service is not installed. (1)	Install the SNMP service.

Name of function resulting in error	Function name	Error message	Action
--	Jp1NnmStatusTrap	SNMP service is not started. (2)	Start the SNMP service.
--	Jp1NnmStatusTrap	The community name is not specified. (3)	Set the community name of the SNMP service.
--	Jp1NnmStatusTrap	SNMP trap trasmission-destination is not defined. (4)	Set the trap destination for the SNMP service.
--	JpSeventOpen	Cannot connect to the event server. (11)	Check the status of the JP1/Base that is used as the event server.
fts_ss_callproc	SearchPath	The system cannot find the file specified. (2)	Check and, if necessary, revise **Program to start when transmission ends normally** (or **Program to start when transmission ends abnormally**) in the auto-start program settings.
fts_ss_callproc	CreateProcess	Access is denied. (5)	Check and, if necessary, revise **Program to start when transmission ends normally** (or **Program to start when transmission ends abnormally**) in the auto-start program settings.
retrieve	GetFileAttributes	The system cannot find the file specified. (2)	Check and, if necessary, revise the transmission file name at the server.
store	CreateFile	Access is denied. (5)	Check and, if necessary, revise the transmission file name at the server.

Table 8-4: Action to be taken when the event ID is 7

Name of function resulting in error	Function name	Error message	Action
--	IMEventLoad	The library was not found. (50)	Install JP1/Base.
--	IMEventOpenSender	Cannot connect to the event service. (40)	Start JP1/Base.
--	Jp1NnmStatusTrap	SNMP service is not installed. (1)	Install the SNMP service.
--	Jp1NnmStatusTrap	SNMP service is not started. (2)	Start the SNMP service.
--	Jp1NnmStatusTrap	The community name is not specified. (3)	Set the community name of the SNMP service.
--	Jp1NnmStatusTrap	SNMP trap trasmission-destination is not defined. (4)	Set the trap destination for the SNMP service.
--	gethostbyname	Authoritative Answer Host not found. (11001)	Check and, if necessary, revise the host name in the transmission information.
fts_cs_callproc	SearchPath	The system cannot find the file specified. (2)	Check and, if necessary, revise **Program to start at normal end** (or **Program to start at abnormal end**) in the transmission settings.
fts_cs_callproc	CreateProcess	Access is denied. (5)	Check and, if necessary, revise **Program to start at normal end** (or **Program to start at abnormal end**) in the transmission settings.
sendrequest	GetFileAttributes	The system cannot find the file specified. (2)	Check and, if necessary, revise the transmission file name at the client.

Name of function resulting in error	Function name	Error message	Action
fts_cs_recvrequest	CreateFile	Access is denied. (5)	Check and, if necessary, revise the transmission file name at the client.

Name of function resulting in error	Function name	Error message	Action
fts_cs_recvreques t	CreateFile	Access is denied. (5)	Check and, if necessary, revise the transmission file name at the client.

8.3 Messages displayed during command execution

This section presents for each command the messages that can be output, their causes, and the actions to take.

8.3.1 Messages displayed during execution of the ftstran command

The table below lists and describes the messages that can be displayed when the ftstran command is executed.

Table 8-5: Messages displayed during execution of the ftstran command

Message that is displayed	Cause	Action
Specify CHECK or UNCHECK after the /TK switch.	Neither CHECK (do size checking) nor UNCHECK (do not do size checking) is specified after the /TK option.	Specify either CHECK (do size checking) or UNCHECK (do not do size checking).
Specify STREAM or COMPRESS after the /TM switch.	Neither STREAM (do not compress) nor COMPRESS (compress) is specified after the /TM option.	Specify either STREAM (do not compress) or COMPRESS (compress).
Specify SEND, RECV, or APPE after the /TT switch.	Neither SEND (overwrite send), nor RECV (receive), nor APPE (append send) is specified after the /TT option.	Specify one of SEND (overwrite send), RECV (receive), or APPE (append send).
Specify ASCII or BINARY after the /TY switch.	Neither ASCII nor BINARY is specified after the /TY option.	Specify either ASCII or BINARY.
Specify AUTO, MULTIPLE or SINGLE after the /TA switch.	Neither AUTO (switch automatically), nor MULTIPLE (transmit multiple files), nor SINGLE (transmit single file) is specified after the /TA option.	Specify one of AUTO (switch automatically), MULTIPLE (transmit multiple files), or SINGLE (transmit single file).
The FTP command is too long.	The FTP command exceeds the maximum length.	Specify the FTP command as no more than 300 bytes.
The name of the program that starts when file transmission ends abnormally is too long.	The name of the program that starts when transmission ends abnormally exceeds the maximum length.	Specify the name of the program to start when transmission ends abnormally as a string of 259 bytes or less.
In the name of the program that starts when file transmission ends abnormally you cannot specify the following characters: space < > " | * ?	An invalid character is contained in the name of the program that starts when transmission ends abnormally.	Check and, if necessary, revise the name of the program to start when transmission ends abnormally.

Message that is displayed	Cause	Action
`The name of the program that starts when file transmission ends abnormally is specified incorrectly.`	The name of the program that starts when transmission ends abnormally is invalid.	Check and, if necessary, revise the name of the program to start when transmission ends abnormally.
`Specify the name of the program that starts when file transmission ends abnormally with a full-path name.`	The name of the program that starts when transmission ends abnormally is not specified as a full path.	Express as a full path the name of the program to start when transmission ends abnormally.
`The card information is unacquirable. - func(error)`	A system call error occurred during acquisition of card information.	Take appropriate action as indicated by the function's error code.
`The card name is too long.`	The specified card name exceeds the maximum length.	Specify the card name as a string of up to 20 bytes.
`The command syntax is incorrect.`	There is a syntax error in the command line.	Check and, if necessary, revise the command line entry.
`The comment is too long.`	The specified comment exceeds the maximum length.	Specify the comment as a string of up to 80 bytes.
`Duplicated switch.- opt`	A specified option is duplicated.	Do not specify the same option more than once.
`The name of the program that starts when file transmission ends normally is too long.`	The name of the program that starts when transmission ends normally exceeds the maximum length.	Specify the name of the program to start when transmission ends normally as a string of up to 259 bytes.
`In the name of the program that starts when file transmission ends normally you cannot specify the following characters: space < > " | * ?`	An invalid character is contained in the name of the program that starts when transmission ends normally.	Check and, if necessary, revise the name of the program to start when transmission ends normally.
`The name of the program that starts when file transmission ends normally is specified incorrectly.`	The name of the program that starts when transmission ends normally is invalid.	Check and, if necessary, revise the name of the program to start when transmission ends normally.
`Specify the name of the program that starts when file transmission ends normally with a full-path name.`	The name of the program that starts when transmission ends normally is not specified as a full path.	Express as a full path the name of the program to start when transmission ends normally.
`Transmission ended abnormally.`	File transmission terminated abnormally.	Check the transmission log.
`Transmission ended normally but with a warning.`	(Normal termination with a warning)	Check the transmission log.

184

Message that is displayed	Cause	Action
Transmission ended normally.	(Normal termination)	--
The password is too long.	The specified password exceeds the maximum length.	Specify the password as a string of up to 50 bytes.
The file name is too long.	The specified file name exceeds the maximum length.	Specify the file name as a string of up to 259 bytes.
The file name is specified incorrectly.	The specified file name is invalid.	Check and, if necessary, revise the file name.
Specify the port number in the range from 1 to 65535.	The port number is not an integer from 1 to 65,535.	Specify the port number as an integer from 1 to 65,535.
Specify the port number with an integer.	The specified port number contains a nonnumeric character.	Specify an integer.
The remote host name is too long.	The specified host name exceeds the maximum length.	Specify the host name as a string of up to 256 bytes.
The remote host name is specified incorrectly.	The specified host name is invalid.	Check and, if necessary, revise the host name.
The name of a user to log in is too long.	The specified user name exceeds the maximum length.	Specify the user name as a string of up to 50 bytes.
The name of a user to log in is specified incorrectly.	The specified user name is invalid.	Check and, if necessary, revise the user name.
The remote file name is too long.	The specified remote file name exceeds the maximum length.	Specify the remote file name as a string of up to 259 bytes.
The remote file name is specified incorrectly.	The specified remote file name is invalid.	Check and, if necessary, revise the remote file name.
The local file name is too long.	The specified local file name exceeds the maximum length.	Specify the local file name as a string of up to 259 bytes.
In the local file name you cannot specify the following characters: space < > " | * ?	The specified local file name contains an invalid character.	Check and, if necessary, revise the local file name.
The local file name is specified incorrectly.	The specified local file name is invalid.	Check and, if necessary, revise the local file name.
Start the program as an administrator.	The user who started the command is not an administrator (applicable to Windows Server 2008).	An administrator must start the command.

8.3.2 Messages displayed during execution of the ftsregc command

The table below lists and describes the messages that can be displayed when the ftsregc command is executed.

Table 8-6: Messages displayed during execution of the ftsregc command

Message that is displayed	Cause	Action
Specify CHECK or UNCHECK after the /TK switch.	Neither CHECK (do size checking) nor UNCHECK (do not do size checking) is specified after the /TK option.	Specify either CHECK (do size checking) or UNCHECK (do not do size checking).
Specify STREAM or COMPRESS after the /TM switch.	Neither STREAM (do not compress) nor COMPRESS (compress) is specified after the /TM option.	Specify either STREAM (do not compress) or COMPRESS (compress).
Specify SEND, RECV, or APPE after the /TT switch.	Neither SEND (overwrite send), nor RECV (receive), nor APPE (append send) is specified after the /TT option.	Specify one of SEND (overwrite send), RECV (receive), or APPE (append send).
Specify ASCII or BINARY after the /TY switch.	Neither ASCII nor BINARY is specified after the /TY option.	Specify either ASCII or BINARY.
Specify AUTO, MULTIPLE or SINGLE after the /TA switch.	Neither AUTO (switch automatically), nor MULTIPLE (transmit multiple files), nor SINGLE (transmit single file) is specified after the /TA option.	Specify one of AUTO (switch automatically), MULTIPLE (transmit multiple files), or SINGLE (transmit single file).
The FTP command is too long.	FTP command exceeds the maximum length.	Specify the FTP command as no more than 300 bytes.
The name of the program that starts when file transmission ends abnormally is too long.	The name of the program that starts when transmission ends abnormally exceeds the maximum length.	Specify the name of the program to start when transmission ends abnormally as a string of up to 259 bytes.
In the name of the program that starts when file transmission ends abnormally you cannot specify the following characters: < > | * ?	An invalid character is contained in the name of the program that starts when transmission ends abnormally.	Check and, if necessary, revise the name of the program to start when transmission ends abnormally.
The name of the program that starts when file transmission ends abnormally is specified incorrectly.	The name of the program that starts when transmission ends abnormally is invalid.	Check and, if necessary, revise the name of the program to start when transmission ends abnormally.

Message that is displayed	Cause	Action
`Specify the name of the program that starts when file transmission ends abnormally with a full-path name.`	The name of the program that starts when transmission ends abnormally is not specified as a full path.	Express as a full path the name of the program to start when transmission ends abnormally.
`The card information is unacquirable. - func(error)`	A system call error occurred during acquisition of card information.	Take appropriate action as indicated by the function's error code.
`The card name is too long.`	The specified card name exceeds the maximum length.	Specify the card name as a string of up to 20 bytes.
`Specify the card name.`	The card name is not specified.	Specify the card name.
`The command syntax is incorrect.`	There is a syntax error in the command line.	Check and, if necessary, revise the command line entry.
`The comment is too long.`	The specified comment exceeds the maximum length.	Specify the comment as a string of up to 80 bytes.
`The specified card (card) is already registered.`	The specified card name already exists.	Change the card name.
`The specified card (card) is not registered.`	The specified card is not registered.	Specify a registered card name.
`Duplicated switch.- opt`	A specified option is duplicated.	Do not specify the same option more than once.
`The name of the program that starts when file transmission ends normally is too long.`	The name of the program that starts when transmission ends normally exceeds the maximum length.	Specify the name of the program to start when transmission ends normally as a string of up to 259 bytes.
`In the name of the program that starts when file transmission ends normally you cannot specify the following characters: < >	* ?`	An invalid character is contained in the name of the program that starts when transmission ends normally.	Check and, if necessary, revise the name of the program to start when transmission ends normally.
`The name of the program that starts when file transmission ends normally is specified incorrectly.`	The name of the program that starts when transmission ends normally is invalid.	Check and, if necessary, revise the name of the program to start when transmission ends normally.
`Specify the name of the program that starts when file transmission ends normally with a full-path name.`	The name of the program that starts when transmission ends normally is not specified as a full path.	Express as a full path the name of the program to start when transmission ends normally.

Message that is displayed	Cause	Action
Specify the name of the destination host to be connected.	The name of the connection-target host is missing.	Specify the name of the connection-target host.
Specify the send or reception type (/TT SEND|RECV|APPE).	The send/receive type is not specified.	After /TT, specify SEND (overwrite send), RECV (receive), or APPE (append send) as the send/receive type.
Specify the transmission mode (/TY ASCII|BINARY).	The transmission mode is not specified.	After /TY, specify either ASCII or BINARY as the transmission mode.
The password is too long.	The specified password exceeds the maximum length.	Specify the password as a string of up to 50 bytes.
Specify the port number in the range from 1 to 65535.	The port number is not an integer from 1 to 65,535.	Specify the port number as an integer from 1 to 65,535.
Specify the port number with an integer.	The specified port number contains a nonnumeric character.	Specify an integer.
The remote host name is too long.	The specified host name exceeds the maximum length.	Specify the host name as a string of up to 256 bytes.
The remote host name is specified incorrectly.	The specified host name is invalid.	Check and, if necessary, revise the host name.
The name of a user to log in is too long.	The specified user name exceeds the maximum length.	Specify the user name as a string of up to 50 bytes.
The name of a user to log in is specified incorrectly.	The specified user name is invalid.	Check and, if necessary, revise the user name.
The remote file name is too long.	The specified remote file name exceeds the maximum length.	Specify the remote file name as a string of up to 259 bytes.
The remote file name is specified incorrectly.	The specified remote file name is invalid.	Check and, if necessary, revise the remote file name.
Specify the remote file name.	The remote file name is not specified.	Check and, if necessary, revise the remote file name.
The local file name is too long.	The specified local file name exceeds the maximum length.	Specify the local file name as a string of up to 259 bytes.
In the local file name you cannot specify the following characters: space < > " | * ?	The specified local file name contains an invalid character.	Check and, if necessary, revise the local file name.
The local file name is specified incorrectly.	The specified local file name is invalid.	Check and, if necessary, revise the local file name.

Message that is displayed	Cause	Action
Specify the local file name.	The local file name is not specified.	Specify the local file name.
Specify the name of a user to log in.	The login user name is not specified.	Specify the login user name.
Start the program as an administrator.	The user who started the command is not an administrator (applicable to Windows Server 2008).	An administrator must start the command.

8.3.3 Messages displayed during execution of the ftshistory command

The table below lists and describes the messages that might be displayed when the ftshistory command is executed.

Table 8-7: Messages that might be displayed during execution of the ftshistory command

Message that is displayed	Cause	Action
The command syntax is incorrect.	There is a syntax error in the command line.	Check and, if necessary, revise the command line entry.

JP1/FTP cannot read the specified log file.
or
JP1/FTP cannot copy temporary file.
  source-file
  destination-file
CopyFile code= *errno*
msg
	Copy operation on the temporary file failed.	Check the error message and take appropriate action.

There is no log-information.	There is no log information to view.	--
Error for access file. *function-name* code= *errno* *msg*	An error occurred while accessing the log file.	Check the error message and take appropriate action.
Error for access file. *function-name* code= *errno* POS= *pos* *msg*	An error occurred while accessing the log file. *pos*: Position of the erroneous log information in the log file (count)	Check the error message and take appropriate action.

Message that is displayed	Cause	Action
Error for access file. *function-name* code= *errno* POS= *pos1*,*pos2* *msg*	An error occurred while accessing the log file. *pos1*: Position of processing (count) *pos2*: Position of the erroneous log information in the log file (count)	Check the error message and take appropriate action.
A part of the log file is corrupted. position = *pos*	A portion of the log file is corrupted. *pos*: Position of the erroneous log information in the log file (count)	Check and, if necessary, revise the log file.
This is not a JP1/FTP log file, or the file is corrupted.	This is not a JP1/FTP log file, or the log file is corrupted.	Check and, if necessary, revise the log file.
There is no form file.	There is no format file.	Check and, if necessary, revise the format file.
JP1/FTP cannot reference form file. *function-name* code= *errno* *msg*	An error occurred while accessing the format file.	Check the error message and take appropriate action.
There is no key in form.	There are no keys in the format file.	--
JP1/FTP cannot output to file. *function-name* code= *errno* *msg*	File output failed.	Check the error message and take appropriate action.
JP1/FTP cannot get the installation directory. *function-reg* code= *errno* *msg* Assumed C:\Program Files\Hitachi\FTSFTP.	An error occurred while obtaining the installation directory.	Check the error message and take appropriate action.
Could not acquire a data directory. *function-reg* code= *errno* *msg* Assumed C:\Program Files\Hitachi\FTSFTP.	An error occurred while obtaining the directory for log information.	Check the error message and take appropriate action.
A temporary directory cannot be acquired. GetTempPath code = *errno* *msg*	An error occurred while obtaining the temporary directory.	Check the error message and take appropriate action.

Message that is displayed	Cause	Action
Start the program as an administrator.	The user who started the command is not an administrator (applicable to Windows Server 2008).	An administrator must start the command.

8.3.4 Messages displayed during execution of the ftsload command

The table below lists and describes the messages that might be displayed when the ftsload command is executed.

Table 8-8: Messages that might be displayed during execution of the ftsload command

Message that is displayed	Cause	Action
JP1/FTP settings are recovered.	(Normal termination)	--
This is not a JP1/FTP settings storage file.	The specified file is not a JP1/FTP definition information file.	Check and, if necessary, revise the definition information file.
There is no corresponding user, so there is no auto-start program settings to be recovered.	(Normal termination with a warning)	--
The command syntax is incorrect.	There is a syntax error in the command line.	Check and, if necessary, revise the command line.
Duplicated switch - *opt*.	An option is duplicated.	Do not specify the same option more than once.
The file name is not specified.	The name of the file to be recovered is not specified.	Specify the name of the file to be recovered.
There are no settings to be recovered.	The definition information to be recovered is not in the file.	--
Invalid switch - *opt*.	The specified option is invalid.	Check and, if necessary, revise the option.
Start the program as an administrator.	The user who started the command is not an administrator (applicable to Windows Server 2008).	An administrator must start the command.

8.3.5 Messages displayed during execution of the ftssave command

The table below lists and describes the messages that might be displayed when the

ftssave command is executed.

Table 8-9: Messages that might be displayed during execution of the ftssave command

Message that is displayed	Cause	Action
JP1/FTP settings are saved.	(Normal termination)	--
The command syntax is incorrect.	There is a syntax error in the command line.	Check and, if necessary, revise the command line.
No auto-start program settings have been registered.	(Normal termination with a warning)	--
Duplicated switch - *opt*.	An option is duplicated.	Do not specify the same option more than once.
No transmission settings have been registered.	(Normal termination with a warning)	--
The file name is too long.	The specified file name exceeds the maximum length.	Specify the file name as a string of up to 259 bytes.
The file name is not specified.	The file name is not specified.	Specify the file name.
Invalid switch - *opt*.	The specified option is invalid.	Check and, if necessary, revise the option.
No user-to-login settings have been registered.	(Normal termination with a warning)	--
Start the program as an administrator.	The user who started the command is not an administrator (applicable to Windows Server 2008).	An administrator must start the command.

8.4 Messages output to the access log

The following table lists and describes the messages that might be output to the access log.

Table 8-10: Messages that might be output to the access log

Message	Cause
FTP-command[#1] `is invalid because it was sent by a` `user who was not logged in.` `[Remote` `host:`*IP-address*[#2]`] [Remote port:`*port-number*[#3]`]` `[Connection number:`*connection-number*[#4]`]`	An FTP command that becomes executable after login was accepted before login.
`Login of user` *user-name*[#5] `failed.` `[Remote` `host:`*IP-address*[#2]`] [Remote port:`*port-number*[#3]`]` `[Connection number:`*connection-number*[#4]`]`	Login failed.
`The max. number of FTP clients was reached. No more` `clients can use the service.`	The number of connection requests has reached the maximum permissible number of concurrent transmissions.
`The connection was closed without login.` `[Remote` `host:`*IP-address*[#2]`] [Remote port:`*port-number*[#3]`]` `[Connection number:`*connection-number*[#4]`]`	The FTP client disconnected itself without logging in.

#1

    FTP-command: Indicates the FTP command.

#2

    IP-address: Indicates the IP address of the FTP client.

#3

    port-number: Indicates the port number of the FTP client.

#4

    connection-number: Indicates the connection number.

#5

    user-name: Indicates the user name.

9. Troubleshooting

This chapter describes how to handle problems that can occur while you are using JP1/
FTP.

9.1 Error handling procedures
9.2 Types of log information
9.3 Data to collect when a problem occurs

9.1 Error handling procedures

This section describes the procedures for handling errors that might occur while you are using JP1/FTP.

1. Checking the processing event

    Check the processing event that was underway when the error occurred. If a message has been output, check the details of the message (for the messages, see *8. Messages*). For details about the log information that is output by JP1/FTP, see *9.2 Types of log information*.

2. Collecting data

    Collect data to determine the cause of the error. For details about the data to collect, see *9.3 Data to collect when a problem occurs*.

3. Checking the problem

    Check the cause of the problem on the basis of the collected data. Also isolate the problem or the affected range.

9.2 Types of log information

The following two types of log information are output during operation of JP1/FTP:

- Common message log
- Log by process

This section describes these two types of log information.

9.2.1 Common message log

The common message log contains log information that reports system errors that have occurred and is intended for the system administrator. The common message log provides the minimum amount of error information that is required.

The common message log is output to the Windows event log.

9.2.2 Log by process

Log by process is the log information that is output by each function of JP1/FTP. The log by process is output to a separate log file for each function. For details about the log files, see *9.3.2 Information about JP1/FTP*.

9.3 Data to collect when a problem occurs

This section describes the data that we recommend you collect in the event of an error on JP1/FTP and how to collect it.

9.3.1 Log information about the operating system (OS)

You need to collect the following log information about the OS:

- Windows event log

  Use Windows Event Viewer to check the Windows event log. We recommend that you also output the log information to a file.

9.3.2 Information about JP1/FTP

The following table lists the information about JP1/FTP that needs to be collected.

Table 9-1: Information about JP1/FTP

File name	Directory name	Overview	Size	Management method
History[#]	*directory-for-log-information*	Results of file transmission	Number of log entries to be retained, as specified in the environment definition, x 1,500 bytes	Wraparound
CSModuleTrace*n* *n*: Value from 1 to 64	*directory-for-log-information*\trace	Module trace for the client	Module trace file size specified in the environment definition	Wraparound
SSModuleTrace*n* *n*: Value from 1 to 64		Module trace for the server	Same as the above	Wraparound
CSProtocolTrace*n* *n*: Value from 1 to 60		Protocol trace for the client	Protocol trace file size specified in the environment definition	Wraparound
SSProtocolTrace*n* *n*: Value from 1 to 60		Protocol trace for the server	Same as the above	Wraparound
ftstran_trace		Transmission command trace	2 megabytes	Wraparound

File name	Directory name	Overview	Size	Management method
`ftstran_tracep`		Transmission command trace	4 bytes	Overwrite
`ftsagent{1｜2}.log`	*JP1/ FTP-installation-directory*`\manager\trace`	Module trace for Operations-Manager Agent	1 megabyte	2-file management
`ftsjnidll{1｜2}.log`		Module trace for Operations-Manager Agent	1 megabyte	2-file management
`ftsconsole{1｜2}.log`		Module trace for Operations-Manager Console	1 megabyte	2-file management
`service1{1｜2}.log`		Trace for the Operations-Manager Agent service	1 megabyte	2-file management
`service2{1｜2}.log`		Trace for the Operations-Manager Agent service	1 megabyte	2-file management
`service3{1｜2}.log`		Trace for the Operations-Manager Agent service	1 megabyte	2-file management
`ftsaccess.log[.old]`	*directory-for-log-information*	Access log	Access log file size specified in the environment definition	2-file management
`Jp1Nnm.log`	*JP1/ FTP-installation-directory*`\NnmTmp`	Log file for HP NNM linkage	100,000 bytes	Wraparound
`Jp1Nnm.log`	*JP1/ FTP-installation-directory*`\manager\agent\NnmTmp`	Log file for HP NNM linkage	100,000 bytes	Wraparound

\#

If you change the number of logs to be retained, the system might create a backup of the old log file. The backup file name is `FTSLOGSAVE` and the directory is the directory for log information.

9.3.3 List of JP1/FTP processes

You use the Windows Task Manager to check the operating status of processes. For details about the processes, see *C. List of Processes*.

9.3.4 Operation information

You need the following information about the operation that was underway when the error occurred, so record this information:

- Details of the operation

- Time the error occurred

- Computer configuration (such as the version of each OS and the host names)

9.3.5 Error information on screen displays

When an error is displayed in a window, collect that information. Also make a hardcopy of the following information:

- Error dialog box

  If **Details** is displayed, make a copy of that information.

9.3.6 How to collect data

You can use the Extraction tool to collect the information described in *9.3.2 Information about JP1/FTP*. The Extraction tool simplifies the collection procedure.

Extraction tool

(1) Name

FTSLOGCLCT.BAT

(2) Storage directory

JP1/FTP installation directory

(3) Execution format

FTSLOGCLCT.BAT [Δ /D Δ *directory-for-log-information*] Δ *target-directory*

Δ: Single-byte space

(4) Function

This tool copies error information to the specified target directory.

(5) Arguments

directory-for-log-information

Specifies the directory for the log information.

200

If this argument is omitted, the directory for log information that is defined in the environment definition is assumed.

target-directory

Specifies the directory in which error information is to be collected.

If the specified directory does not exist, the tool creates a new directory.

If the specified directory already exists, the tool overwrites the data.

(6) Execution permissions

Administrator permissions (administrator in Windows Server 2008)

Appendixes

A. List of Files and Directories
B. Port Numbers
C. List of Processes
D. JP1 Events
E. Format Files Used for Output of Definition Information
F. Tools
G. Linking to HP NNM Version 7.5 or Earlier
H. Notes about Operation
I. Changes in Each Version

A. List of Files and Directories

The following table lists the names of the files and directories that are used by JP1/FTP. The default directories are as follows:

JP1/FTP installation directory:

OS-installation-drive:\Program Files\Hitachi\FTSFTP

Directory for log information:

OS-installation-drive:\Program Files\Hitachi\FTSFTP

Table A-1: List of files and directories for JP1/FTP

Description		File and directory names
Commands	Executes transmission	*JP1/FTP-installation-directory*\ftstran.exe
	Registers transmission information	*JP1/FTP-installation-directory*\ftsregc.exe
	Saves	*JP1/FTP-installation-directory*\ftsload.exe
	Recovers	*JP1/FTP-installation-directory*\ftssave.exe
Log information files	Log file	*directory-for-log-information*\History
	Backup of log file[#1]	*directory-for-log-information*\FTSLOGSAVE
	Module trace for the client	*directory-for-log-information*\trace\CSModuleTrace*n* *n*: Value from 1 to 64
	Module trace for the server	*directory-for-log-information*\trace\SSModuleTrace*n* *n*: Value from 1 to 64
	Protocol trace for the client	*directory-for-log-information*\trace\CSProtocolTrace*n* *n*: Value from 1 to 60
	Protocol trace for the server	*directory-for-log-information*\trace\SSProtocolTrace*n* *n*: Value from 1 to 60
Transmission command trace		*directory-for-log-information*\trace\ftstran_trace
		directory-for-log-information\trace\ftstran_tracep
Log files for HP NNM linkage		*JP1/FTP-installation-directory*\NnmTmp\Jp1Nnm.log[#2]

Description		File and directory names
		JP1/ FTP-installation-directory\manager\agent\NnmTmp\Jp1Nnm.log[#2]
Format files for text output	Login user registration information	*JP1/FTP-installation-directory*\USFORM.TXT
	Sample file for login user registration information	*JP1/FTP-installation-directory*\USFORM.TXT.sample
	Auto-start program information	*JP1/FTP-installation-directory*\ATFORM.TXT
	Sample file for auto-start program information	*JP1/FTP-installation-directory*\ATFORM.TXT.sample
	Transmission request registration information	*JP1/FTP-installation-directory*\CLFORM.TXT
	Sample file for transmission request registration information	*JP1/FTP-installation-directory*\CLFORM.TXT.sample
	Log information	*JP1/FTP-installation-directory*\HSFORM.TXT
	Sample file for log information	*JP1/FTP-installation-directory*\HSFORM.TXT.sample
API library	Import library (for VC++6.0)	*JP1/FTP-installation-directory*\FTSFTP.lib
	Import library (for VC++5.0)	*JP1/FTP-installation-directory*\FTSFTP50.lib
	Import library (for VC++4.0)	*JP1/FTP-installation-directory*\FTSFTP40.lib
	Import library (for Platform SDK February 2003)	*JP1/FTP-installation-directory*\FTSFTP.lib
	Import library (for VS2005)	*JP1/FTP-installation-directory*\FTSFTP80.lib
	Import library (for VS2008)	*JP1/FTP-installation-directory*\FTSFTP90.lib

Description		File and directory names
	Header file	*JP1/FTP-installation-directory*\apihead.h
	Sample program	*JP1/FTP-installation-directory*\Sample.c
Custom job settings file for the Web browser		*JP1/FTP-installation-directory*\ajs_custom*
Operations management	Managed host definition information	*JP1/FTP-installation-directory*\manager\console\hostdef.csv
	Operations-Manager Console module trace	*JP1/FTP-installation-directory*\manager\trace\ftsconsole1.log or ftsconsole2.log
	Operations-Manager Agent module trace	*JP1/FTP-installation-directory*\manager\trace\ftsagent1 or ftsagent2
		JP1/FTP-installation-directory\manager\trace\ftsjnidll1.log or ftsjnidll2.log
	Trace for the Operations-Manager Agent service	*JP1/FTP-installation-directory*\manager\trace\service11.log or service12.log
		JP1/FTP-installation-directory\manager\trace\service21.log or service22.log
		JP1/FTP-installation-directory\manager\trace\service31.log or service32.log
Utilities	Data collection tool	*JP1/FTP-installation-directory*\FTSLOGCLCT.BAT
	Transmission result initialization tool	*JP1/FTP-installation-directory*\FTSTRANINIT.BAT
	Operations management initialization tool	*JP1/FTP-installation-directory*\manager\FTSMGRINIT.BAT
	Managed host information changing tool	*JP1/FTP-installation-directory*\manager\console\FTSMGRHOST.BAT
PASV transmission	Definition file	*JP1/FTP-installation-directory*\FTPPASV.INI
	Sample definition file	*JP1/FTP-installation-directory*\FTPPASV.INI.SAMPLE

Description		File and directory names
Correction patch information	Log file	*JP1/FTP-installation-directory*\PATCHLOG.TXT
	Backup directory	*JP1/FTP-installation-directory*\patch_backup_dir
Function for controlling remote host connections	Definition file	*JP1/FTP-installation-directory*\FTPHOSTACC.INF
	Sample definition file	*JP1/FTP-installation-directory*\FTPHOSTACC.INF.sample
Definition for a multiple IP address environment	Definition file	*JP1/FTP-installation-directory*\HOSTINFO.INI
	Sample definition file	*JP1/FTP-installation-directory*\HOSTINFO.INI.sample
Access log	Access log file	*directory-for-log-information*\ftsaccess.log
	Backup of the access log file	*directory-for-log-information*\ftsaccess.log.old
Function for using the access control function to change the root directory of absolute path names	Definition file	*JP1/FTP-installation-directory*\AccessLimitation.ini
	Sample definition file	*JP1/ FTP-installation-directory*\AccessLimitation.ini.sample
FTP connection response message control function	Definition file	*JP1/FTP-installation-directory*\FtsBanner.ini
	Sample definition file	*JP1/FTP-installation-directory*\FtsBanner.ini.sample
	FTP connection response message file	*JP1/FTP-installation-directory*\FtsBanner.txt
Environment definition information	Definition file	*JP1/FTP-installation-directory*\ftsenv.ini
	Sample definition file	*JP1/FTP-installation-directory*\ftsenv.ini.sample
Port numbers	Sample file for the port number settings	*JP1/FTP-installation-directory*\services.sample

#1

> If you change the number of logs to be retained, the system might create a backup of the old log file.

#2

> This file is created when the HP NNM linkage facility is used. Wraparound occurs in Jp1Nnm.log when its size reaches 100,000 bytes. The size increases by 650 bytes whenever a service starts or stops and by 860 bytes whenever a file

transmission terminates abnormally or with a warning.

B. Port Numbers

This appendix describes the port numbers used by JP1/FTP and the firewall passage directions. The protocol to be used is TCP/IP.

B.1 List of port numbers

Each port number is set after JP1/FTP has been installed. You can set any port number. The table below shows an example of port number settings. For details about the settings, see *2.2.2 Setting the port numbers*.

Table B-1: List of port numbers for JP1/FTP

Service name	Port number (example)	Usage
ftssdata	20124	Used for transferring data to be received (FTP data connection)
ftss	20125	Used as the server port (FTP control connection)
ftsc	20126	Used by the client service
ftsclog	20127	Used for JP1/FTP logging
ftsslog	20128	Used for JP1/FTP logging
ftsagent	20252	Used by the Operations-Manager function

B.2 Firewall passage directions

The following tables show the firewall passage directions.

Table B-2: Firewall passage directions (ACTV mode)

Connection type	Product at server	Port number (example)	Firewall passage direction	Product at client	Port number
Control connection	JP1/FTP	20125/tcp	<-	JP1/FTP[#]	ANY/tcp
Data connection	JP1/FTP	20124/tcp	->	JP1/FTP[#]	ANY/tcp

209

Table B-3: Firewall passage directions (PASV mode)

Connection type	Product at server	Port number (example)	Firewall passage direction	Product at client	Port number
Control connection	JP1/FTP	20125/tcp	<-	JP1/FTP[#]	ANY/tcp
Data connection	JP1/FTP	ANY/tcp	<-	JP1/FTP[#]	ANY/tcp

[#]

If the product at the client is not JP1/FTP, the port number depends on that product.

ANY means that an available port number assigned by the OS is to be used. In this case, the range of available port numbers depends on the OS.

B.3 Items to check when performing transmission via a firewall

We recommend that you check the following when you perform file transmission via a firewall:

1. Check whether the firewall can pass the FTP protocol.

   - YES -> 2

   - NO -> Use a firewall that can pass the FTP protocol (evaluate this change).

2. Check whether the OS's default FTP is also to be used.

   - YES -> 3

   - NO -> Change ftssdata and ftss to the port numbers used for normal FTP:

   ftssdata: 20/TCP

   ftss: 21/TCP

3. Check whether the firewall settings allow addition of FTP ports.

   - YES -> Set the firewall in such a manner that ftssdata and ftss can be used as FTP ports.

   - NO -> If the default FTP is also used, JP1/FTP cannot be used.

Note

The Operations-Manager function cannot be used via a firewall.

C. List of Processes

The table below lists the processes of JP1/FTP. The value in parentheses is the maximum number of times the process can be executed concurrently.

You can check these processes on the **Processes** page in the Task Manager window.

Table C-1: List of JP1/FTP processes

Process name	Function
ftpd (1)	Server service
ftpcs (1)	Client service
ftpl (1)	Log service
ftsagent (1)	Agent service

D. JP1 Events

This appendix provides a list of the JP1 events that are issued by JP1/FTP, as well as lists of their attributes.

D.1 List of JP1 events

Table D-1: List of JP1 events

Event ID	Event	Message
00010D01	Start of the JP1/File Transmission Server/FTP Server service	FTP Server service started.
00010D02	Start of the JP1/File Transmission Server/FTP Client service	FTP Client service started.
00010D03	Start of the JP1/File Transmission Server/FTP Log service	FTP Log service started.
00010D0F	Start of the JP1/File Transmission Server/FTP Agent service	FTP Agent service started.
00010D04	Stop of the JP1/File Transmission Server/FTP Server service	FTP Server service ended.
00010D05	Stop of the JP1/File Transmission Server/FTP Client service	FTP Client service ended.
00010D06	Stop of the JP1/File Transmission Server/FTP Log service	FTP Log service ended.
00010D10	Stop of the JP1/File Transmission Server/FTP Agent service	FTP Agent service ended.
00010D0B	Normal termination of file transmission	FTP file transmission ended normally.
00010D0C	Abnormal termination of file transmission	FTP file transmission ended abnormally.
00010D0D	Termination of file transmission with a warning (auto-start program start failure)	FTP file transmission is terminated with a warning. Automatic start of a program failed.

D.2 Attributes of JP1 events

This section presents the details of the JP1 events for each event ID.

(a) Details of event ID: 00010D01

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP Server service started.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	User who started the service
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	SERVER
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/SERVER
	Object ID	OBJECT_ID	SERVER
	Occurrence	OCCURRENCE	START
	Start time	START_TIME	Start time
	End time	END_TIME	--
	End code	RESULT_CODE	--

(b) Details of event ID: 00010D02

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP Client service started.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	User who started the service
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	CLIENT
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/CLIENT
	Object ID	OBJECT_ID	CLIENT

Attribute type	Item	Attribute name	Description
	Occurrence	OCCURRENCE	START
	Start time	START_TIME	Start time
	End time	END_TIME	--
	End code	RESULT_CODE	--

(c) Details of event ID: 00010D03

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP Log service started.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	User who started the service
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	LOG
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/LOG
	Object ID	OBJECT_ID	LOG
	Occurrence	OCCURRENCE	START
	Start time	START_TIME	Start time
	End time	END_TIME	--
	End code	RESULT_CODE	--

(d) Details of event ID: 00010D0F

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP Agent service started.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	User who started the service
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP

Attribute type	Item	Attribute name	Description
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	AGENT
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/AGENT
	Object ID	OBJECT_ID	AGENT
	Occurrence	OCCURRENCE	START
	Start time	START_TIME	Start time
	End time	END_TIME	--
	End code	RESULT_CODE	--

(e) Details of event ID: 00010D04

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP Server service ended.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	User who started the service
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	SERVER
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/SERVER
	Object ID	OBJECT_ID	SERVER
	Occurrence	OCCURRENCE	END
	Start time	START_TIME	--
	End time	END_TIME	End time
	End code	RESULT_CODE	0

(f) Details of event ID: 00010D05

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP Client service ended.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	User who started the service
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	CLIENT
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/CLIENT
	Object ID	OBJECT_ID	CLIENT
	Occurrence	OCCURRENCE	END
	Start time	START_TIME	--
	End time	END_TIME	End time
	End code	RESULT_CODE	0

(g) Details of event ID: 00010D06

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP Log service ended.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	User who started the service
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	LOG
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/LOG
	Object ID	OBJECT_ID	LOG
	Occurrence	OCCURRENCE	END

Attribute type	Item	Attribute name	Description
	Start time	START_TIME	--
	End time	END_TIME	End time
	End code	RESULT_CODE	0

(h) Details of event ID: 00010D10

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP Agent service ended.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	User who started the service
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	AGENT
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/AGENT
	Object ID	OBJECT_ID	AGENT
	Occurrence	OCCURRENCE	END
	Start time	START_TIME	--
	End time	END_TIME	End time
	End code	RESULT_CODE	0

(i) Details of event ID: 00010D0B

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP file transmission ended normally.
Extended attributes (common information)	Severity	SEVERITY	Information
	User name	USER_NAME	FTP login user
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB

Attribute type	Item	Attribute name	Description
	Object name	OBJECT_NAME	For SERVER: Transmission number For CLIENT: Transmission card name
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/SERVER or JP1/FTP/CLIENT
	Object ID	OBJECT_ID	SERVER or CLIENT
	Occurrence	OCCURRENCE	END
	End time	END_TIME	End time
	End code	RESULT_CODE	0
(program-specific information)	Transmission number	A0	Transmission number
	Connection number	A1	Connection number
	Card name	A2	Transmission card name (client only)
	Name of the host at the connection destination	A3	Name of the host at the connection destination
	Number of the port at the connection destination	A4	Number of the port at the connection destination (client only)
	User name	A5	FTP login user name
	Transmission mode	A6	ASCII or BINARY
	Transmission command	A7	Send (overwrite), send (append), receive (overwrite), or receive (append)
	Compression mode	A8	Compressed or uncompressed
	Local file name	A9	Local file name
	Remote file name	B0	Remote file name (client only)
	Transmission start time	B1	Transmission start time
	Transmission end time	B2	Transmission end time
	Size of the transmitted data	B3	Size of the transmitted data (bytes)

Attribute type	Item	Attribute name	Description
	Comment	B4	Comment (client only)
	Transmission end status	B5	Normal termination

(j) Details of event ID: 00010D0C

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP file transmission ended abnormally.
Extended attributes (common information)	Severity	SEVERITY	Error
	User name	USER_NAME	FTP login user
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	For SERVER: Transmission number For CLIENT: Transmission card name
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/SERVER or JP1/FTP/CLIENT
	Object ID	OBJECT_ID	SERVER or CLIENT
	Occurrence	OCCURRENCE	END
	End time	END_TIME	End time
	End code	RESULT_CODE	1
(program-specific information)	Transmission number	A0	Transmission number
	Connection number	A1	Connection number
	Card name	A2	Transmission card name (client only)
	Name of the host at the connection destination	A3	Name of the host at the connection destination
	Number of the port at the connection destination	A4	Number of the port at the connection destination (client only)

Attribute type	Item	Attribute name	Description
	User name	A5	FTP login user name
	Transmission mode	A6	ASCII or BINARY
	Transmission command	A7	Send (overwrite), send (append), receive (overwrite), or receive (append)
	Compression mode	A8	Compressed or uncompressed
	Local file name	A9	Local file name
	Remote file name	B0	Remote file name (client only)
	Transmission start time	B1	Transmission start time
	Transmission end time	B2	Transmission end time
	Size of the transmitted data	B3	Size of the transmitted data (bytes)
	Comment	B4	Comment (client only)
	Transmission end status	B5	Abnormal termination
	Module in which the error occurred	C0	Module in which the error occurred
	Location of the error	C1	Location of the error
	Error type	B6	System call error or logical error, or protocol error
	Name of system call	B7	Name of the system call in which the error occurred (Error type: system call error)
	System call message	B8	System call error message (Error type: system call error)
	Protocol message	B9	Protocol error message (Error type: protocol error)

(k) Details of event ID: 00010D0D

Attribute type	Item	Attribute name	Description
Basic attribute	Message	--	FTP file transmission is terminated with a warning. Automatic start of a program failed.
Extended attributes (common information)	Severity	SEVERITY	Warning
	User name	USER_NAME	FTP login user
	Product name	PRODUCT_NAME	/HITACHI/JP1/FTP
	Object type	OBJECT_TYPE	JOB
	Object name	OBJECT_NAME	For SERVER: Transmission number For CLIENT: Transmission card name
	Root object type	ROOT_OBJECT_TYPE	JOB
	Root object name	ROOT_OBJECT_NAME	JP1/FTP/SERVER or JP1/FTP/CLIENT
	Object ID	OBJECT_ID	SERVER or CLIENT
	Occurrence	OCCURRENCE	END
	End time	END_TIME	End time
	End code	RESULT_CODE	2
(program-specific information)	Transmission number	A0	Transmission number
	Connection number	A1	Connection number
	Card name	A2	Transmission card name (client only)
	Name of the host at the connection destination	A3	Name of the host at the connection destination
	Number of the port at the connection destination	A4	Number of the port at the connection destination (client only)
	User name	A5	FTP login user name
	Transmission mode	A6	ASCII or BINARY

Attribute type	Item	Attribute name	Description
	Transmission command	A7	Send (overwrite), send (append), receive (overwrite), or receive (append)
	Compression mode	A8	Compressed or uncompressed
	Local file name	A9	Local file name
	Remote file name	B0	Remote file name (client only)
	Transmission start time	B1	Transmission start time
	Transmission end time	B2	Transmission end time
	Size of the transmitted data	B3	Size of the transmitted data (bytes)
	Comment	B4	Comment (client only)
	Transmission end status	B5	Normal termination
	Auto-start program name	C3	Auto-start program name

E. Format Files Used for Output of Definition Information

This appendix describes the format files that are used for output of definition information.

Sample format files are provided. For the storage locations and names of the sample format files, see *A. List of Files and Directories*.

You can edit a format file for ease of use, such as by specifying the information you wish to have output.

E.1 Creating a format file

Keywords are used to specify the information that is to be output to a format file.

During output, information is embedded into the format file at the locations of the corresponding keywords. Any characters other than the keywords (including linefeed and control characters) are output as is to the text file.

Notes about creating a format file

- A format file must be created within a size limit of 2,048 bytes. If a created file exceeds 2,048 bytes, any excess information will be ignored.

- You can specify a maximum of 50 keywords in a format file. If you specify more than 50 keywords, the excess keywords will be ignored.

(1) Keywords that can be specified

This subsection lists the keywords that can be specified in each type of format file.

Table E-1: Keywords that can be specified for login user definition information

Keyword	Description
`$ICNT`	Data count
`$USER`	User name
`$CDIR`	Current directory

Table E-2: Keywords that can be specified for auto-start programs

Keyword	Description
`$ICNT`	Data count
`$USER`	User name
`$AKEY`	Trigger for auto-start

Keyword	Description
$ANML	Name of the program to start when transmission ends normally
$AERR	Name of the program to start when transmission ends abnormally

Table E-3: Keywords that can be specified for transmission information

Keyword	Description
$ICNT	Data count
$USER	User name
$CARD	Transmission card
$LCAL	Local file name
$RMTE	Remote file name
$TRAN	Sending or receiving
$MODE	Transmission mode
$OUTK	Output type
$COMP	Compression mode
$FSIZ	Size check
$HOST	Remote host name
$PORT	Port number
$ANML	Name of the program to start when transmission ends normally
$AERR	Name of the program to start when transmission ends abnormally
$CMND	FTP command
$CMNT	Comment
$MULT	Single-file or multiple-file transmission

Table E-4: Keywords that can be specified for log information

Keyword	Description
$ICNT	Data count

Keyword	Description
$USER	User name
$CARD	Transmission card
$LCAL	Local file name
$RMTE	Remote file name
$TRAN	Sending or receiving
$MODE	Transmission mode
$OUTK	Output type
$COMP	Compression mode
$HOST	Remote host name
$PORT	Port number
$CMNT	Comment
$TRNO	Transmission number
$SVCE	Client or server
$STAT	End status
$STIM	Start time
$ETIM	End time
$TIME	Transmission period
$TSIZ	Size transmitted
$CONO	Connection number
$ETYP	Error type
$EPOS	Location of the error
$EMOD	Error module name
$ESYS	Name of the system call
$EMSG	Error message
$EPRT	Protocol message

F. Tools

The following table lists and describes the tools supported by JP1/FTP.

Table F-1: Tools supported by JP1/FTP

Function	Tool name
Initialize results	FTSTRANINIT.BAT FTSMGRINIT.BAT
Change monitored host information	FTSMGRHOST.BAT

These tools are executed as MS-DOS commands.

F.1 FTSTRANINIT.BAT and FTSMGRINIT.BAT - initialize results

FTSTRANINIT.BAT initializes the transmission results (log information, trace information, transmission number, and connection number), and FTSMGRINIT.BAT initializes the operation results of the Operations-Manager function (trace information).

(1) Names

FTSTRANINIT.BAT

FTSMGRINIT.BAT

(2) Storage directories

FTSTRANINIT.BAT:

JP1/FTP-installation-directory

FTSMGRINIT.BAT:

JP1/FTP-installation-directory\manager

(3) Execution formats

FTSTRANINIT.BAT

FTSMGRINIT.BAT

(4) Functions

FTSTRANINIT.BAT:

Initializes the transmission results as follows:

- Deletes log information.

- Deletes protocol traces.

- Deletes module traces.

- Resets the transmission number to its initial value.

- Resets the connection number to its initial value.

- Initializes the access log file (becomes 0 bytes).

FTSMGRINIT.BAT:

Deletes the trace information for operations management.

(5) Arguments

None.

(6) Execution permissions

Administrator permissions (administrator in Windows Server 2008)

(7) Notes

FTSTRANINIT.BAT:

Before you execute this tool, you must stop the client service, server service, and log service of JP1/FTP.

FTSMGRINIT.BAT:

Before you execute this tool, you must stop the agent service of JP1/FTP and close the Operations-Manager Console.

F.2 FTSMGRHOST.BAT - change monitored host information

FTSMGRHOST.BAT adds the local host to or deletes the local host from the monitored host information.

(1) Name

FTSMGRHOST.BAT

(2) Storage directory

JP1/FTP-installation-directory\manager\console

(3) Execution format

FTSMGRHOST.BAT /A|/D

(4) Function

FTSMGRHOST.BAT changes the information about the local host in the monitored host information.

(5) Arguments

1. `/A`

   Specifies to add the information about the local host to the monitored host information.

2. `/D`

   Specifies to delete the information about the local host from the monitored host information.

(6) Execution permissions

Administrator permissions (administrator in Windows Server 2008)

G. Linking to HP NNM Version 7.5 or Earlier

When you link JP1/FTP to HP NNM Version 7.5 or earlier, you can monitor from HP NNM the status of the JP1/FTP services and of file transmissions for abnormal termination.

Linkage with HP NNM is not supported in the IPF version or in Windows Server 2008.

G.1 System configuration for HP NNM linkage

Required programs

You must install the following programs on the computer where JP1/FTP is installed:

- SNMP service

You must also install the following programs on the computer that is to be used to monitor JP1/FTP:

- HP NNM
- JP1/FTP

Figure G-1: Example of a system configuration for linking to HP NNM
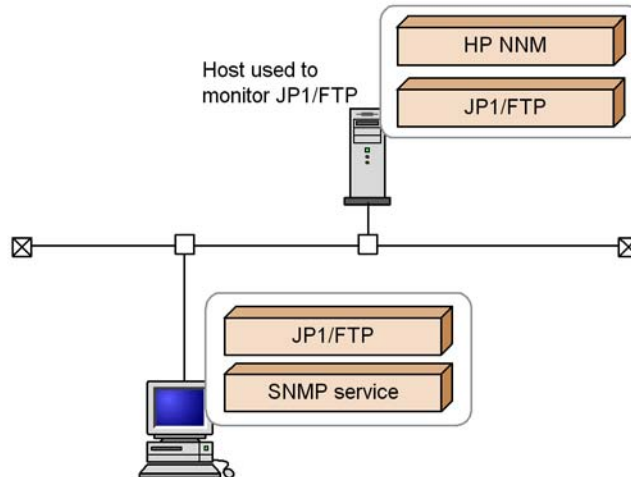
G.2 Specifying the settings for linking to HP NNM

Linkage with HP NNM requires the use of SNMP traps. If the SNMP service has not been installed, add the Windows SNMP service and then configure the service.

- Service to be added: SNMP service
- Configuration of the SNMP service

  Community name: Jp1Trap

  Trap destination: IP address of the host to which you wish to send notifications

G.3 Starting the service

This subsection describes how to start the service. If the service is already running, stop it and start it again.

To start the service:

1. From the Windows **Start** menu, choose **Control Panel**, **Administrative Tools**, **Services**, and then **SNMP Service**.

2. From the Windows **Start** menu, choose **Control Panel**, **Administrative Tools**, **Services**, and then **NNM Process Manager**.

3. In the Environment Definition dialog box, select **Link with NNM**, and then click **OK**.

   The linkage batch starts. Execute the linkage batch while the NNM service is running, without starting HP NNM itself.

   For details about the Environment Definition dialog box, see *3.1 Defining an environment for JP1/FTP*.

   How to suppress automatic display of the NNM console

   In a system running HP NNM 05-00 or later, the NNM console is displayed automatically. To suppress this display, add ovw to the HP NNM registry key OVConsole\CannotLaunchViewer. For details, see the HP NNM version 7.5 Help.

4. Start the JP1/FTP service.

   Start the JP1/FTP service. The status of the JP1/FTP service and the status of file transmissions are sent to HP NNM.

If the status symbols are not displayed correctly:

   The symbols might not be set correctly depending on the order in which JP1/FTP and HP NNM are installed, and when the **Link with NNM** option was enabled. In such a case, clear the **Link with NNM** check box in the Environment Definition dialog box, and then update the environment definition. After that, select the **Link with NNM** check box again, and then update the environment definition. The NNM console window then appears with the linkage enabled.

G.4 Using HP NNM to monitor transmission results

To use HP NNM's node submap to monitor transmission results:

1. From the Windows **Start** menu, choose **Programs**, **Network Node Manager**, and then **Network Node Manager**.

   HP NNM starts.

   The following figure shows an example of the node submap that displays the symbols for JP1/FTP.

   Figure G-2: Node submap
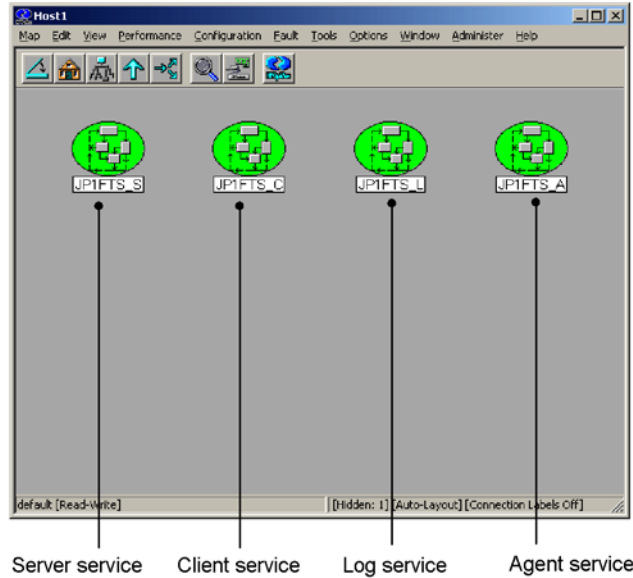
Relationships between traps and symbol colors

The following table shows the relationships between traps and the symbol colors.

Table G-1: Relationships between traps and symbol colors

Trap timing	Trap displayed in the event browser (Severity)	Symbol type: Symbol color
JP1/FTP service start	The status of *XX* has become `Normal` (Normal)	Started service: Green
Abnormal termination of a file transmission	The status of *XX* has become `Minor` (Normal). File name, user name, and card name are displayed.	Corresponding service (client or server): Yellow

Trap timing	Trap displayed in the event browser (Severity)	Symbol type: Symbol color
Warning termination of a file transmission (auto-start program start error)	The status of *XX* has become `Warning` (Normal). File name, user name, card name, and auto-start program name are displayed.	Corresponding service (client or server): Light blue
Service stop	The status of *XX* has become `Critical` (Warning)	Stopped service: Red

Legend:

XX: Service name

Display of symbols other than the above

- Immediately after installation

  There is no symbol (initial status). If HP NNM was linked previously, the color for the last trap sent during the previous operation remains in effect (this is usually red, indicating service stop). However, no trap might have been sent, depending on the computer status during the service stop and shutdown, in which case the color will not be red.

- When file transmission terminated normally after another file transmission terminated abnormally or with a warning

  The symbol color for the corresponding service (client or server) remains the same as for the abnormal termination or termination with a warning. To change the symbol color to green (running, no abnormal termination or termination with a warning), from the **Administer** menu, choose **JP1 Manager**, **Initialize Symbols**, and then **Normal**.

- When file transmissions alternated between abnormal termination and termination with a warning

  The symbol colors alternate.

G.5 Notes about linking to HP NNM

- If the event browser of HP NNM has terminated, receiving a trap from the agent does not change the symbol status. The symbol status remains unchanged even if you initialize the symbol.

- Immediately after you have configured the system or when you have deleted the node that corresponds to the agent host, the following error message might be displayed: `no status color can be set`. If you restart HP NNM or choose **Update** from the **JP1 Manager** menu, this error message will not be displayed again.

- If the host name of an agent host is changed, multiple symbols (symbols for the host name before and after the change) might be displayed on the node submap for that host in HP NNM. In such a case, delete the symbol that does not respond to a received trap, or delete both symbols and then display a new symbol with a new trap.

- If a path indicating the location of an application includes a directory name that contains a space, that application might not run (depending on the HP NNM version being used). To link HP NNM in such a case, install the application using a JP1/FTP installation path consisting of directory names that contain no spaces.

- Do not change the attributes or selection names of symbol objects managed by JP1/FTP.

- If you uninstall JP1/FTP, the symbols managed by JP1/FTP that are already displayed on the HP NNM map remain the same. If they are no longer needed, delete them.

- When you uninstall JP1/FTP from the manager, make sure that the service of HP NNM is running but HP NNM itself has terminated.

- When you uninstall HP NNM, make sure that you first stop the JP1/FTP service.

- Depending on the system environment, no symbol might be displayed when a trap is received. In such a case, open *JP1/ FTP-installation-directory*\NnmTmp\Jp1Nnm.log using a program such as Notepad and check for an error such as LoadLibrary Failed. If this error has been issued, you might be able to receive traps by changing the service account of HP NNM to another account (we recommend that you have a built-in account).

- The service name of HP NNM is JP1/Cm2/Network Node Manager in HP NNM 01-00 or 02-00 and NNM Process Manager in HP NNM 05-00 or later.

- If you use long host names with DNS, limit the maximum length of an agent host name to 228 bytes. If you use a longer host name, the manager's symbols will not be created.

H. Notes about Operation

- Files are locked while they are engaged in file transmission (lock processing is performed). During send processing, such files can be read, but they are write-protected. During receive processing, the files are protected from both read and write operations.

- If file transmission is interrupted, such as by forced termination of file receive processing or by a transmission error, an incomplete file might be created. If overwrite receive processing is interrupted, the original file cannot be restored.

- JP1/FTP does not recognize files on network drives. It treats each such file as a single Windows file. Therefore, you can use files on a network drive only in an environment that supports them as Windows files and within the supported operation range.

  Due to problems specific to network drives, their settings, and the environment configuration, transmission might fail. Even if transmission is successful, the contents of a transmitted file might not be written correctly.

- JP1/FTP does not support IPv6.

- If you use a network relay device (such as a router or a firewall) that performs IP address translation (such as Network Address Translation (NAT) or IP masquerading), file transmission via the device might fail due to use of the FTP protocol. Make sure that the device in use supports the FTP protocol.

  Note that the Operations-Manager Console functions cannot be used in an environment where IP addresses are translated.

- If you connect an Operations-Manager Console to an Operations-Manager Agent running on a separate computer, the Operations-Manager Agent must be on the same LAN. However, even if the Operations-Manager Agent is on the same LAN, but the physical host for the Operations-Manager Agent (the host that is returned by the `hostname` command) is not at the same LAN address as for the Operations-Manager Console (including the loopback address), the connection will fail.

- The Operations-Manager functions are supported even if the JP1/FTP versions for the Operations-Manager Console and the Operations-Manager Agent are different.

- JP1/FTP uses the IP addresses shown in the table below.

Table H-1: IP addresses used by JP1/FTP

No.	Usage		IP address to be used
1	Client	IP address for control connection	IP address that is assigned automatically by the OS
2		IP address for data connection	IP address for control connection
3	Server	IP address for control connection	IP address that accepted the connection
4		IP address for data connection	IP address for control connection
5	IP address of the Operations-Manager Agent		Physical IP address (IP address corresponding to the host name that is returned by an OS command (such as hostname))
6	IP address of the Operations-Manager Console		IP address that is assigned automatically by the OS

- Provided below are notes about using JP1/FTP in a cluster system configuration (in an HA configuration that supports system switching). For details about the definition of JP1/FTP in an environment where logical addresses are used, see *3.11 Using JP1/FTP in a multiple IP address environment*. A cluster system is the same as what is referred to as a node switching system in the JP1 manuals.

  1. Failover is not supported.

  2. Physical IP addresses must be enabled (IP addresses corresponding to the host names that are returned by an OS command, such as hostname).

  3. When JP1/FTP is run as the FTP server, file transmission is supported whether the FTP client specifies a local IP address or a physical IP address as the connection target.

  4. When JP1/FTP is run as the FTP client, re-transmission initiated by a method such as automatic retries of file transmission is not performed in the event of a failure.

  5. FTP custom jobs can be used to perform file transmission.

  The following notes apply when the environment definition for a multiple IP address environment is not used:

  1. When JP1/FTP is run as the FTP client, the IP address for connection is usually a physical IP address because it is assigned automatically by the OS.

  2. JP1 events are sent to the physical IP address (IP address corresponding to the host name that is returned by an OS command, such as hostname).

  3. When JP1/FTP is run as the FTP server, the physical host name (host name

235

returned by an OS command, such as `hostname`) is set in message 220, which is returned when control connection is established.

- The following notes apply when JP1/FTP is used in Windows Server 2008:

  1. You must start commands, GUIs, and tools as administrator. If a non-administrator user attempts to start them, an error message is displayed and processing terminates.

  2. To start JP1/FTP from another linked product, the administrator must be executing that linked product. Otherwise, startup of JP1/FTP might fail.

  3. A program that calls the API library must be executed by the administrator.

  4. The JP1/FTP service account can be changed only to Administrator. If an attempt is made to change it to a non-administrator user, JP1/FTP processing might be affected adversely and the service might stop during operation.

  5. An auto-start program cannot have a graphical user interface. If you specify that a program with a graphical user interface is to start automatically, JP1/FTP processing might be affected adversely and the service might stop during operation.

  6. If you change permissions from a non-administrator user to the administrator and then start a command or GUI, a User Account Control dialog box is displayed. `Unidentified Publisher` is displayed in this dialog box, but this is not a problem. Click **Allow**, and then start the command or GUI.

  7. Class-3 and class-4 characters are not supported.

  8. Help for GUIs is not available.

- Before you change the system time, stop all JP1/FTP services and GUIs. To reset the system time, you must initialize the transmission logs.

  The procedure for resetting the system time is as follows:

  1. Stop all JP1/FTP services and GUIs.

  2. Back up the log information file to a desired directory.

  3. Change the system time.

  4. Initialize the transmission results. For details about the initialization method, see *F.1 FTSTRANINIT.BAT and FTSMGRINIT.BAT - initialize results*.

  5. Start the JP1/FTP services and GUIs.

I. Changes in Each Version

(1) Changes in 09-00

- A non-administrator user or a user without administrator permissions can now reference the definition information.

- The `PORT` command checking specifications have been changed for the FTP server.

- The `ftstran` command's return value (`9900001`) has been added.

- The `ftsregc` command's return value (`9900001`) has been added.

- The `ftshistory` command's return value (`9900001`) has been added.

- The `fts_ftp_open` function's return value (`0x2FFFFF13`) has been added.

- Messages for `ftstran` command execution have been added.

- Messages for `ftsregc` command execution have been added.

- Messages for `ftshistory` command execution have been added.

- Messages for `ftsload` command execution have been added.

- Messages for `ftssave` command execution have been added.

- Notes about using Windows Server 2008 have been added.

- The function for using the access control function to change the root directory of absolute path names has been added.

- The FTP connection response message control function has been added.

- Information has been added to the effect that when JP1/FTP is installed on multiple computers and JP1/AJS2 is linked, all installed JP1/FTPs in the system configuration must be the same version.

- Information about firewall passage directions has been added.

- The restriction on transmitting a file of more then 4 gigabytes has been removed (previously, transmission of a file of more than 4 gigabytes was supported only by the IPF version).

- The **Defining program** settings have been added to the Set Properties of Custom Job dialog box.

(2) Changes in 08-00

- Access logs are now collected.

- A single-file/multiple-file transmission selection function has been added.

237

- A function for controlling remote host connections has been added.
- A function for specifying the IP address to be used in a multiple IP address environment has been added.

(3) Changes in 07-50

- In Windows XP, JP1/FTP can now be linked to HP NNM.
- Event logs can now be output at the start of transmission.
- Single-byte spaces are now permitted in file path names.
- The PASV mode is now supported.
- When a protocol trace is displayed, the specified transmission is now displayed at the top.
- An event log message has been added at the start of transmission.
- Linkage with JP1/AJS2 Smart Edition is now supported.
- A tool for collecting error information has been added.
- Initialization tools have been added.
- A tool for changing managed host information has been added.

(4) Changes in 07-10

- The `ftshistory` command for displaying log information from the command line has been added.
- Actions for event IDs `2`, `4`, and `7` in the messages displayed in Event Viewer have been added.
- Messages for the `ftshistory` command execution have been added.

Index

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