EPSON®
Remote Maintenance Software Ver.2.01
Technical Reference Guide

EPSON

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Revision Information

Revision	Page	Altered Items and Contents
Rev. A	All pages	Newly authorized
Rev. B	All pages	ERM Ver.2 correspondence
Rev. C	1-7,1-8,3-5,3-41,3-42,3-43,3-48,3-49,4-46,4-49,4-57,4-61	ERM Ver.2.01 correspondence
	1-6,3-1,3-43,3-48,4-15,4-16,4-17	SR-610 correspondence
	1-1,3-2,3-3,3-41,4-23,4-26	DIP switch settings for TM printer and customer display added
	4-7	Description on JOB information added
	4-23	Description on Target information added
	4-25,4-26	Description on Client Device Information added
	4-29,4-34,4-55,4-59,4-64	Note on proxy server deleted
	4-7,Appendix-A	Return Code added

Contents

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Chapter 4 *How to Operate the Remote Maintenance Software*

Appendix-A *Return Code and Return Description*

Chapter 1

Outline of the Remote Maintenance Software

This chapter describes the outline of the Remote Maintenance Software.

Outline

With the Remote Maintenance Software, you can manage clients by issuing various jobs from a server to clients and obtain the execution results via the internet or LAN system. It enables you to rewrite or obtain definition data of clients in many shops or on many floors all at once. You can also rewrite the printer firmware. Therefore, a maintenance person does not need to go to every client to rewrite data, which makes maintenance more effective.

Jobs are not executed by a server, but executed by clients requesting service.

Setup

When you use the Remote Maintenance Software, you need to prepare a server (Windows XP Professional/Windows Server 2003) and establish a network where you use the software.

If you perform maintenance via the internet, obtain a domain for the server.

If you perform maintenance via a LAN, obtain a domain and IP address for the server.

You need to set up the software on a server and each client and configure settings.

It is recommended that you prepare a dedicated server for the Remote Maintenance Software.

Set DIP switch 2-1 of the Epson TM printer of a client to "ON."

Flow of Maintenance

The maintenance flow is shown below.
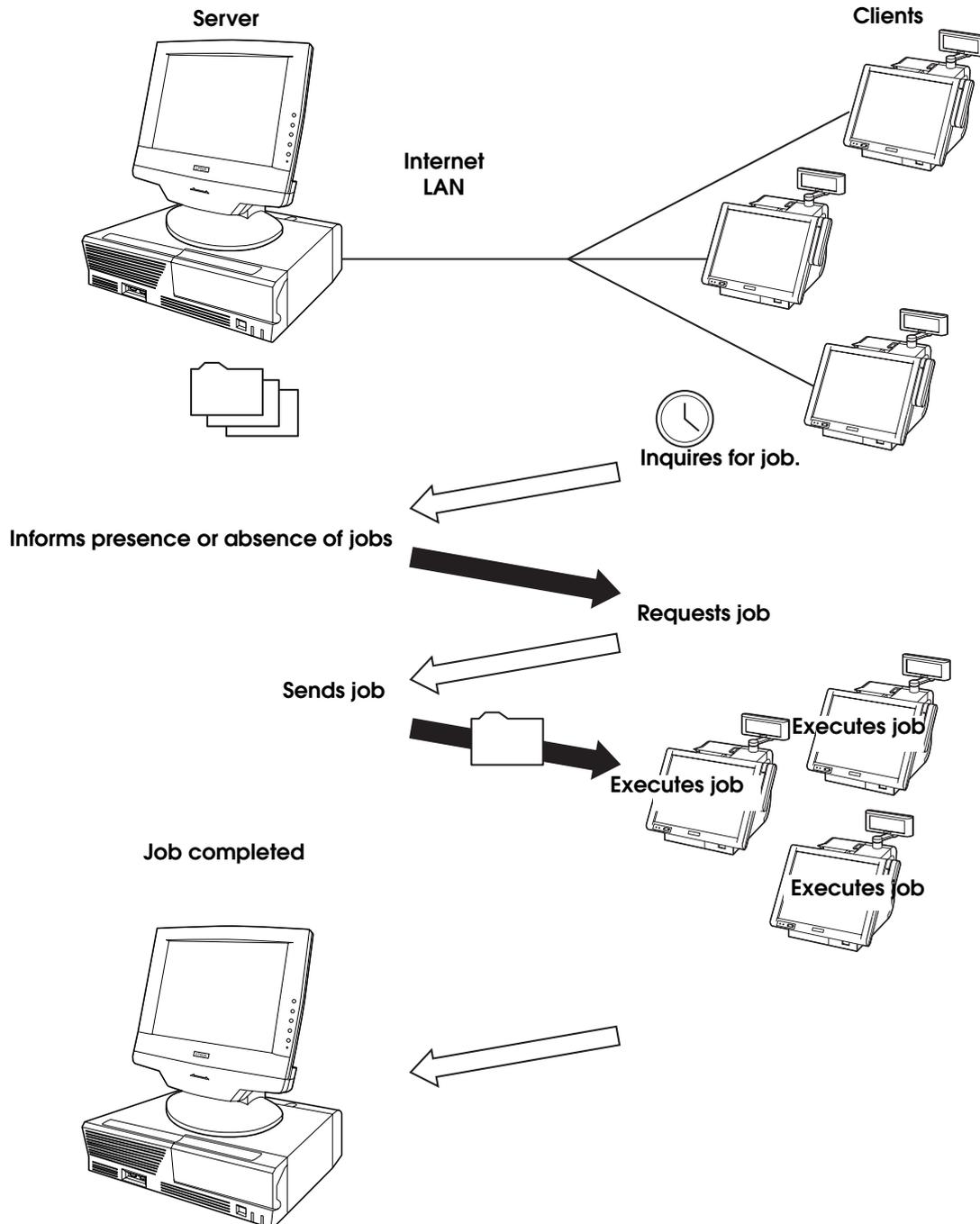
1. A server creates a job.

2. Clients inquire the server for a job at a specified time or at specified intervals.

3. The server informs the client of the presence or absence of a job.

4. If the server confirms jobs, the client requests the job.

5. The server sends the job requested by the client.

6. The client executes the job at a specified time.

7. The client sends the execution result to the server.

8. The execution result is displayed on the server.

Functions

The Remote Maintenance Software has the following functions (jobs that can be created):

- Obtaining client information

- Obtaining the device information of clients, printer printing, display on the customer display

- Obtaining client event logs

- Obtaining the client system logs*

- Updating printer firmware

- Updating the Remote Maintenance Software on client

- Reading/writing printer NV memory

- Reading/writing 28 key POS keyboard definition data

- Reading/writing MSR setting data

*Added to the Ver.2 or later.

✎ *Note:*
The Remote Maintenance Software does not have functions for OS maintenance, security, update of applications, or 60 key POS keyboard.

Remote Maintenance Software main screen

The main screen of the Remote Maintenance Software on server is shown below.
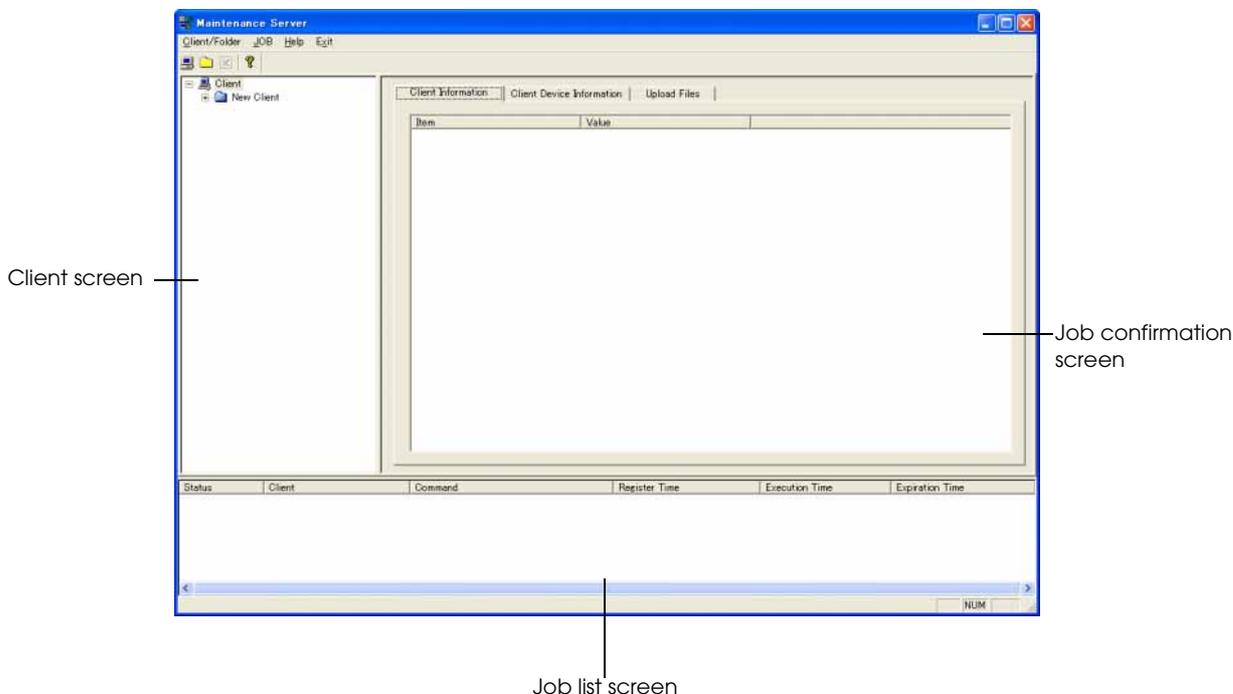
[Client screen]	Displays clients managed by a maintenance server in a tree view. You can register clients and create folders. Creating folders enables you to manage clients with folders.
[JOB confirmation screen]	You can confirm job execution results. The [Client Information] tab displays client information, and the [Upload Files] tab displays the files read from clients.
[JOB list screen]	Displays operations a maintenance server performed on clients and execution status as a job list. You can delete jobs and confirm each execution result. You can also make a job active by right-clicking an inactive job and selecting [Active] from the menu.

Screen on client

When the Remote Maintenance Software is installed on a client, the following icon is displayed on the task bar.

Environment

The environment of the system and OS for use of the Remote Maintenance Software is as follows.

Server

Hardware	OS	Recommended specifications
PC AT compatible machine	Windows Server 2003 *	CPU: 550MHz or more Memory: 256MB or more HDD: 2GB free space
	Windows XP Professional Service Pack2	CPU: Clock 300MHz or more RAM: 128MB or more HDD: 2.1GB free space

✎ *Note:*
The number of clients that can be connected with a maintenance server is 15 for a server with Windows Server 2003, and 10 for a server with Windows XP Professional.

* A server with Windows Server 2003 or Web Edition cannot be used as a server.

Client

Hardware	IR-700
	SR-610
OS	Windows 2000 Professional Service Pack4
	Windows XP Professional Edition Service Pack2
TM Printer *1,*2	Printer embedded or printer with serial interface connection
Customer display *2	DM-D120,DM-D110,DM-D210,DM-D500
Drawer	Not supported.
Keyboard	DM-KX028 *3
MSR	DM-MX123 (dedicatd to IR-700), DM-MS112 (dedicatd to SR-610)

*1) The TM printers with parallel, USB, Ethernet, or wireless LAN connection are not supported. DSW2-1 of the TM printer needs to be turned to "ON."

*2) When two printers or customer displays are connected, one of them cannot be supported.

*3) The DM-KX060 are not supported.

Restrictions

The restrictions for each function of the Remote Maintenance Software (Ver. 2.01) are shown as follows.

Function	APD is already installed	Operator is required for client	Reboot is required	Application program being executed on client	Touch panel driver is not installed *1	Pass through connection
Get Client Information	*2	Not Required	Not Required	*3		
Get Device Information	*4	*5	Not Required	*6		*9
Get Event Log	OK	Not Required	Not Required	Not Required		
Get System Log	OK	Not Required	Not Required	Not Required		
Update Printer Firmwawe	NG	Not Required	Not Required	Required		*10
Update Maintenance Client	OK	Required	Required *7	Required		
Write Printer NV Memory	NG	Not Required	Not Required	Required		
Write 28Keyboard Definition Data	OK	Not Required	Not Required	Required	*1	
Write MSR Settings Data	OK	Not Required	Not Required	Required	*1	
Read Printer NV Memory	NG	Not Required	Not Required	*8		
Read 28Keyboard Definition Data	OK	Not Required	Not Required	Not Required	*1	
Read MSR Settings Data	OK	Not Required	Not Required	Not Required	*1	

*1) If the touch panel driver is not installed on a client, the customer display/printer may display/print meaningless characters.

*2) Obtaining the version of printer firmware is not possible.

*3) When an application on a client is using the printer, obtaining the version of printer firmware is not possible.

*4) Obtaining the printer status is not possible. Printer printing and DM-D display test is not possible.

*5) An operator to confirm the client is required for printer printing and DM-D display test.

*6)When an application on a client is using the printer, obtaining the status of printer firmware is not possible.

*7) The Remote Maintenance Software is updated after a client is rebooted.

*8) When an application on a client is using the printer, obtaining data is not possible.

*9) In case of the pass-through connection, do not send the job of printer printing twice. The second job may not be printed.

*10) In case of the pass-through connection, this function cannot be executed.

Do not use the Remote Maintenance Software for systems operating for 24 hours.

Version of the Remote Maintenance Software

The Remote Maintenance Software version must be the same one between a server and clients to execute all the functions.

If the Remote Maintenance Software versions are different between a server and client, execute **Update Maintenance Client** to update the Remote Maintenance Software version on the client.

The Remote Maintenance Software can execute jobs depending on the following versions of a server and clients.。

		Server	
		Ver. 1	Ver. 2
Client	Ver. 1	OK	*
	Ver. 2	*	OK

  * Only the job of "Update Maintenance Client" can be executed.

Chapter 2

Operation of the Remote Maintenance Software

This chapter introduces operational examples of EPSON POS system maintenance with the Remote Maintenance Software. The various case examples will help you make an operational plan.

Addition and Setting of Clients

When you add a client to a maintenance system that is already operating, follow the steps below to manage the client information.

1. Install the Remote Maintenance Software (ERMClient) on the client.

2. Make the following settings for the maintenance server on the client.

    • Polling time setting

    • Server URL setting

3. Connect the client to a network.

4. On a maintenance server, register the client.
    You can change client names and create folders to manage clients for each shop or floor easily.

5. Execute **Get Client Information** to obtain the information about the added client only.

6. Obtain and manage the client information.

Perform the steps above for each client and manage the client information for maintenance. No tool to manage the information is provided; it is recommended to manage it with an application such as a spreadsheet.

Polling Setting on Client

The most appropriate polling setting differs depending on the network environment. Refer to the following description to configure your most appropriate settings.

LAN Environment

Client polling can be set to be short. (1 to 10 minutes)

Maintenance can be performed quickly because clients can frequently request jobs from a server.

Internet Environment

In case of high-speed line

Client polling can be set to be short as it is in the LAN environment.

In case of dial-up

CALL is performed for each polling. You can set polling to suit for your environment, but perform polling at least once a day.

For Urgent Maintenance

When you want to execute jobs at times other than the time set by a maintenance server, a client operator (manager) can download the jobs.

Updating Printer Firmware

Perform an update of the printer firmware on clients that need it.

⚠ CAUTION:

Be sure to confirm that applications on the client are closed before executing this job. If the job is executed during printer operation, the firmware can be damaged.

Flow of Printer Firmware Update

1. Save a printer firmware update file in a maintenance server.

2. Confirm that applications on the client are closed.

3. The maintenance server makes **Update Printer Firmware** active.

4. An client operator executes **Download JOB**.

5. The maintenance server makes **Get Client Information** active.

6. The client operator executes **Download JOB**.

7. The maintenance server obtains the client information to confirm the update.

Updating the Remote Maintenance Software

When you update the Remote Maintenance Software, you need to update the Remote Maintenance Software on all the clients.

Reboot the client to enable the Remote Maintenance Software after updating.

Flow of Remote Maintenance Software Update

1. Confirm that applications on the client are closed.

2. The maintenance server makes **Update Maintenance Client** active.

3. An client operator executes **Download JOB**.

4. When the Remote Maintenance Software has updated, the client operator reboots the client.

5. The maintenance server makes **Get Client Information** active.

6. The client operator executes **Download JOB**.

7. The maintenance server obtains the client information to confirm the update.

Rewriting Printer NV Memory/Definition Data of 28 Keyboard/Setting Data of MSR

Perform these jobs on clients that need them.

Close the applications on a client because devices cannot be used during data rewriting.

Flow of Rewriting Printer NV Memory/Definition Data of 28 Keyboard/Setting Data of MSR

1. Save a file to rewrite in a maintenance server.

2. Confirm that applications on the client are closed.

3. The maintenance server executes the appropriate one of the following.

   • Write Printer NV Memory

   • Write 28Keyboard Definition Data

   • Write MSR Setting Data

4. At the polling time set on a client, job reference, download, and execution are executed.

5. The printer NV memory/definition data of 28 keyboard/setting data of MSR is updated.

6. The client notifies the maintenance server of the job execution result.

7. The new data becomes effective when the update has been completed.

Backup of Jobs

When you want to leave a history, perform backup of jobs. Perform backup of the database periodically. This should be performed by a server only.

The history of jobs is saved in a file named "ERM.mdb" in the folder (Default setting is C: \Program Files\EPSON\ERM Server\) where the ERM Server is installed. Copy the file to a backup folder when necessary.

Backup Procedure

Open the directory where the ERM Server is installed, and copy the ERM.mdb. The folder directory is \C:\Program Files\EPSON\ERM Server\ by default.

Compacting ERM.mdb

As you use the Remote Maintenance Software, executed jobs accumulate and the size of the ERM database increases. Compact the ERM.mdb periodically. This should be performed by a server only.

Compacting Procedure

1. Select [Start], [Control Panel], [Control Tool], and then [Data Source (ODBC)].

2. The ODBC Date Source Administrator starts up. Select [System DSN]. From the system data source list, select "ERM," and then click [Configure].
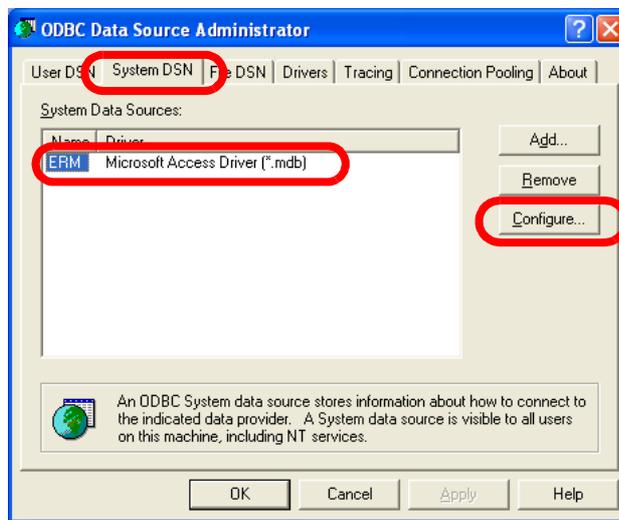
3. The OCBC Microsoft Access Setup screen appears. Click [Compact...].
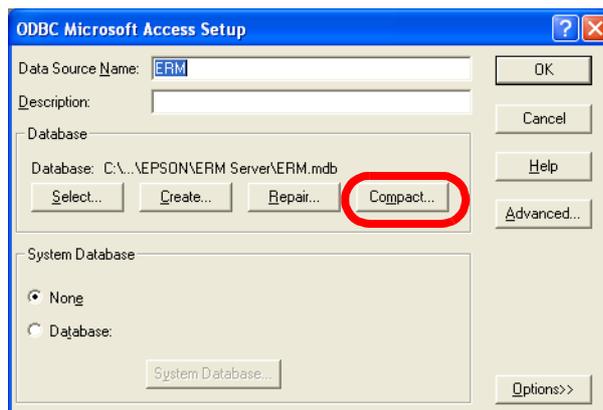
4. The Database to Compact From screen appears. Select "ERM.mdb," and then click [OK].
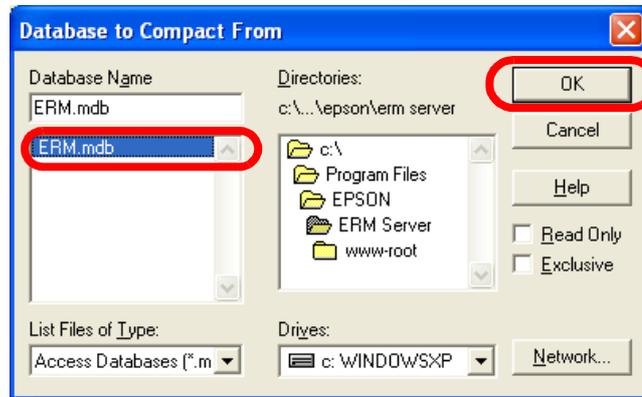
5. The Database to Compact to screen appears. Select "General" for Locale and "Version 4.x" for Format, and then click [OK].
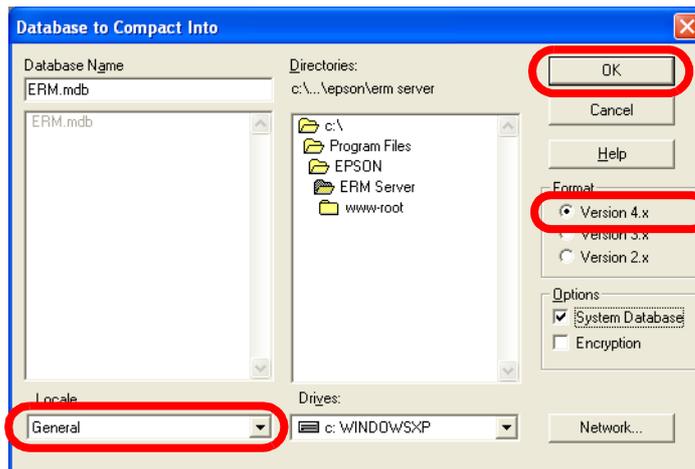
System Date/Time Setting on Maintenance Server and Clients

Difference between the date and time on a maintenance server and those on clients causes time lag between the setting on the maintenance server and execution time on clients. It is recommended that you set the same time on the maintenance server and clients. If there is a time difference between the location of the server and client, set the local date and time on the client.

If the execution date and time set by a server has already passed on a client when a job is downloaded on a client, it is immediately executed.

Chapter 3

Installation and Setup for Remote Maintenance Software

This chapter describes how to install and set up the Remote Maintenance Software.

Preparing

❏ Server

Hardware	PC AT compatible machine (For recommended specifications, see"Environment" on page 1-6.)
OS	Windows XP Professional Service Pack2 or later/ IIS Windows Sever 2003 / IIS

❏ Domain or IP address

Obtain a domain or IP address for the server.

❏ Network environment

Network for use

❏ Remote Maintenance Software

Saving the Remote Maintenance Software in a USB memory card makes it easier to install it on a server and clients.
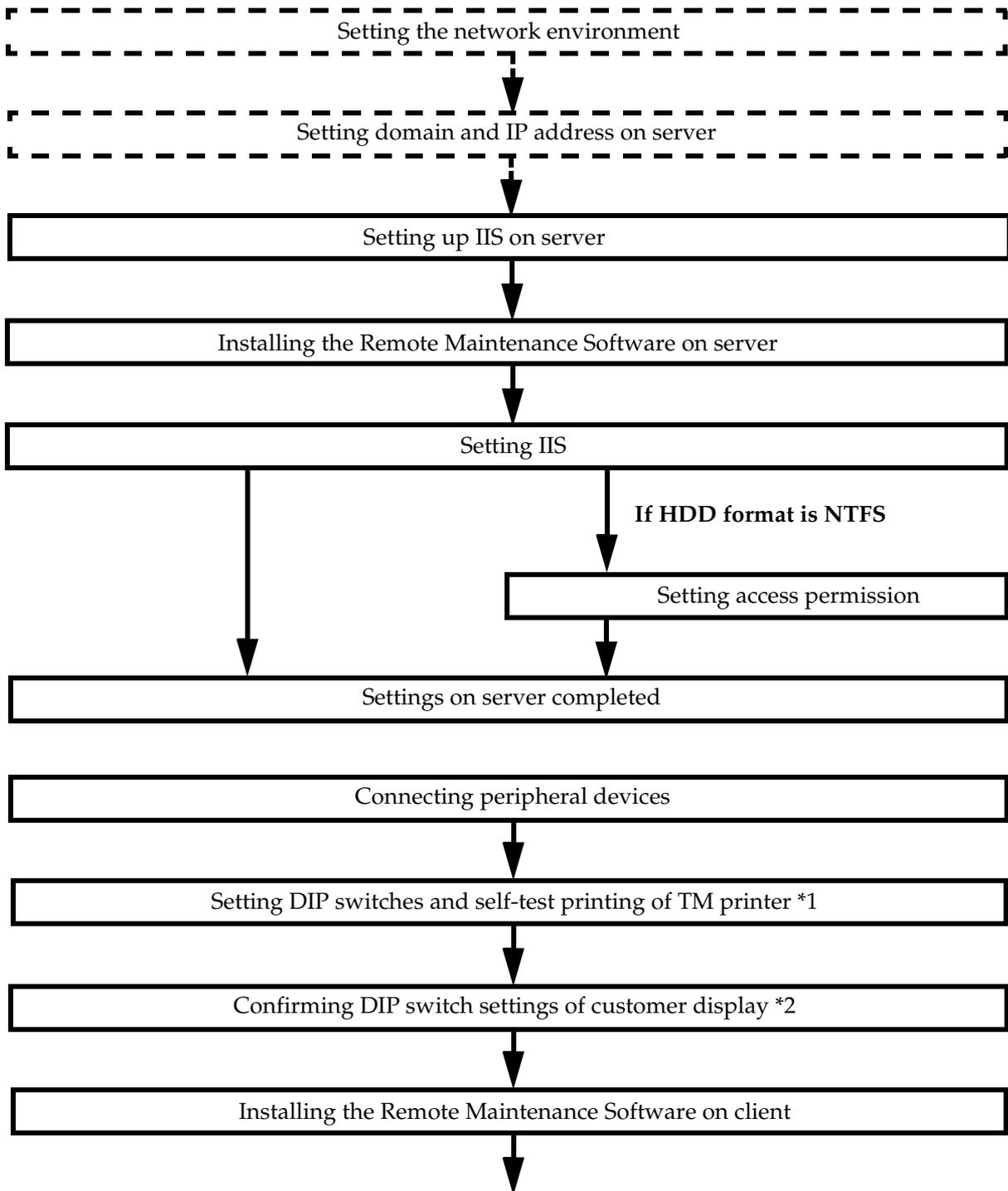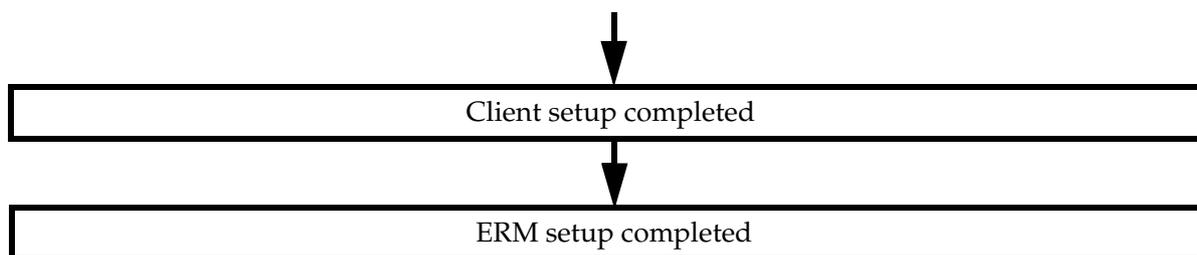
❏ Client

IR-700

SR-610

Installation and Setup Procedure

Flow of Installation and Setup

The flow of installation and setup for the Remote Maintenance Software is shown below.

```
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
│           Setting the network environment           │
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
                          ↓
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
│         Setting domain and IP address on server      │
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
                          ↓
┌─────────────────────────────────────────────────────┐
│                 Setting up IIS on server             │
└─────────────────────────────────────────────────────┘
                          ↓
┌─────────────────────────────────────────────────────┐
│     Installing the Remote Maintenance Software on server │
└─────────────────────────────────────────────────────┘
                          ↓
┌─────────────────────────────────────────────────────┐
│                     Setting IIS                      │
└─────────────────────────────────────────────────────┘
       │                             │
       │                  If HDD format is NTFS
       │                             ↓
       │             ┌────────────────────────────────┐
       │             │      Setting access permission  │
       │             └────────────────────────────────┘
       ↓                             ↓
┌─────────────────────────────────────────────────────┐
│               Settings on server completed           │
└─────────────────────────────────────────────────────┘

┌─────────────────────────────────────────────────────┐
│               Connecting peripheral devices          │
└─────────────────────────────────────────────────────┘
                          ↓
┌─────────────────────────────────────────────────────┐
│   Setting DIP switches and self-test printing of TM printer *1 │
└─────────────────────────────────────────────────────┘
                          ↓
┌─────────────────────────────────────────────────────┐
│   Confirming DIP switch settings of customer display *2 │
└─────────────────────────────────────────────────────┘
                          ↓
┌─────────────────────────────────────────────────────┐
│     Installing the Remote Maintenance Software on client │
└─────────────────────────────────────────────────────┘
                          ↓
```

Client setup completed

ERM setup completed

Main settings you should perform.

*1   Set the DIP switches of the TM printer as follows:
Data bits=8, Parity=None, Stop bits=1, DSW2-1: ON
(For information on how to set the DIPswitches, refer to
the Technical Reference Guide for the TM printer.)

*2   Set the DIP switches of the customer display as follows:
Data bits=8, Parity=None, Stop bits=1
(For information on how to set the DIPswitches, refer to
the User's Manual for the customer display.

Installation and Setup for Maintenance Server

Installation and setup procedures differ depending on the OS and format type of the hard disk drive on the server.

Installing the Remote Maintenance Software

Follow the steps below to install the Remote Maintenance Software.

1. Connect a device (for example, a USB memory card) storing the Remote Maintenance Software, and double-click "ERMServer" to start the installation.

2. The Welcome screen appears. Click [Next].

3. The Choose Destination Location screen appears. Specify a place to store, and click [Next].

4. The Select Program Folder screen appears. Specify the program folder name, and click [Next].

5. The Setup Complete screen appears. Select "Yes, I want to restart my computer now.," and click [Finish].


6. Reboot the maintenance server.

Installing the Internet Information Services (IIS) for Windows XP

If your OS is Windows XP, follow the steps below to install the Internet Information Services.

1. From the Start menu, select [Control Panel], [Internet and Network Connections], and then [Network Connections]. Right-click on [Connection of Local Area], and select [Properties] from the menu.

2. The Local Area Connection Properties screen appears. Select the Internet Protocol (TCP/IP), and click [Properties].
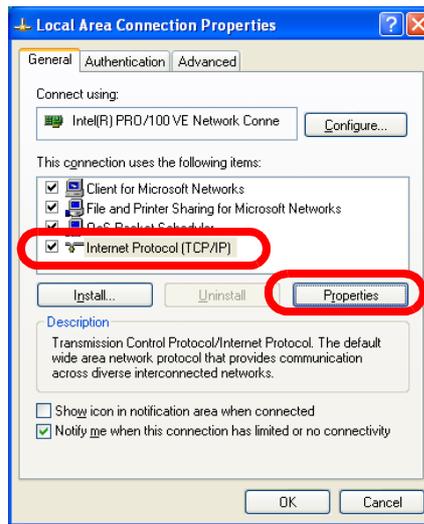
3. The Internet Protocol (TCP/IP) Properties screen appears. Select "Use the following address:" Then enter the IP address prepared and click [OK]. Ask your network administrator for the other settings.
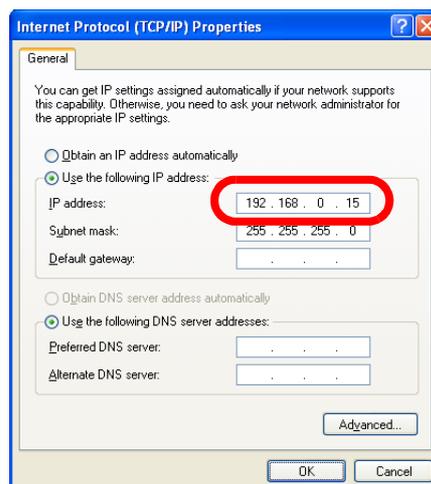
4. Click [OK] on the Local Area Connection Properties screen.

5. Confirm whether the Internet Information Service (IIS) is already set up. If it is set up, skip the following steps.
(From the Start menu, select [Control Panel], [Performance and Maintenance], and then [Administrative Tools] to display [Internet Information Service (IIS)].)

6. From the Start menu, select [Control Panel], and then [Add/Remove Programs].

7. The Add/Remove Programs screen appears. Click [Add/Remove Windows Components].

8. The Windows Components screen appears. Check the checkbox for the Internet Information Service [IIS], and click [Next].
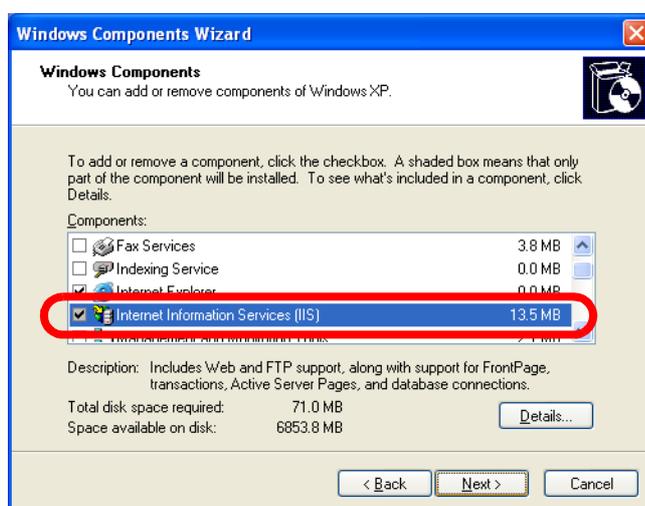
9. Installing the Internet Information Service (IIS) is started.
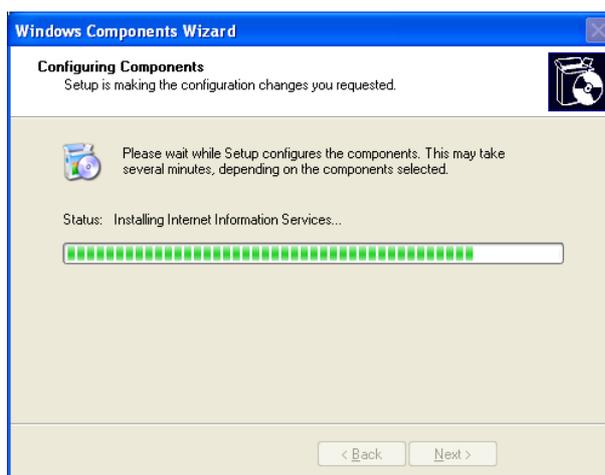
10. The following screen may appear during install.
    In that case, insert the Windows XP Professional install CD into the CD drive, specify for
    "Copy files from," and then click [OK].
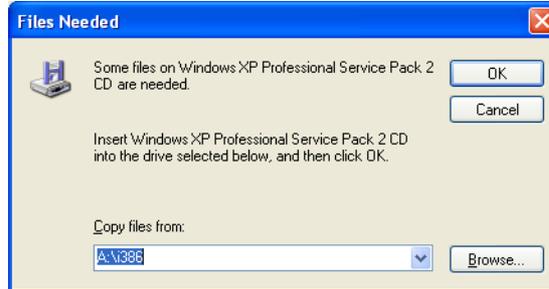
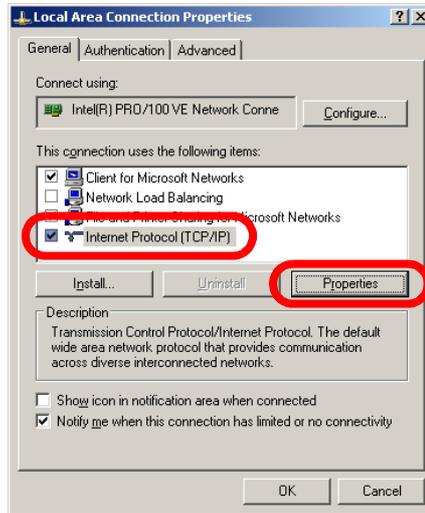11. The Completing the Windows Components Wizard screen appears. Click [Finish].

12. Reboot the maintenance server.

13. Confirm that the Internet Information Service (IIS) is set up.
    (From the Start menu, select [Control Panel], and then [Administrative Tools] to display
    [Internet Information Service (IIS)].)

Installing the Internet Information Services (IIS) for Windows Server 2003
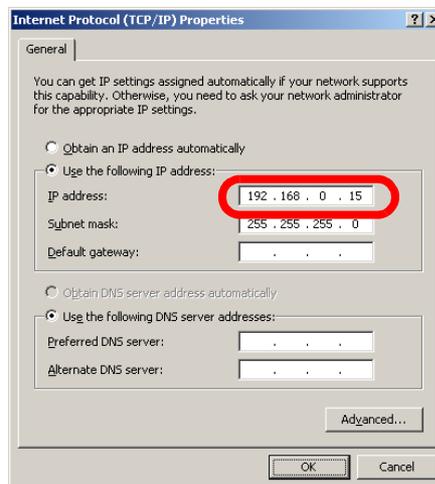
If your OS is Windows Server 2003, follow the steps below to install the Internet Information
Services.

1. From the Start menu, select [Control Panel], [Network Connections], and then [Local
   Area Connection Properties].

2. The Local Area Connection status screen appears. Click [Properties].

3. The Local Area Connection Properties screen appears. Select the Internet Protocol (TCP/IP), and click [Properties].

4. The Internet Protocol (TCP/IP) Properties screen appears. Select "Use the following address:" Then enter the IP address prepared and click [OK]. Ask your network administrator for the other settings.


5. Click [OK] on the Local Area Connection Properties screen.

6. Confirm whether the Internet Information Service (IIS) is already set up. If it is set up, skip the following steps.
    (From the Start menu, select [Control Panel], and then [Administrative Tools] to display [Internet Information Service (IIS)].)

7. From the Start menu, select [Control Panel], and then [Add/Remove Programs].

8. The Add/Remove Programs screen appears. Click [Add/Remove Windows Components].

9. The Windows Components screen appears. Check the checkbox for the Application Server, and click [Details...].
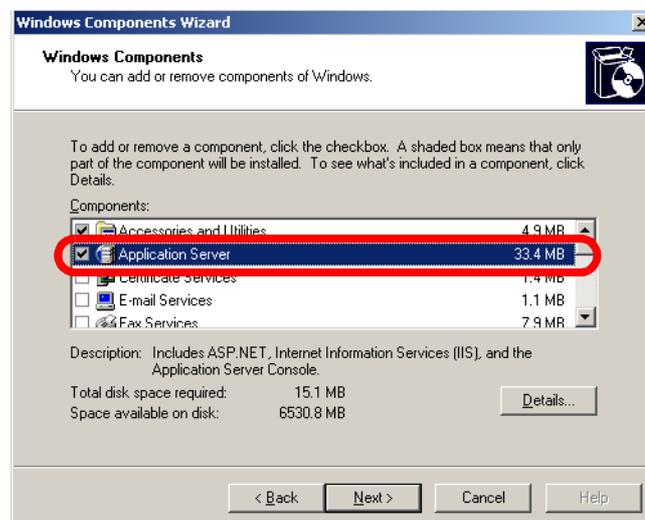
10. The Application Server screen appears. Check the checkbox for the Internet Information Service [IIS], and click [OK].
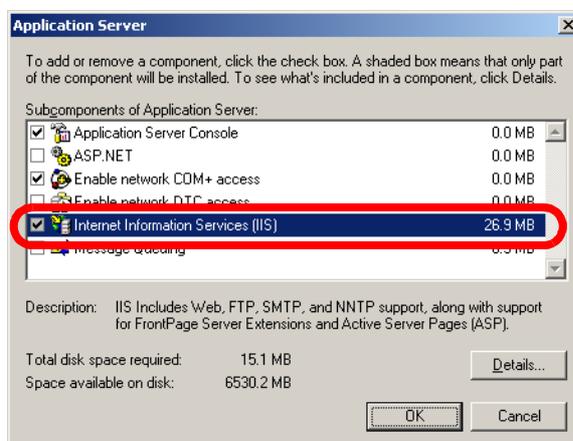
11. The Windows Components screen appears again. Click [Next].
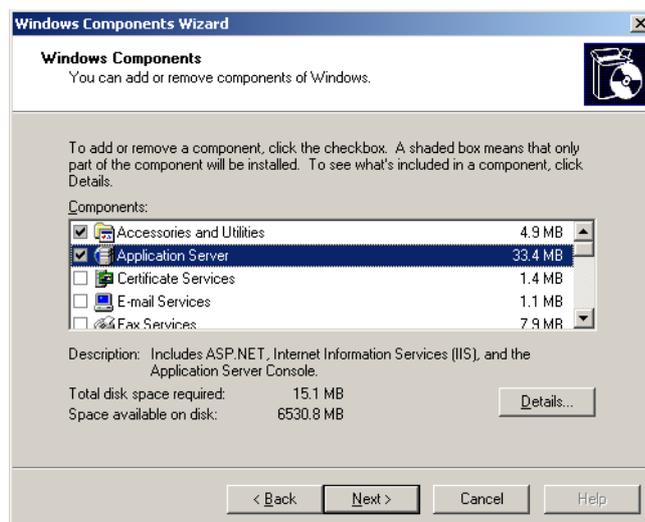
12. Installing the Internet Information Service (IIS) is started.

13. A screen requesting a disk may appear during install.
    In that case, insert the Windows Server 2003 install CD into the CD drive, and then click [OK].

14. The Completing the Windows Components Wizard screen appears. Click [Finish].

15. Reboot the maintenance server.

16. Confirm that the Internet Information Service (IIS) manager is set up.
(From the Start menu, select [Control Panel], and then [Administrative Tools] to display [Internet Information Service (IIS)].)

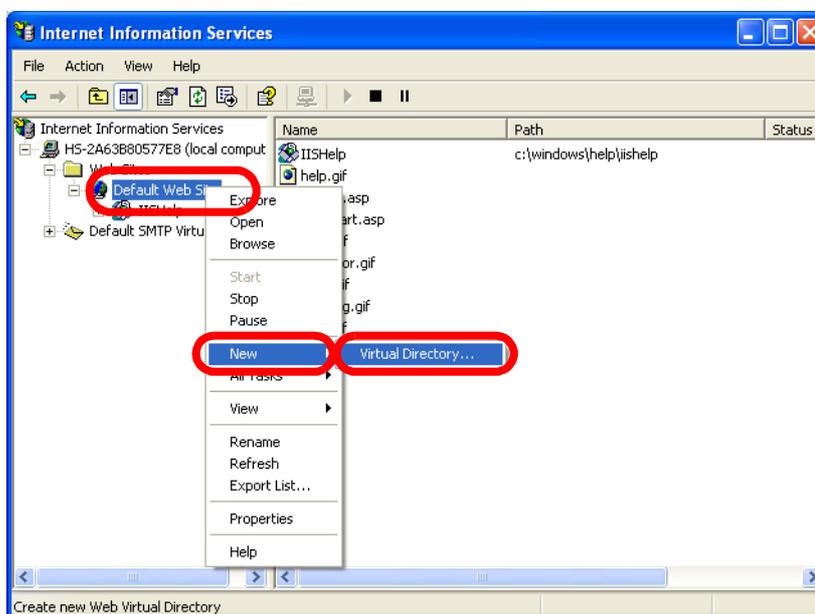### Setting the Internet Information Services (IIS) for Windows XP

If your OS is Windows XP, follow the steps below to set the Internet Information Services.

✎ *Note:*
The following steps are described, assuming that the Remote Maintenance Software is installed in the default directory: C:\Program Files\EPSON\ERM server\).
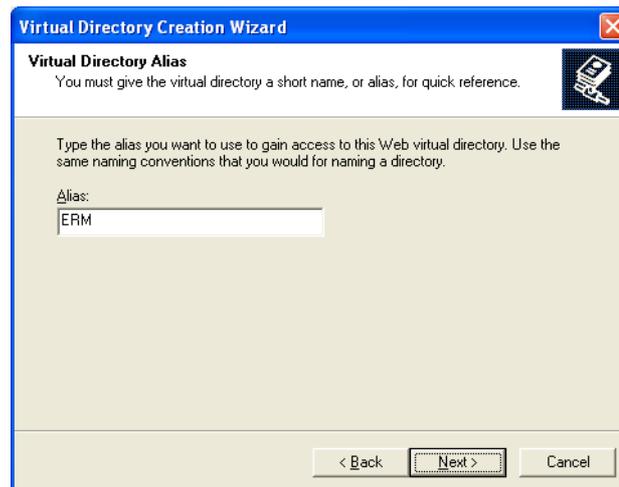
1. From the Start menu, select [Control Panel, [Administrative Tools], and then [Internet Information Service (IIS)].

2. The Internet Information Service starts up. Select [Internet Information Services], [Clients], [Web Sites], and then [Default Web Site]. Right-click on [Default Web Site], select [New], and then [Virtual Directory...] from the menu.
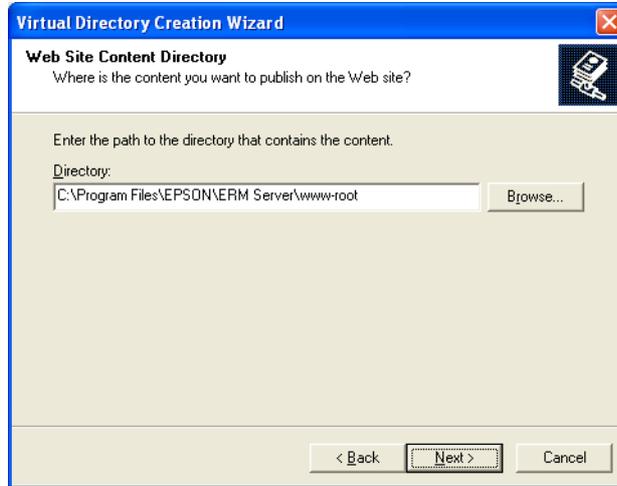
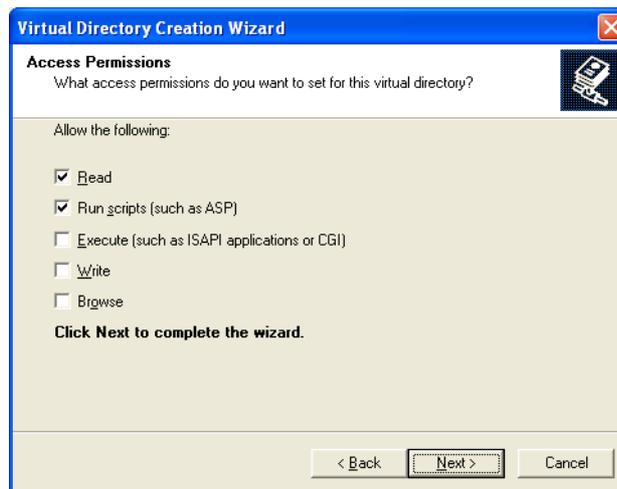3. The Virtual Directory Creation Wizard screen appears. Click [Next].

4. The Virtual Directory Alias screen appears. Enter "ERM" for the Alias, and click [Next].

5. The Web Site Content Directory screen appears. Specify the folder path to "C:\Program Files\EPSON\ERM Server\www-root, and click [Next].

6. The Access Permissions screen appears. Click [Next].

7. The completion screen appears. Click [Finish].

8. Select [Internet Information Services], [Clients], [Web Sites], and then [Default Web Site]. Right-click on [Default Web Site], select [New], and then [Virtual Directory...] from the menu.

9. The Virtual Directory Creation Wizard screen appears. Click [Next].

10. The Virtual Directory Alias screen appears. Enter "ERMroot," and click [Next].

11. The Web Site Content Directory screen appears. Specify the directory path to "C:\Program Files\EPSON\ERM Server\www-root, and click [Next].

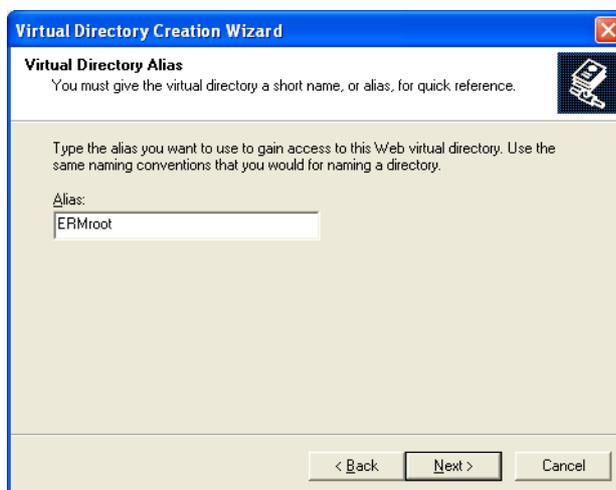12. The Access Permissions screen appears. Click [Next].

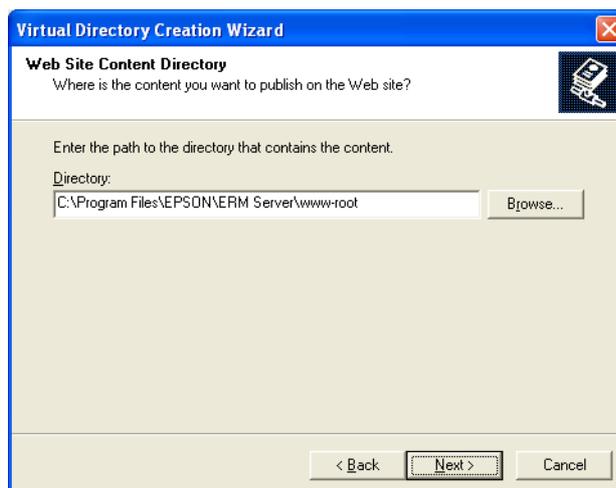13. The completion screen appears. Click [Finish].

14. Select [Internet Information Services], [Clients], [Web Sites], [Default Web Site], and then [ERM]. Right-click on [ERM], and select [Properties] from the menu.

15. The ERM Properties screen appears. Select the [Virtual Directory] tab, select "Scripts and Executables" for the Execute Permissions, and then click [OK].
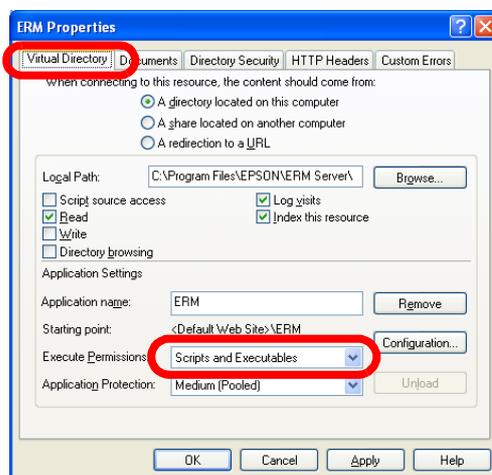
16. Select [Internet Information Services], [Clients], [Web Sites], [Default Web Site], and then [ERMroot]. Right-click on [ERMroot], and select [Properties] from the menu.

17. The ERMroot Properties screen appears. Select the [Virtual Directory] tab, and select "Scripts only" for the Execute Permissions.
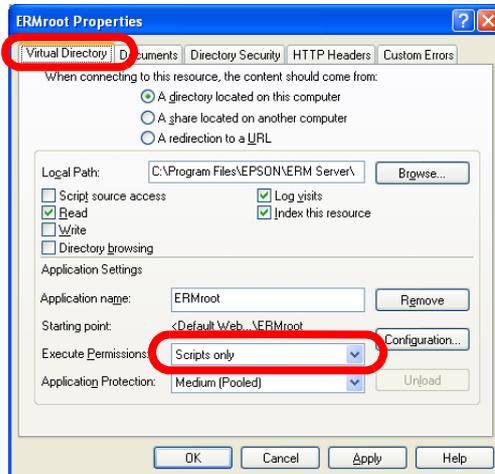
18. Select the [HTTP Headers] tab, and click [File Types...].
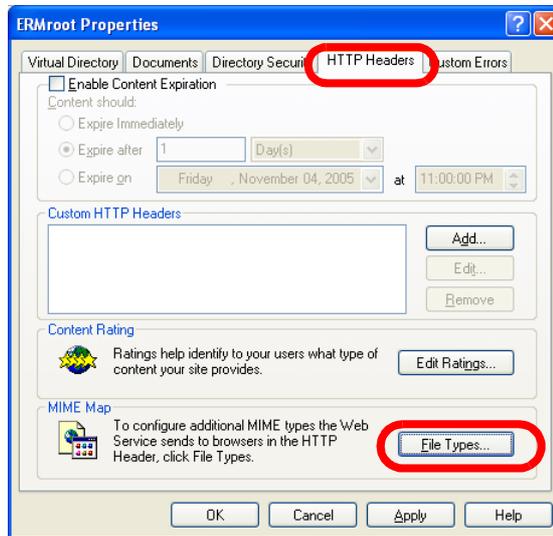
19. The MIME Types screen appears. Click [New...].
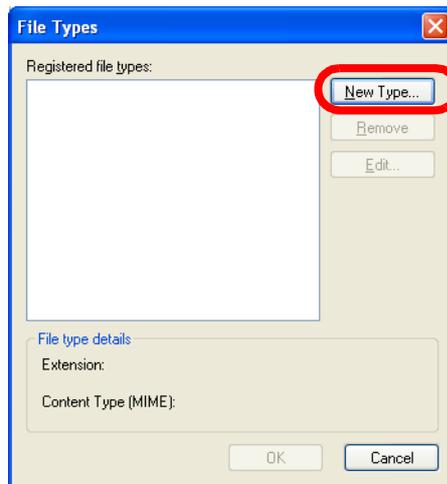
20. The screen to add and edit custom HTTP headers appears. Enter "*" for the Extension and "All Files" for the MIME type, and then click [OK].
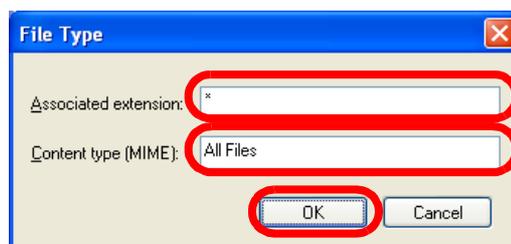
21. Click [OK].
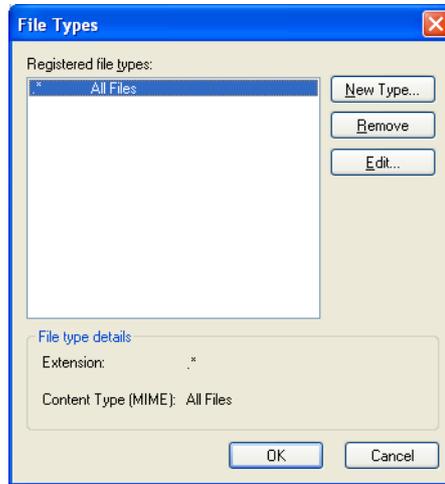
22. Click [OK] on the ERMroot Properties screen.

23. Exit the Internet Information Service (IIS).

Setting for Simple File Sharing (NTFS)

If the format type of the drive (partition) where the Remote Maintenance Software is installed is NTFS, you need to set simple file sharing. Follow the steps below.

1. From the tools menu in the explorer, select [Folder Options].
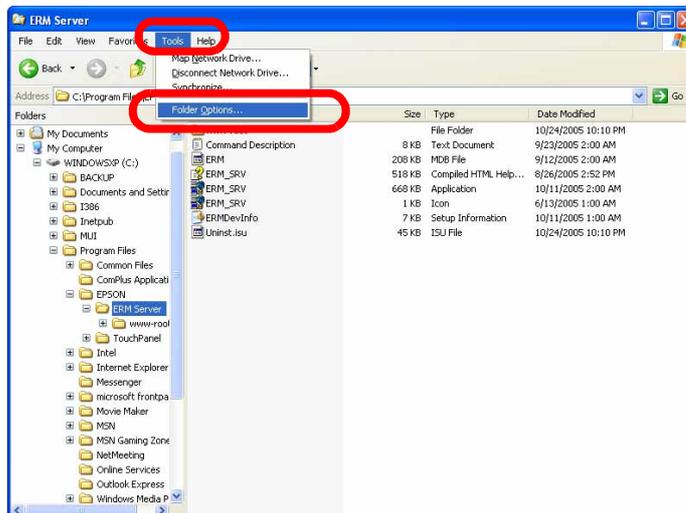
2. The Folder Options screen appears. Select the [View] tab, uncheck the box for "Use simple file sharing (Recommended), and then click [OK].
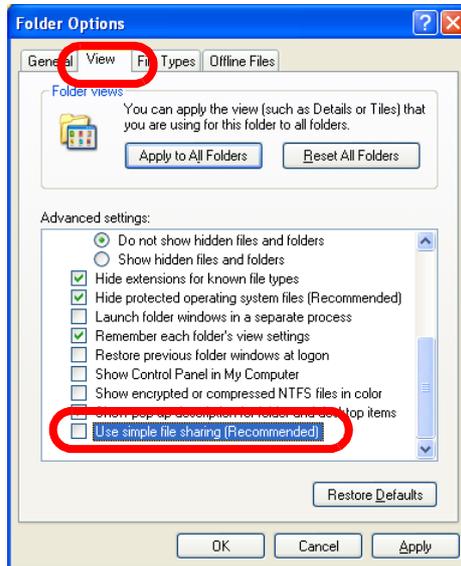
3. Open the folder where the ERM Server is install, and select "www-root." The www-root folder is "C\Program Files\EPSON\ERM Server" by default for the install destination.

4. Right-click on the folder and select [Sharing and Security] to open [www-root Properties].
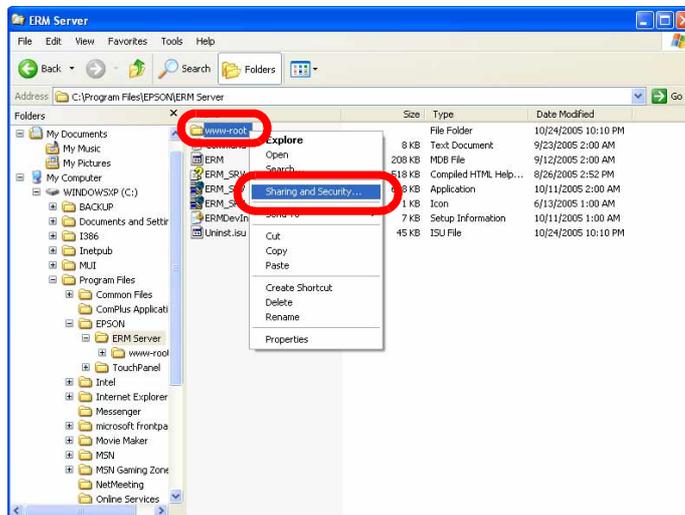
5. The www-root Properties screen appears. Select the [Sharing] tab, select "Share this folder," and then click [OK].
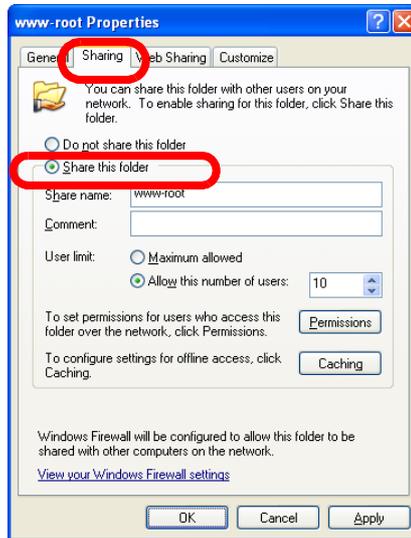
Setting the Internet Information Services (IIS) for Windows Server 2003

If your OS is Windows Server 2003, follow the steps below to set the Internet Information Services.

✎ *Note:*
The following steps are described, assuming that the Remote Maintenance Software is installed in the default directory: C:\Program Files\EPSON\ERM server\).

1. From the Start menu, select [Control Panel], [Administrative Tools], and then [Internet Information Service (IIS) Manager].

2. The Internet Information Service (IIS) manager starts up.
   Select [Internet Information Services], [Computer Name (local computer], [Web Sites], and then [Default Web Site]. Right-click on [Default Web Site], select [New], and then [Virtual Directory...] from the menu.

3. The Virtual Directory Creation Wizard screen appears. Click [Next].

4. The Virtual Directory Alias screen appears. Enter "ERM" for the Alias, and click [Next].

5. The Web Site Content Directory screen appears. Specify the folder path to "C:\Program Files\EPSON\ERM Server\www-root, and click [Next].

6. The Access Permissions screen appears. Click [Next].

7. The completion screen appears. Click [Finish].

8. Select [Internet Information Services], [Computer Name (local computer], [Web Sites], and then [Default Web Site]. Right-click on [Default Web Site], select [New], and then [Virtual Directory...] from the menu.

9. The Virtual Directory Creation Wizard screen appears. Click [Next].

10. The Virtual Directory Alias screen appears. Enter "ERMroot", and click [Next].

11. The Web Site Content Directory screen appears. Specify the folder path to "C:\Program Files\EPSON\ERM Server\www-root, and click [Next].

12. The Access Permissions screen appears. Click [Next].

13. The completion screen appears. Click [Finish].

14. Select [Internet Information Services], [Computer Name (local computer], [Web Sites], and then [Default Web Site]. Right-click on [ERM], and select [Properties] from the menu.

15. The ERM Properties screen appears. Select the [Virtual Directory] tab, select "Scripts and Executables" for the Execute Permissions, and then click [OK].

16. Select [Internet Information Services], [Computer Name (local computer], [Web Sites], and then [Default Web Site]. Right-click on [ERMroot], and select [Properties] from the menu.

17. The ERMroot Properties screen appears. Select the [Virtual Directory] tab, select "Scripts only" for the Execute Permissions, and click [OK].
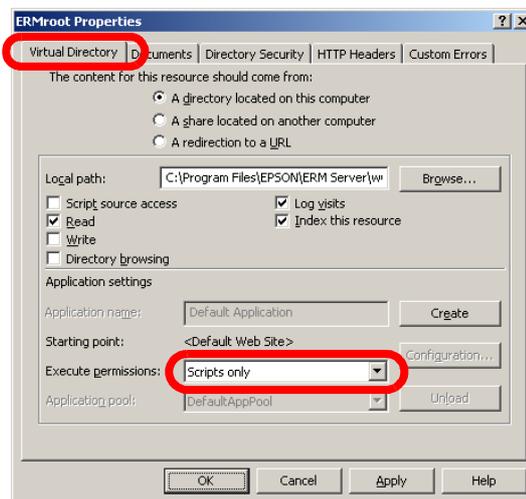
18. Select [Internet Information Services], [Computer Name (local computer)], and [Web Service Extensions]. Click [Add a new Web service extension...].
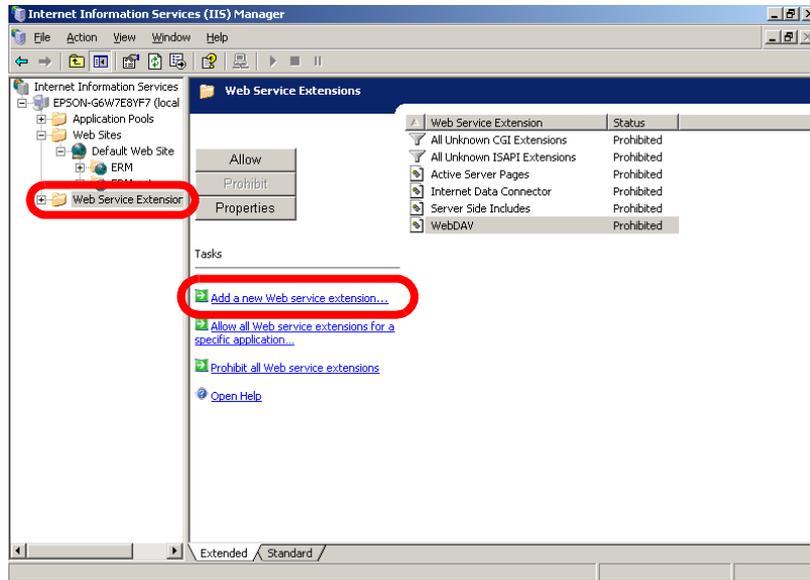
19. The New Web Service Extension screen appears. Enter "ERM" for the Extension name and click [Add...] to add necessary files. Added files are as follows:

    •C:\Program Files\EPSON\ERM Server\www-root\ERMEngine.dll

    •C:\Program Files\EPSON\ERM Server\www-root\ERMUploadFile.dll
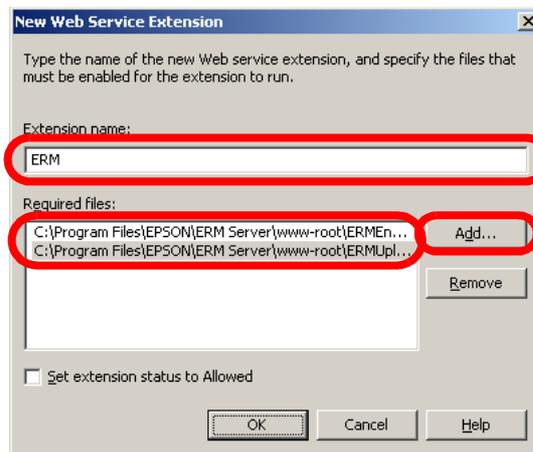
20. Check the checkbox for "Set extension status to Allowed," and click [OK].
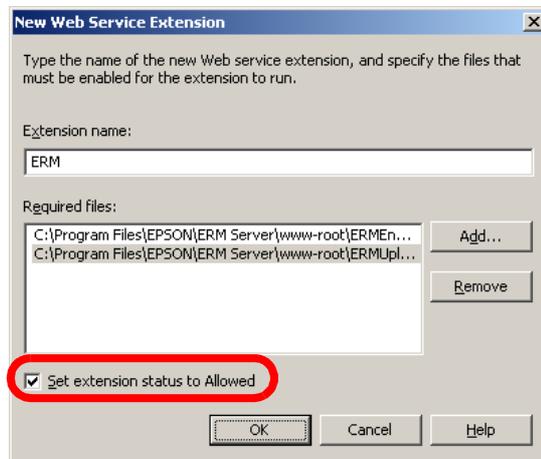
21. Select [Internet Information Services], [Computer Name (local computer], [Web Sites], and then [Default Web Site]. Right-click on [ERMroot], and select [Properties] from the menu.
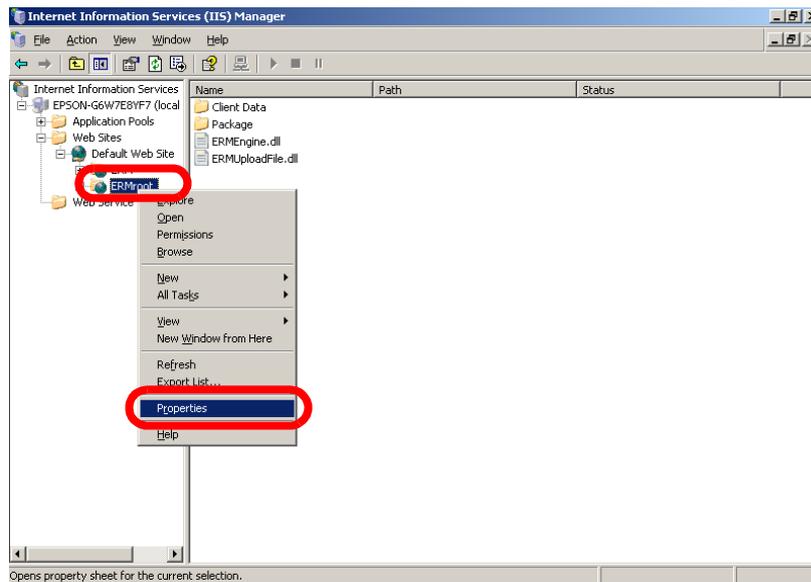
22. The ERMroot Properties screen appears. Select the [HTTP Headers] tab, and click [MIME Types...].
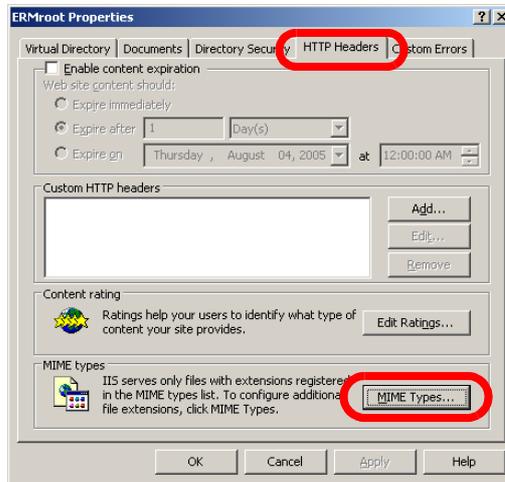
23. The MIME Types screen appears. Click [New...].
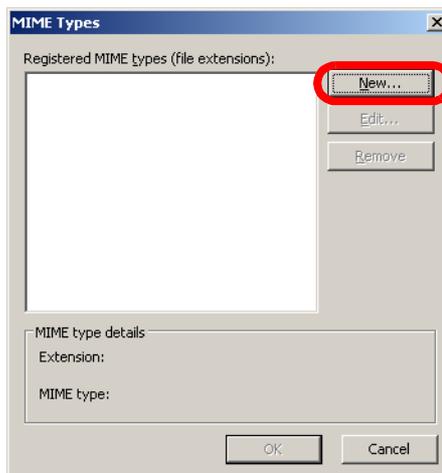
24. Enter "*" for the Extension and "All Files" for the MIME type, and then click [OK].
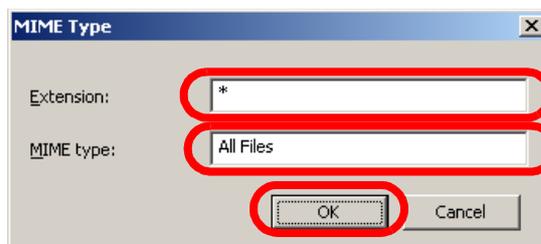
25. Click [OK].

26. Click [OK] on the ERMroot Properties screen.

27. Exit the Internet Information Service (IIS).

Setting for Access Permissions (NTFS)

If the format type of the drive (partition) where the Remote Maintenance Software is installed is NTFS, you need to set access permissions. Follow the steps below.

1. Open the folder where ERM Server is installed, and select ERM.mdb.
   The default folder for ERM.mdb. is "C:\Program Files\EPSON\ERM Server."

2. Right-click on ERM. mdb, and select [Properties] from the menu.

3. The ERM.mdb Properties screen appears. Select the [Security] tab, and click [Add...].
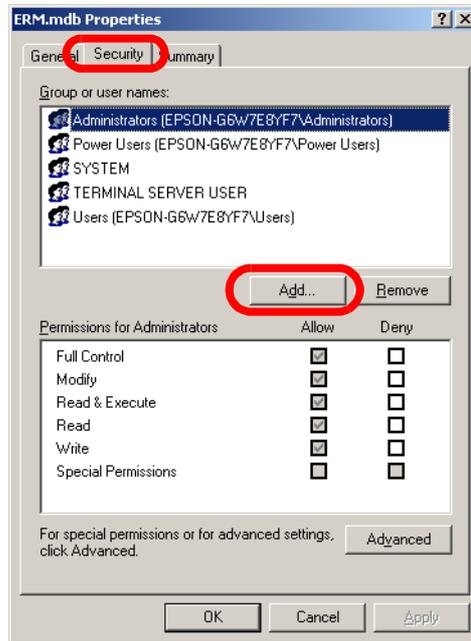
4. The Select Users or Groups screen appears. Click [Advanced...].
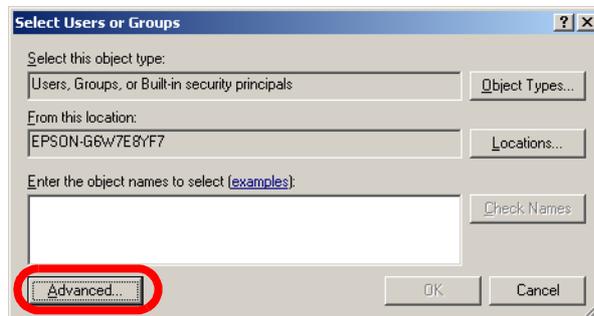
5. The advanced Select Users or Groups screen appears. Click [Find Now] to list the search result of users or groups. From the list, select "IUSER," and click [OK].
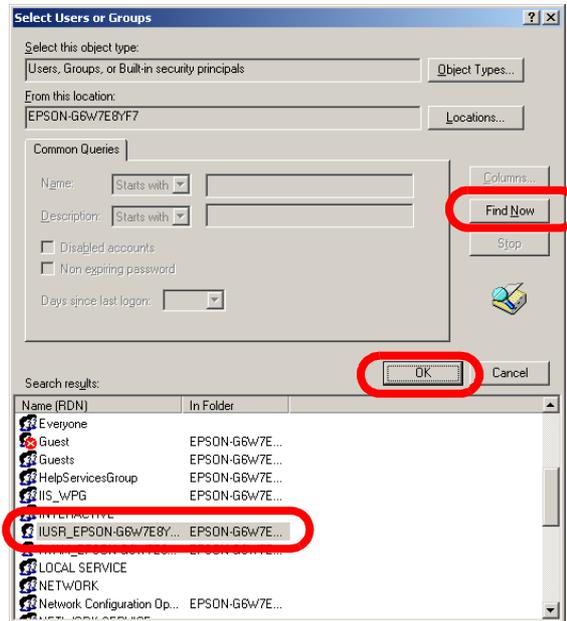
6. The Select Users or Groups screen appears again. Confirm that the IUSER you selected is displayed, and click [OK].
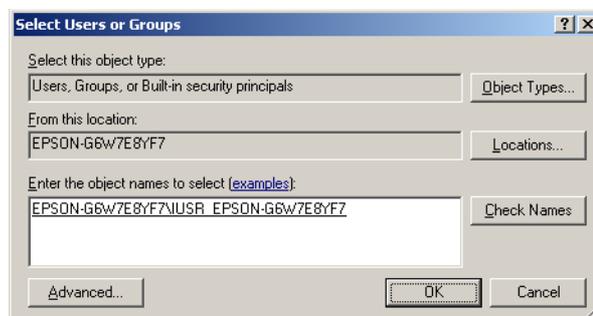
7. The ERM.mdb Properties screen appears again. On the [Security] tab, select "Internet Guest Account" that is added to the Group or user names, check the checkbox for the Full Control of the Permissions for Internet Guest Account, and then click [OK].
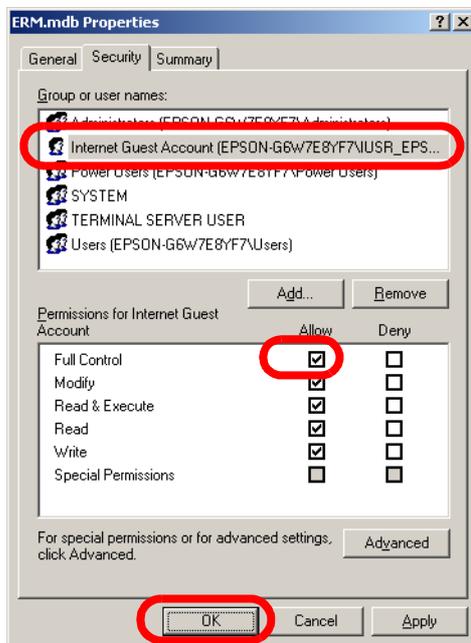
8. Open the directory where ERM Server is installed, and select www-root.
    The default directory is "C:\Program Files\EPSON\ERM Server."

9. Right-click on www-root, and select [Properties] from the menu.

10. The www-root Properties screen appears. Select the [Security] tab, and click [Add...].
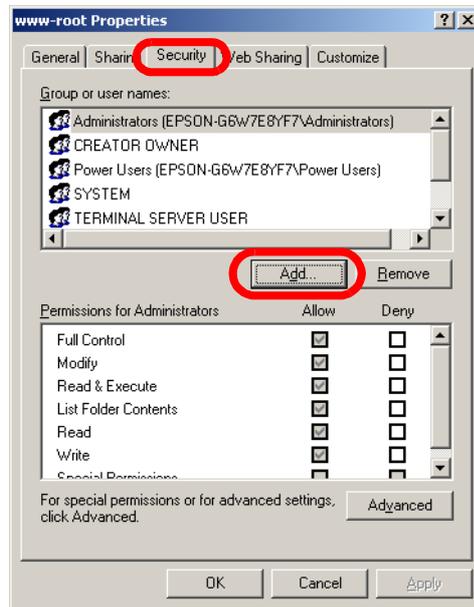
11. The Select Users or Groups screen appears. Click [Advanced...].
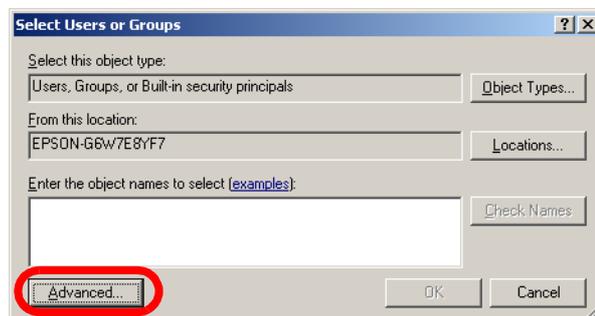
12. The advanced Select Users or Groups screen appears. Click [Find Now] to list the search result of users or groups. From the list, select "IUSER," and click [OK].
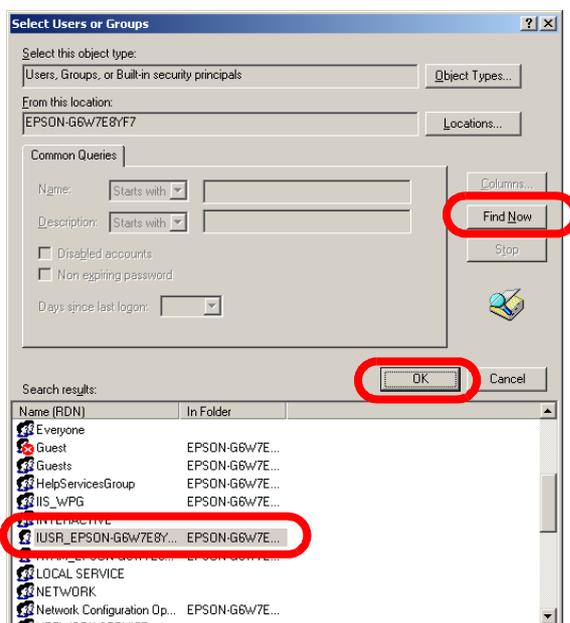
13. The Select Users or Groups screen appears again. Confirm that the IUSER you selected is displayed, and click [OK].
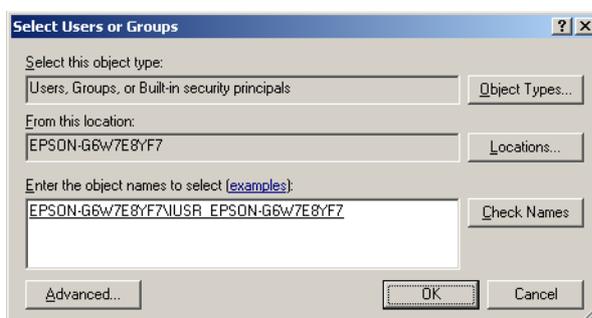
14. The www-root Properties screen appears again. On the [Security] tab, select "Internet Guest Account" that is added to the Group or user names, check the checkbox for the Full Control of the Permissions for Internet Guest Account, and then click [OK].
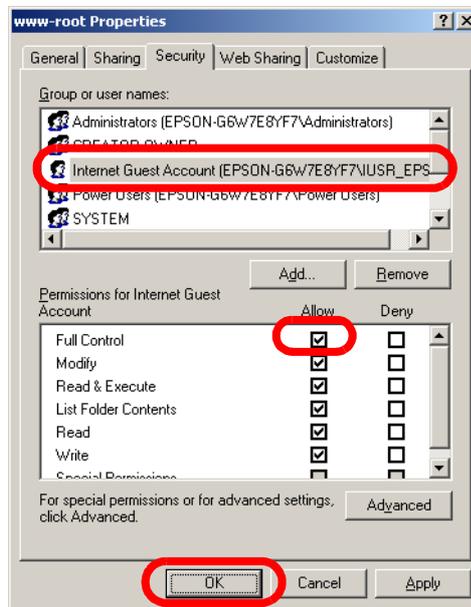
Installation and Setup for Client

Client Setup

Connect peripheral devices such as a customer display, 28 key POS keyboard, and MSR to the client.

Setting and Confirming DIP Switch of TM Printer

Setting

Set the DIP switches of the TM printer as follows:

Data bits=8, Parity=None, Stop bits=1, DSW2-1=ON

For information on how to set the DIP switches, refer to the Technical Reference Guide for the TM printer.

Confirming

You can confirm the communication settings of the TM printer through the self-test print.

For information on how to perform the self-test, refer to the Technical Reference Guide for the TM printer.

Setting DIP Switch of Customer Display

Set the DIP switches of the customer display as follows:

Data bits=8, Parity=None, Stop bits=1

For information on how to set the DIP switches, refer to the User's manual for the customer display.

Installing the Remote Maintenance Software on Client

Follow the steps below to install the Remote Maintenance Software on a client.

1. Connect a device (for example, a USB memory card) storing the Remote Maintenance Software, and double-click "ERMClient" to start the installation.

2. The Welcome screen appears. Click [Next].

3. The Printer Port Setting screen appears. If you use a printer, check the checkbox for "Use Printer," select the printer port settings and click [Next]. If you use Remote Maintenance Software Ver. 2.00, you do not need to check the checkbox.
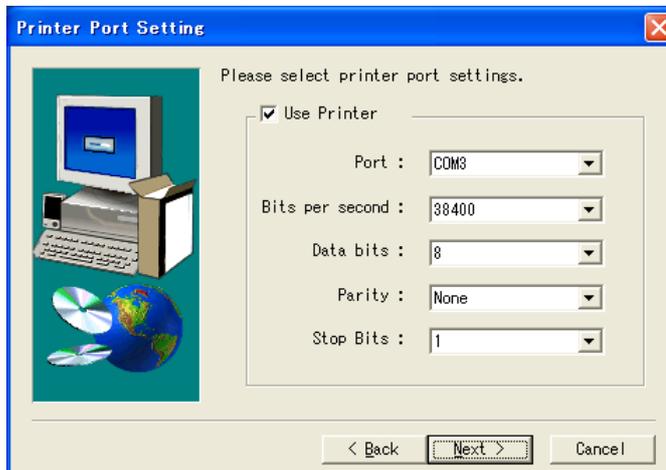
✎ *Note*
The default port is "COM3." Set "Bits per second" depending on your environment. Data bits, Parity, and Stop bits must be fixed.

4. The Customer Display Port Setting screen appears. If you use a customer display, check the checkbox for "Use Customer Display," select the customer display port settings, and click [Next]. If you use Remote Maintenance Software Ver. 2.00, you do not need to check the checkbox.
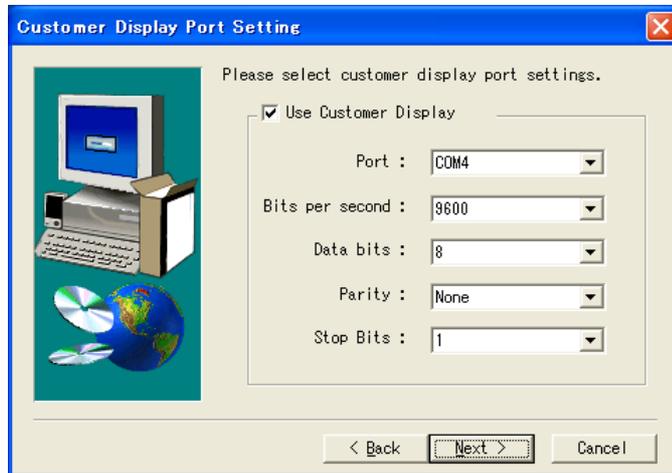
✎ *Note*

The default port is "COM4" for the IR-700 and "COM3" for the SR-610. Set "Bits per second" depending on your environment. Data bits, Parity, and Stop bits must be fixed.

5. The Memo screen appears. Input the memo if necessary, and click [Next].
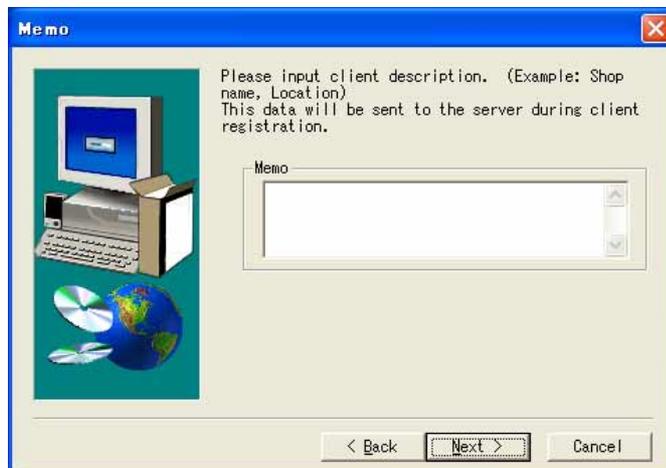
6. The Server Information screen appears. Enter the server URL or IP address and port number, and click [Next].
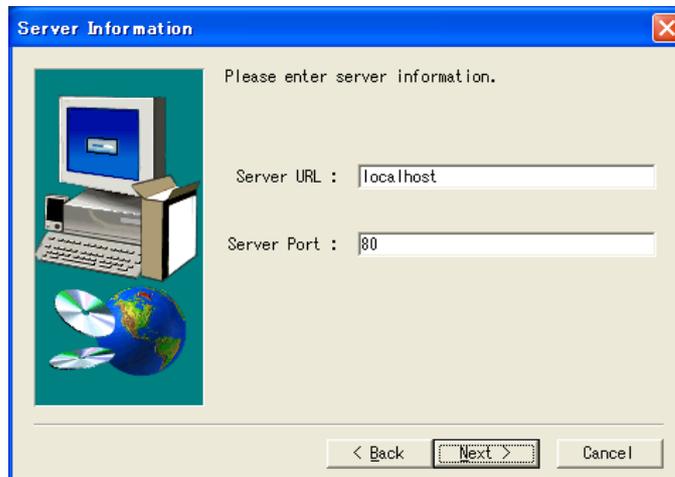
7. The Proxy Server Information screen appears. When you use a proxy server, enter the address of the server and port number, and click [Next].
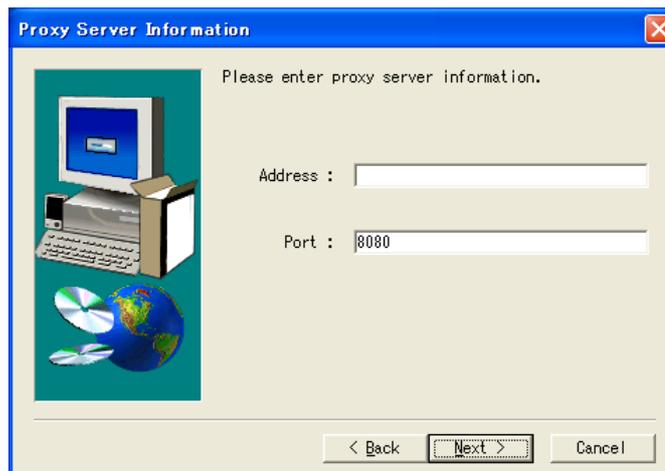
8. The Choose Destination Location screen appears. Specify a place to store, and click [Next].
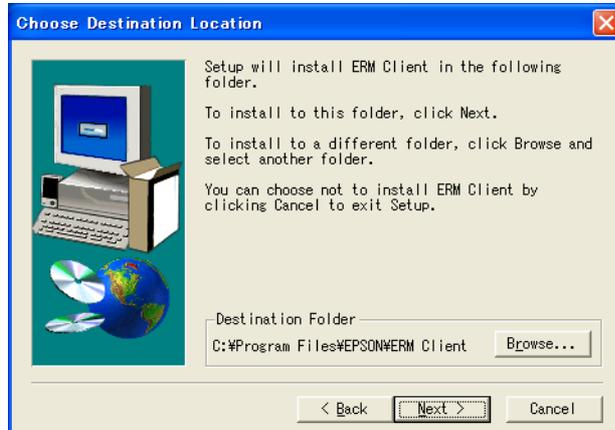
9. The Select Program Folder screen appears. Specify the program folder name, and click [Next].

10. The Setup Complete screen appears. Select "Yes, I want to restart my computer now," and click [Finish].

11. When installation is complete, the following icon is added on the task bar.

Setting for Network Environment

Set a network to be suitable for your use.

Setup for Client

Follow the steps below to set up for a client.

1. When you use the Remote Maintenance Software in LAN environment, start up the maintenance server, and start up [Command Prompt] by selecting [All Programs] and then [Accessories] from the Start menu.

2. Enter "ping" + "IP address," and press **Enter** to confirm the connection with the server. The ping command cannot be used depending on the environment.

3. Start up the client. From the Start menu, select [All Programs], [Accessories], [EPSON], [ERM], and then [ERM Client] to start up the Remote Maintenance Software.

4. The Remote Maintenance Software icon is added on the lower right screen. Right-click or left-click on the icon, and select [Settings] from the menu.

5. The Maintenance Client Settings screen appears. Select the [Client Settings] tab. Set service request time to server, server URL or IP address, and port number.
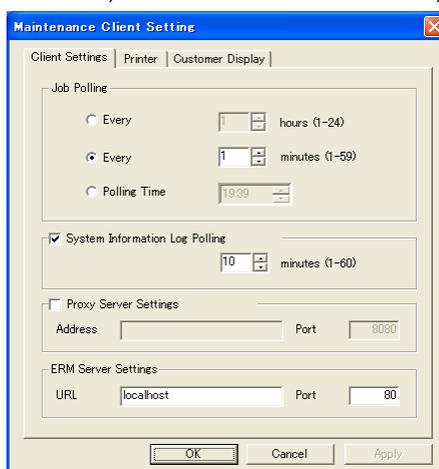
[Job Polling]   Set the service request time to a server.
        Every 1 minute is set by default.

[System Information Log Polling]
        Set the intervals to obtain system logs.
        The setting is enabled with 10 minute intervals by default.

[Proxy Sever Settings]
        Set a proxy server.
        The default value is the one set when installed.

   [Address]   Enter the proxy server address.

   [Port]   Enter the port number of the proxy server.
          You can change it for your environment.

[ERM Sever Settings]
        Set for a server.
        The default value is the one set when installed.

   [URL]   Enter the server URL or IP address.

[Port]   Enter the port number of the server.
          You can change it for your environment.

✎ *Note:*

This system performs the service based on the requests from clients. Therefore, it is recommended that the service request time to a maintenance server is set to as short as 1 minute when you develop or confirm the system, and then set to longer such as every 1 hour when you operate the system.

6. If you use a printer, select the [Printer] tab. Check the checkbox for "Use Printer," and set the Port, Bits per second, Data bits, Parity, and Stop bits for the printer. And then click [OK]. If you use Remote Maintenance Software Ver. 2.00, you do not need to check the checkbox.
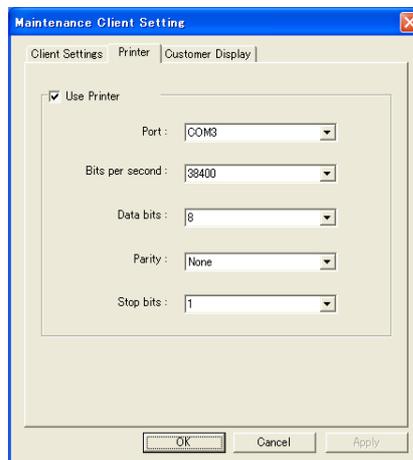
[Use Printer] If you use a printer, check the checkbox.

[Port]   Set the connection port for the printer.
       The default value is the one set when installed.

✎ *Note*
  For the SR-610, change it to the COM port you use depending on your environment.

[Bits per second] Set the baud rate for the printer.
       "38400"bps is set by default.

[Data bits]   Fixed to "8."

[Parity]   Fixed to "None."

[Stop bits]   Fixed to "1."

7. If you use a customer display, select the [Customer Display] tab. Check the checkbox for "Use Customer Display," set the Port, Bits per second, Data bits, Parity, and Stop bits for the customer display. And then click [OK]. If you use Remote Maintenance Software Ver. 2.00, you do not need to check the checkbox.
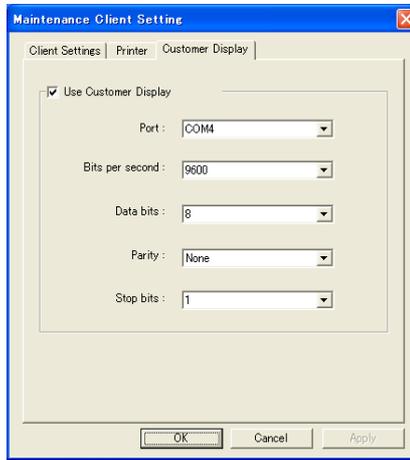
[Use Customer Display]
> If you use a customer display, check the checkbox.

[Port]   Set the connection port for the customer display.
The default value is the one set when installed.

[Bits per second] Set the baud rate for the customer display.
"9600"bps is set by default.

[Data bits]   Fixed to "8."

[Parity]   Fixed to "None."

[Stop bits]   Fixed to "1."

8. If you have changed the settings of server URL, IP address, or port number, you need to reboot the Remote Maintenance Software service to connect to the new server.
When the following message appears, select [Yes] to reboot. If you select [No], the setting is disabled.

9. The "Service Restarted" message appears. Click [OK].

Chapter 4

How to Operate the Remote Maintenance Software

This chapter describes how to operate the Remote Maintenance Software.

Client Operations

Startup

The Remote Maintenance Software on a client is registered in the directory specified when it is installed. It is in the following directory by default:

    C:∴Program Files∴EPSON∴ERM Client∴

You can start up the utility by any of the following methods:

❑ Click ERMClient.EXE in the explore to execute it.

❑ From the start menu, select [All programs], [EPSON], [EMR], and then [ERM Client].

When the utility has started up, an icon appears in the task bar on the lower right of the screen.

Starting the Service

Follow the steps below to start the service.

1. Right or left-click on the Remote Maintenance Software icon in the task bar, and select [Start] from the menu.

2. The service start confirming dialogue appears. Click [OK].

✎ *Note:*
If you have closed the system without stopping the service, the service automatically starts next time you start up the system.

Stopping the Service

Follow the steps below to stop the service.

1. Right-click on the Remote Maintenance Software icon in the task bar, and select [Stop] from the menu.

2. The service stop confirming dialogue appears. Click [OK].

Requesting the Service

When you want to execute jobs at times other than the service request time (Polling), right-click on the Remote Maintenance Software icon, and select [Download JOB] from the menu.

Changing the Service Request Setting

Follow the steps below to change the service request setting.

1. Right-click on the Remote Maintenance Software icon in the task bar, and select [Settings] from the menu.

2. The Maintenance Client Setting screen appears. Set the Polling, and click [OK].
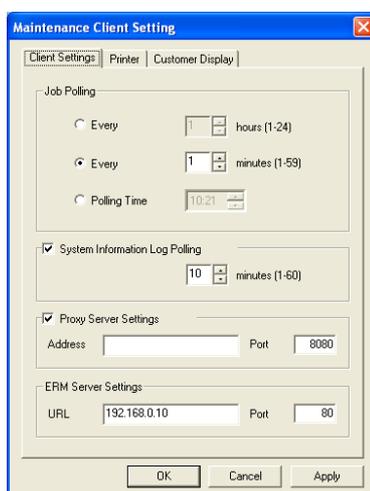
The service request to the maintenance server is set as follows.

[Every (hours)]   Set by hour-interval to request the service. 1 to 24 is available.

[Every (minutes)] Set by minute-interval to request the service. 1 to 59 is available.

[Polling Time]   Set the time to request the service.

[System Information Log Polling]
                Enable the setting to obtain system logs.
                Set by minute-interval to obtain system logs. 1 to 60 is available.

[Proxy Sever Settings]
                Set for a proxy server.
                Enable the setting to use a proxy server.

    [Address]   Set the address of the proxy server.

    [Port]   Set the port number of the proxy server.

[ERM Sever Settings]

      Set for a server.

        [URL]   Set the URL or IP address of the server.

        [Port]   Set the port number of the server.

1. If you have changed the settings of server URL, IP address, or port number, you need to reboot the Remote Maintenance Software service to connect to the new server.
When the following message appears, select [Yes] to reboot. If you select [No], the setting is disabled.

2. The "Service Restarted" message appears. Click [OK].

Server Operations

Main Screen
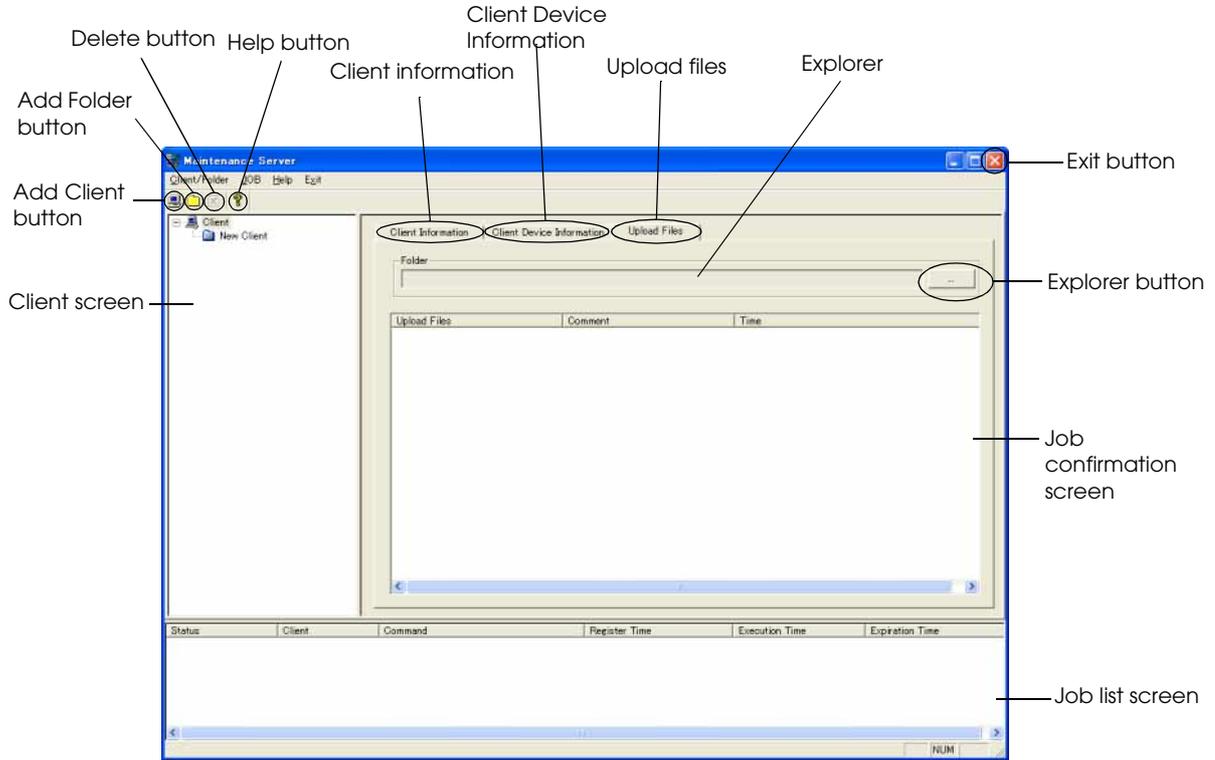
[Add Client button]   Adds a client.

[Add Folder button]   Creates a folder to manage clients by folders.

[Help button]   Displays the version of the Remote Maintenance Software.

[Delete button]   Deletes clients and folders in the Client screen.

[Client Information]   Displays a list of information about clients registered in the Client screen. On the Client screen, execute the job by selecting [JOB], [Create], and [Get Client information]. The client information will be displayed when the results are notified from clients.

[Client Device Information]
    Display a list of information about devices of clients registered in the Client screen.
    The client information will be displayed when the job is executed by selecting [JOB], [Create], and [Get Device Information] and the results are notified from clients.

[Upload files]   Displays a list of files obtained from clients.

[Folder]   Displays a location to store files obtained from clients.

[Explorer button]   Opens a directory displayed in the [Folder] by Explorer. You can open files displayed for the [Upload files].

[Exit button]   Exits the Remote Maintenance Software.

[Client screen]   Displays clients managed by the maintenance server in a tree view. You
                       can register clients and create folders. You can manage clients by
                       moving a registered client to a folder and registering a client in a folder.

[Job list screen]   Displays jobs created.

• Status   Displays job statuses. The line color changes with status as follows:

Status	Description	Color
Inactive	The job is not enabled. The job will not be executed, even if the client requests it in this status. Right-click and select (Active), and then the status goes to the Wait Download and the job is enabled.	Gray
Wait Download	The job is waiting to be downloaded by a client.	White
Wait Execute	The job has been downloaded. The job is waiting to be executed.	White
Execute	The job is being executed.	White
Success	The job has been executed successfully.	White
Error	An error has occurred during execution of the job.	Red
Expired	The job execution has expired.	Red

• Client   The client name for the job is displayed.

• Command   The category of the job is displayed.

• Register Time   The issuing time of the job is displayed.

• Execution Time

      The scheduled date and time for the client to execute the job are displayed. The
      client executes the job on the date and time after downloading it.
      In case of "Immediately," the client executes the job right after downloading it.
      The date and time do not indicate those on the server, but those on the client.

• Expiration Time

      The date and time the job expired are displayed.
      If the client has downloaded the job after the time, it will not be executed.
      In case of "-," an expiration date is not set for the job.
      The date and time do not indicate those on the server, but those on the client.

Right-clicking on the job list screen displays the following functions:

- Activate   Enables selected jobs.

- Delete   Deletes jobs, regardless of job status. The delete confirmation message appears. The message may appear again, depending on the job status.

- Information   Displays the job information screen.
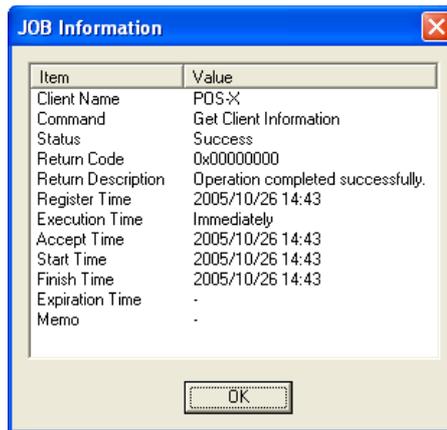
JOB Information Display

Item	Value
Client Name	Client name (host name) is displayed.
Command	Job executed or being executed is displayed.
Status	Status of the job is displayed.
Return Code	The the execution result of the job is displayed by a code. Appendix-A
Return Description	Meaning of the Return Code is displayed. Appendix-A
Register Time	The issuing date and time of the job are displayed. This date and time indicate those on the server.
Execution Time	The scheduled date and time for the client to execute the job are displayed. The client executes the job on the date and time after downloading it. In case of "Immediately," the client executes the job right after downloading it. The date and time do not indicate those on the server, but those on the client.
Accept Time	The date and time the client downloaded the job are displayed. The date and time indicate those on the server.
Start Time	The date and time for the server to receive the notification from the client that the job execution has started are displayed. The date and time indicate those on the server.
Finish Time	The date and time the completion of the job execution was notified from the client is displayed. The date and time indicate those on the server.
Expiration Time	The date and time the job expired are displayed. If the client has downloaded the job after the time, it will not be executed. In case of "-," an expiration date is not set for the job. The date and time do not indicate those on the server, but those on the client.
Memo	The memo you made when you created the job is displayed.

[Job confirmation screen]   You can confirm client information and execution results of jobs to obtain other files.
For the contents, refer to JPB Function. (page 4-15)

- [Client Information]

    By selecting Client Information, information about the client that executed the job is displayed. The information is about the latest executed job. See Job Function for contents displayed.

    · Client Device Information
    By selecting Client Device Information, information about the devices of the clients that executed the job is displayed. The information is about the latest executed job. See Job Function for contents displayed.(page 4-15)

- [Upload Files]

By selecting Upload Files, an list of files uploaded from a client that is registered in the client screen is displayed.
By clicking the Explorer button, you can open the folders shown in the Folder with Explorer to confirm the files. The files are for the latest executed job, because they are obtained and stored with the same names.
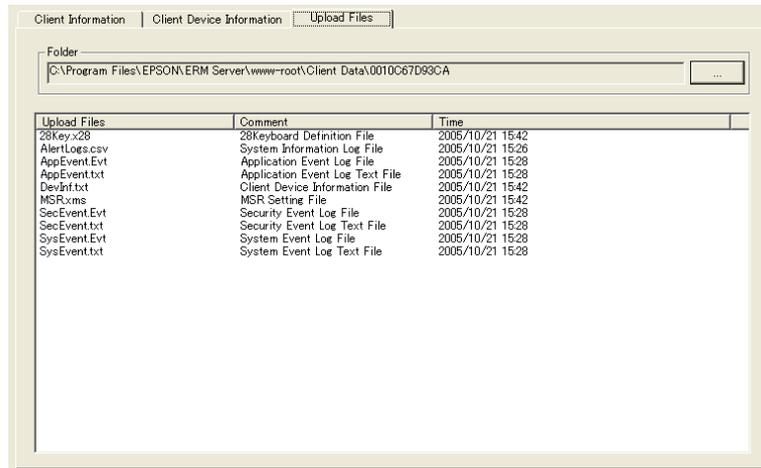
Startup

The Remote Maintenance Software on the maintenance server is registered in the directory specified when it is installed. It is in the following directory by default:

C:∴Program Files∴EPSON∴ERM Server∴.

You can start up the utility by either of the following methods:

❏ Click ERM_SRV.EXE in Explorer to execute it.

❏ From the start menu, select [All programs], [EPSON], [EMR], and then [ERM Server].

Exit

Click Exit button to exit.

Registration, Editing, and Deletion of Clients

Registration, editing, and deletion of clients are performed by the maintenance server.

Registration

You can register a client by any of the following methods:

❏ Automatic registration

If a network is already established and connected with the client, the client is automatically registered below the New Client when the client starts up and the Remote Maintenance Software starts the service.

❏ Manual registration

Follow the steps below.

1. Click [Add Client] on the main screen.

2. The Add Client screen appears. Enter a client name (host name), client MAC address, and memo if necessary, and then click [OK].
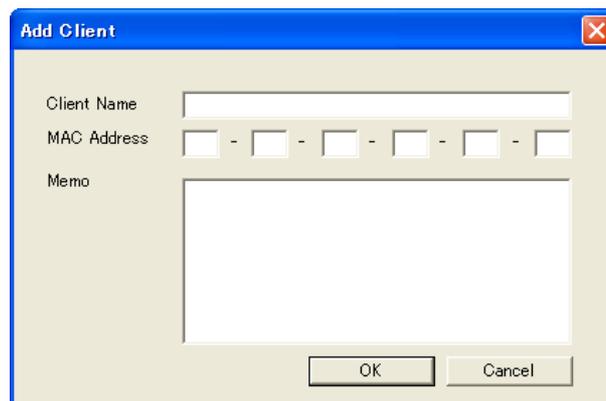
3. The client set in the step 2 is registered in the client screen.

✎ *Note:*
If you register manually, prepare the host name and MAC address of the client you want to register.

The Client Name is the client name (alias) that is managed by the Remote Maintenance on the server. You cannot change the computer name registered in the client machine.

Editing

Follow the steps below to edit the client name and memo.

1. Right-click on a client you want to edit in the client screen, and select [Change Client] from the menu.

2. The Change Client screen appears. Edit the client name (host name) or memo, and click [OK].
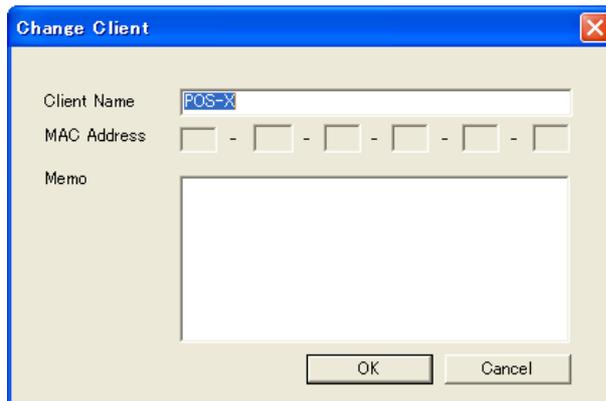
✎ *Note:*
The client name is the client name managed by the maintenance server. You cannot change the computer name registered in the client machine.

Deletion

Follow the steps below to delete a client.

1. Select a client you want to delete in the client screen, and click [Delete].

2. The Delete screen appears. Click [Yes].

You cannot delete the New Client folder.

Client Managing by Folders

By creating folders in the client screen with the [Add Folder] button, you can manage clients by folders. Managing clients by folders for each floor or shop enables the efficient maintenance of clients. You can also create subfolders below a folder to manage clients with more classifications.

Move of clients and folders

Follow the steps below to move a client and folder.

1. Right-click on a client that is registered in the client screen, and select [Move] from the menu.
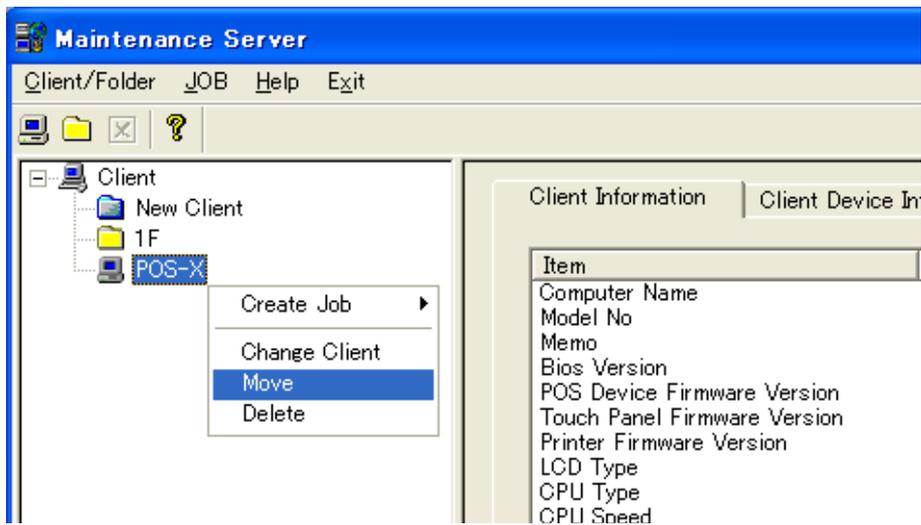
2. The Move to Folder screen appears. Select a destination folder, and click [OK].

3. The client or folder is now below the folder selected in the step 2.

Maintenance

The maintenance flow is shown below.

```
┌─────────────────────────────────────────────────────────────────────────┐
│              Starting up the Remote Maintenance Software                  │
└─────────────────────────────────────────────────────────────────────────┘
         │
         │  If you want to perform maintenance of
         │  writing or updating.
         ▼
┌──────────────────────────────────────┐
│  Prepare files required for maintenance. │
└──────────────────────────────────────┘
         │
         ▼
┌─────────────────────────────────────────────────────────────────────────┐
│                          Job selection                                    │
│   ┌─────────────────────────────────────────────────────────────────┐     │
│   │  Selecting a job, specifying the time for service               │     │
│   │  Setting definition files                                       │     │
│   │  Selecting whether making the job active immediately            │     │
│   └─────────────────────────────────────────────────────────────────┘     │
└─────────────────────────────────────────────────────────────────────────┘
         │   If the job is not active
         ▼
┌──────────────────────────────┐
│     Set the job active.      │
└──────────────────────────────┘
         │
         ▼
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
      A client inquires for a job.
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
         │
         ▼
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
      The job is sent to the client.
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
         │
         ▼
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
      The client executes the job.
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
         │
         ▼
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
  The execution result of the job is reported from the client. The result is displayed.
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
         │
         ▼
┌─────────────────────────────────────────────────────────────────────────┐
│                        Result confirmation                                │
└─────────────────────────────────────────────────────────────────────────┘
```

┌──────────────┐
│ Operations │
└──────────────┘

┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
   Automatic executions
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘

Job Function

Job	Definition file	Client IR-700	SR-610	Description

Get Client Information	-	✓	✓	Client information is sent to the maintenance server. A client operates as follows:
				1. Obtains client information.
				  The information to be obtained is as follows:
				    Computer name
				    Model name
				    Memo
				    BIOS version
				    Firmware version of POS device
				    Firmware version of touch panel
				    Printer Firmware version
				    LCD type
				    CPU type
				    CPU speed
				    Memory size
				    MAC address
				    IP address
				    Maintenance client version
				2. Sends the client information to the maintenance server.

Get Client Device Information	-	✓	✓	Client device information is sent to the maintenance server. A client operates as follows:
				1. Obtains device information of the client.
				  The information to be obtained is as follows:
				    Printer status
				    Print test result
				    DM-D test result
				    Touch panel test result
				2. Obtains event logs of the client
				3. Sends the client device information to the maintenance server.

Get Event Log	-	✓	✓	Event logs of the Clients are sent to the maintenance server. A client operates as follows: 1. Obtains event logs of the client. 2. Sends the event logs of the client to the maintenance server.
Get System Log	-	✓	✓	System logs of the Clients are sent to the maintenance server. A client operates as follows: 1. Obtains system logs of the client. 2. Sends the system logs of the client to the maintenance server.
Update Printer Firmware	Required	✓	✓	Firmware of the TM printer connected with the IR-700 is updated. A client operates as follows: 1. Downloads the Firmware data and Firmware Update Tool. 2. Executes the Firmware Update Tool to update the printer firmware. 3. Sends the execution result to the maintenance server.

Update Maintenance Client	Required	✓	✓	The Remote Maintenance Software on a client is rewritten. A client operates as follows: 1. Downloads an install package (Setup.exe) for clients. 2. Executes Setup.exe to rewrite. 3. Sends the execution result to the maintenance server.
Write Printer NV Memory	Required	✓	✓	NV memory data is written in the TM printer of the Clients. A client operates as follows: 1. Downloads NV memory files and the NV Memory Read/Write Tool. 2. Executes the NV Memory Read/Write Tool to rewrite NV memory data of the printer. 3. Sends the execution result to the maintenance server.
Write 28Keyboard Definition Data	Required	✓	-	Definition data of 28 key POS keyboard connected to the Clients is written. A client operates as follows: 1. Downloads definition data files and the automatic definition file writing tool. 2. Executes the automatic definition file writing tool to rewrite the definition data of the 28 key POS keyboard. 3. Sends the execution result to the maintenance server.
Write MSR Setting Data	Required	✓	✓	Setting data of the MSR connected to the Clients is written. A client operates as follows: 1. Downloads setting data files and the automatic definition file writing tool. 2. Executes the automatic definition file writing tool to rewrite the setting data of the MSR. 3. Sends the execution result to the maintenance server.

Read Printer NV Memory	-	✓	✓	NV memory data of the TM printer for the Clients is obtained and stored in files. A client operates as follows: 1. Downloads the NV Memory Read/Write Tool. 2. Executes the NV Memory Read/Write Tool to obtain the NV memory data of the printer. 3. Sends the execution result and the NV memory files to the maintenance server.
Read 28Keyboard Definition Data	-	✓	-	Definition data of 28 key POS keyboard connected with the Clients is obtained and stored in files. A client operates as follows: 1. Downloads the definition file obtaining tool. 2. Executes the definition file obtaining tool to obtain definition data of the 28 key POS keyboard from the POS controller and store it in definition files. 3. Sends the execution result and the definition data files to the maintenance server.
Read MSR Setting Data	-	✓	✓	Setting data of the MSR connected to the Clients is obtained and stored. A client operates as follows: 1. Downloads the definition file obtaining tool. 2. Executes the definition file obtaining tool to obtain setting data of the MSR from the POS controller and store it in setting files. 3. Sends the execution result and the setting data files to the maintenance server.

Get Client Information

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	30 seconds
Dial-up	30 seconds

✎ *Note:*

The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of the server or client and network line conditions.

While a printer is being used, the printer firmware version cannot be obtained.

Procedure

Follow the steps below to obtain client information.

1. Right-click on a target client, and select [Create job], and then [Get Client Information] from the menu.
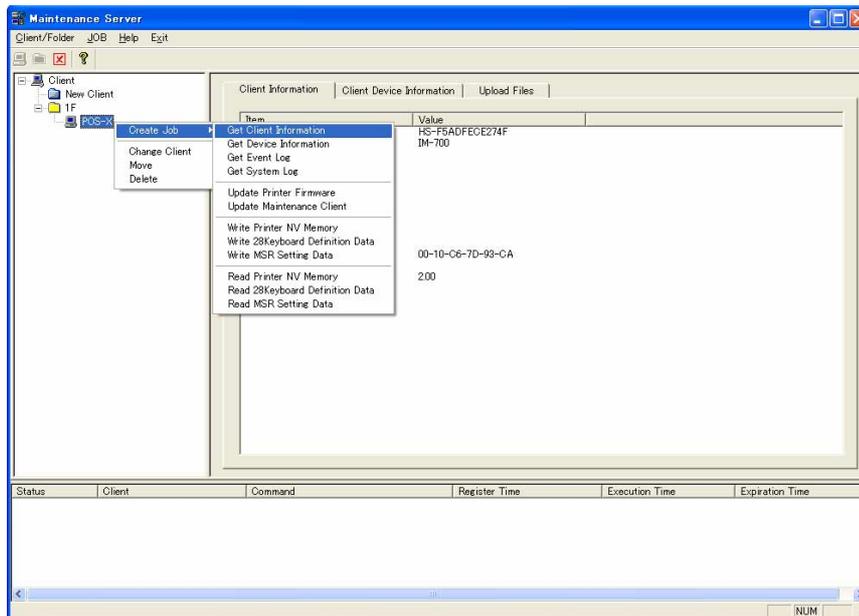
2. The Get Client Information screen appears. Configure the following settings, and then click [OK].

[Target Client]	Select target clients. The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
[Execution Time]	Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it. If you select "Immediately" (default), the clients execute the job right after downloading it. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

[Expiration Time]   The date and time the job expired are displayed.
If the clients have downloaded the job after the time, it will not be executed.
If you select "No" (default), an expiration date is not set for the job.
The date and time do not indicate those on the server, but those on the clients.
If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

[Memo]   You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.

[Activate JOB After Creation]Check the box if you want to make the job active right after it is created.
If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created.
When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*

The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

3. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

4. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

5. After the client information is obtained, the status in the job list moves to "Success." The client information is displayed in the job confirmation screen.

✎ *Note:*
You cannot obtain and store client information as files.

The MAC address and IP address of the client information obtained from the Clients with network cards may not be the address assigned to the Ethernet interface that the Remote Maintenance Software uses.

While a printer is being used, the printer firmware version cannot be obtained.

Get Client Device Information

Sends client device information to a server.

This job causes a client printer to print and a customer display to display. In these cases, an operator needs to confirm the client status.

The job execution time (time it takes a job status in the job list screen to move from "Wait Execute" to "Success") is about 30 seconds with a LAN network environment and also about 30 seconds with dial-up. The time may be different depending on the network line condition.

Procedure

Follow the steps below to obtain client device information.

1. Right-click on a target client, and select [Create job], and then [Client Device Information] from the menu.
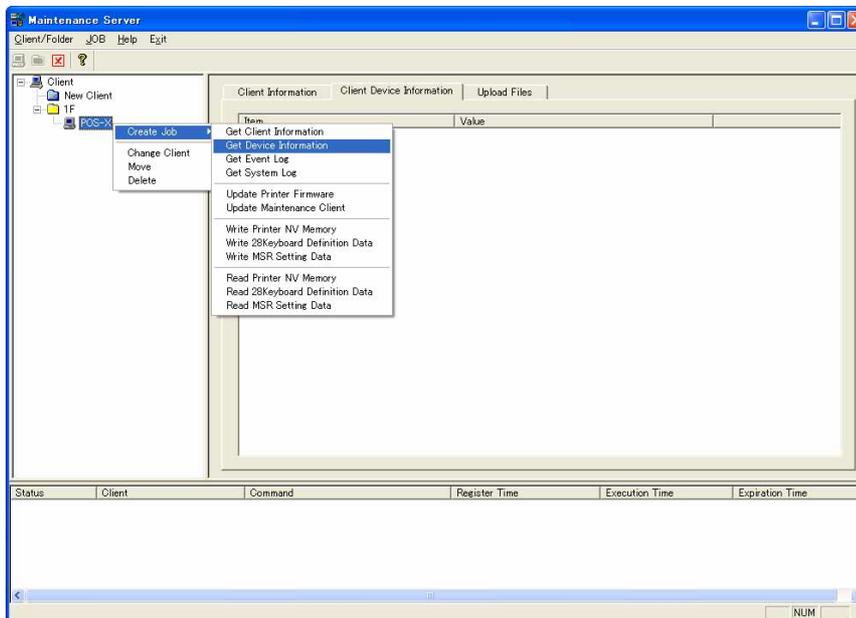
2. The Get Device Information screen appears. Configure the following settings, and then click [OK].
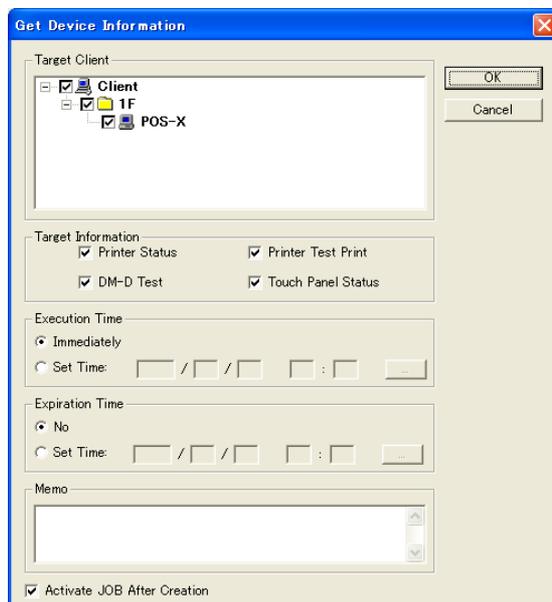
[Target Client] Select target clients.
The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
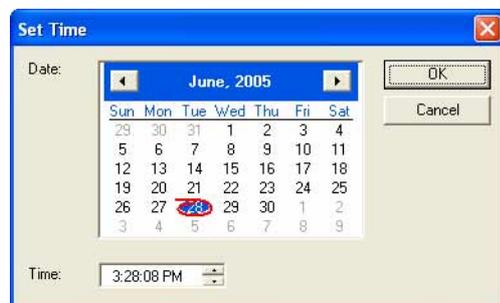
[Target Information] Select the target device on which you want to obtain information or perform a test.
Each item has the following functions.

Item	Function
Printer Status	Obtains printer status.
DM-D Test	Executes a self-test on the customer display.
Printer Test Print	Prints test print with the client TM printer.
Touch Panel Status	Diagnoses the touch panel.

✎ *Note:*
Set the DIP switch (DSW2-1) to "ON" to obtain the printer status by using Printer Status.

[Execution Time] Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it.
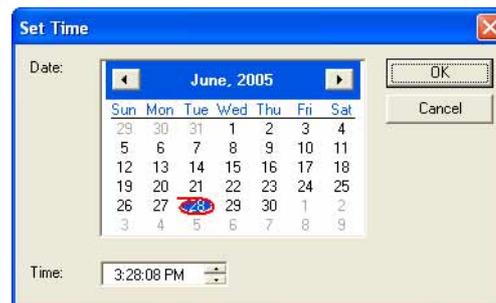If you select "Immediately" (default), the clients execute the job right after downloading it.
The date and time do not indicate those on the server, but those on the clients.
If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

[Expiration Time]	The date and time the job expired are displayed. If the clients have downloaded the job after the time, it will not be executed. If you select "No" (default), an expiration date is not set for the job. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Memo]	You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.
[Activate JOB After Creation]	Check the box if you want to make the job active right after it is created. If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created. When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*

The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

3. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

4. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

If the checkbox for "Printer Test Print" of [Target Information] is checked, let an operator confirm that the printer prints. If the checkbox for "DM-D Test" is checked, let an operator confirm that the customer display displays.

5. When the client device information is obtained, the status in the job list screen moves to "Success." The client device information is displayed on the job confirmation screen.
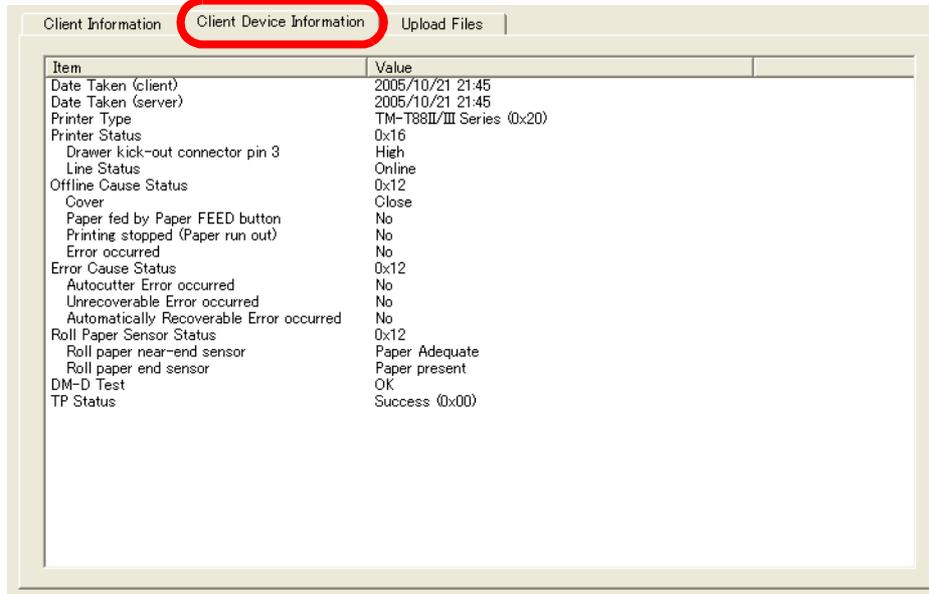
The job confirmation screen displays the following job results executed by clients.

Item	Value	Description	Action
Printer Status	Displays printer status. Main statuses are shown below.		
Line Status	Offline	Printer is in the offline status or an error occurred.	Check if the printer is online. Or check the error information.
Cover	Open	Printer cover is open.	Close the printer cover.
Autocutter Error occurred	Error Occurs	Autocutter has a defect.	Repair the autocutter.
Roll paper near-end sensor	Paper near-end	Remaining amount of the roll paper is close to the end.	Prepare new roll paper.
Roll paper end sensor	Paper not present	No roll paper is installed.	Install roll paper.
DM-D test	Displays the execution result.		
	OK	The result is always "OK." (When the DM-D is set to be used.)	–
	Unknown	The DM-D is not set to be used on the client.	–
TP Status	Displays the touch panel status. Main statuses are shown below.		
	Success(0x00)	Touch panel is in the normal status.	–
	ROM Error(0x01)	ROM of the POS controller has a defect.	Replace the LCD unit.
	Panel Voltage Error(0x0C)	Voltage is not normal. (It is the status when the touch panel is touched.)	Check the touch panel if it is touched. If not, replace the LCD unit.

6. Select the [Upload Files] tab to display the information on the client device information files obtained and stored in the job confirmation screen.
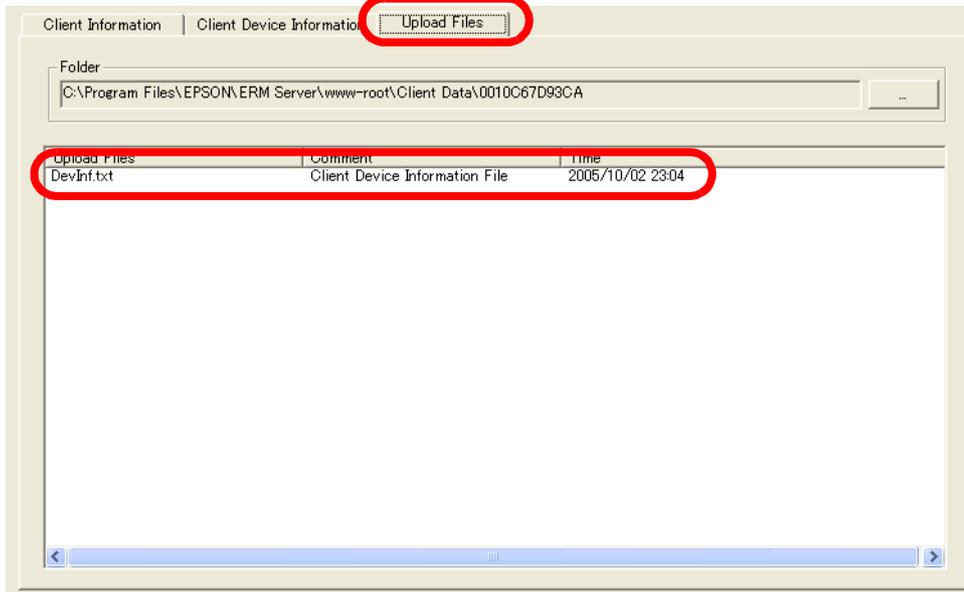
The [Client Device Information] tab can obtain "DevInf.txt."
It is displayed in the Folder on the [Upload Files] tab. Click the explorer button to start up Explorer to open the folder and confirm with a text editor.

Get Event Log

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	30 seconds
Dial-up	50 seconds

✎ *Note:*

The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

Procedure

Follow the steps below to obtain event logs of a client.

1. Right-click on a target client, and select [Create job], and then [Get Event Log] from the menu.
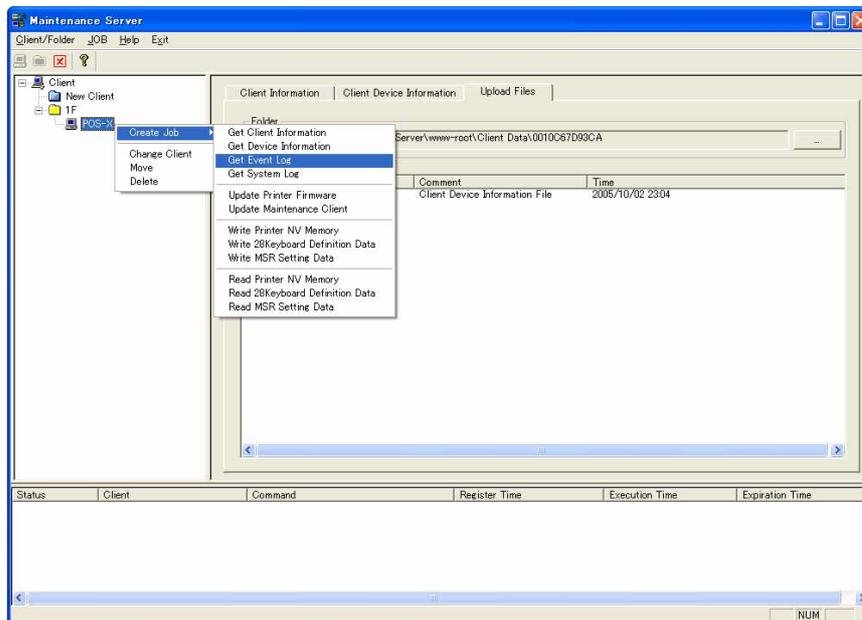
2. The Get Event Log screen appears. Configure the following settings, and then click [OK].

[Target Client]	Select target clients. The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
[Execution Time]	Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it. If you select "Immediately" (default), the clients execute the job right after downloading it. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Expiration Time]	The date and time the job expired are displayed. If the clients have downloaded the job after the time, it will not be executed. If you select "No" (default), an expiration date is not set for the job. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Memo]	You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.

[Activate JOB After Creation]Check the box if you want to make the job active right
after it is created.
If it is not checked (default), the status becomes
"Inactive" and the job is not active right after it is created.
When you want to make the job active, right-click in the
job list, and select "Active."

✎ *Note:*

The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

3. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

4. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

5. When the event log files are obtained successfully, the status in the job list screen moves to "Success."

6. Select the [Upload Files] tab to display the client event log file information obtained and stored in the job confirmation screen.
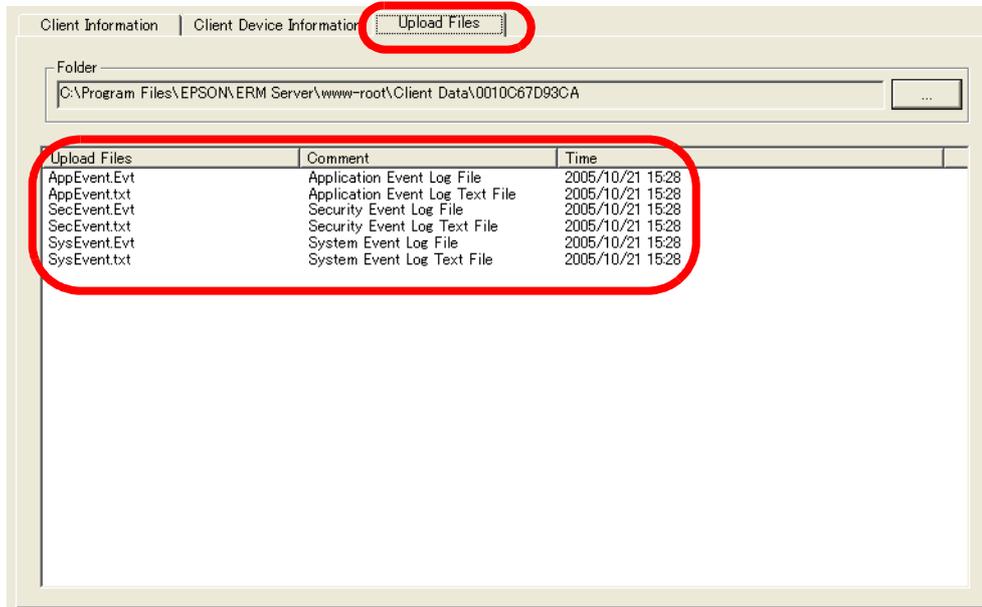
✎ *Note:*
Event log files are stored in the folder shown in Folder on the Upload File tab.
If event log files have been obtained before, they are overwritten.

Confirming the Event Logs

You can obtain the following files by Get Event Log.

File name	Category	Confirming methods
AppEvent.Evt	Application Event Log File	Event viewer
AppEvent.Txt	Application Event Log Text File	Text editor
SysEvent.Evt	System Event Log File	Event viewer
SysEvent.Txt	System Event Log Text File	Text editor
SecEvent.Evt	Security Event Log File	Event viewer
SecEvent.Txt	Security Event Log Text File	Text editor

Folder to store the event logs

Displayed in Folder on the Upload Files tab.
Click the Explorer button to start Explorer and open the destination folder.

✎ *Note:*
The directory to store the Event logs is fixed for each client system.

Confirming the text files

Use a text editor to confirm the files.

Confirming the event viewer files

Follow the steps below:

1. From the start menu, open [Control Panel], [Performance and Maintenance], [Control Tool], and then the event viewer.

2. Select [Action], and then [Open log file...].
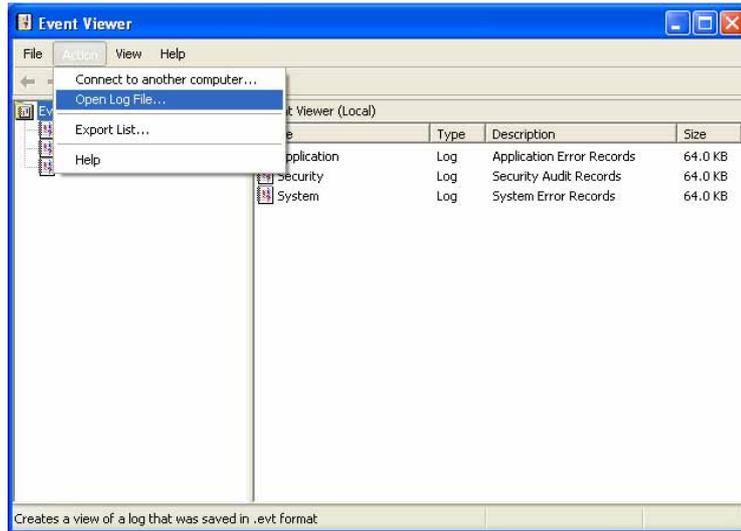
3. Specify the folder where client log files are stored and select a file name and log type.
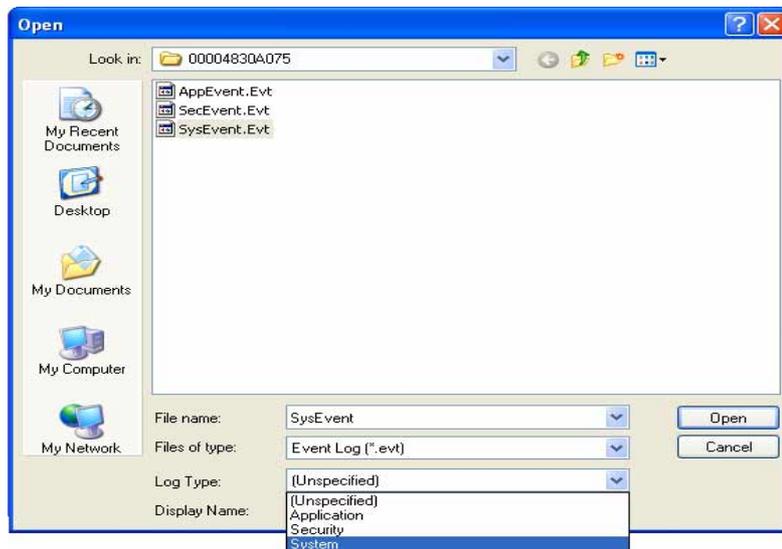
4. Client event log files are displayed.

Get System Log

Sends system logs of the Clients to a server.

The job execution time (time it takes a job status in the job list screen to move from "Wait Execute" to "Success") is about 30 seconds with LAN network environment and about 50 seconds with dial-up. The time may be different depending on the network line condition.

Procedure

Follow the steps below to obtain client system logs.

1. Right-click on a target client, and select [Create job], and then [Get System Log] from the menu.
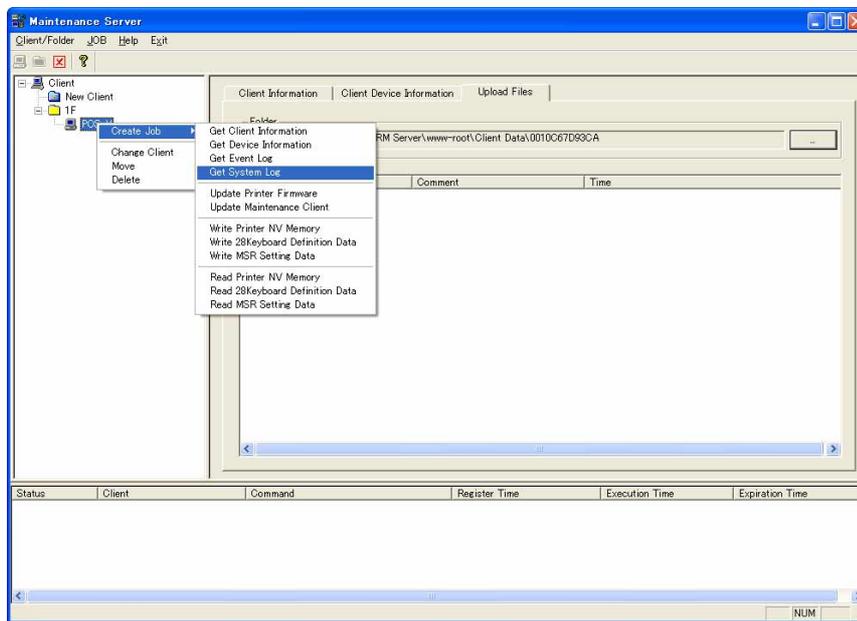
2. The Get System Log screen appears. Configure the following settings, and then click [OK].
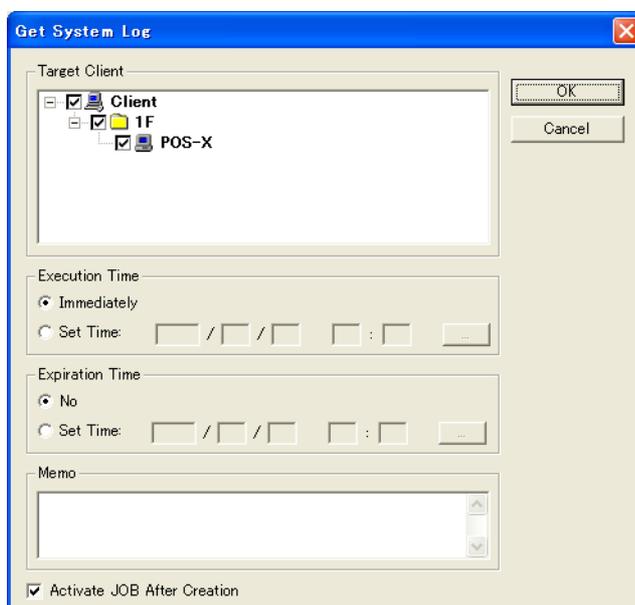
[Target Client]	Select target clients. The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
[Execution Time]	Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it. If you select "Immediately" (default), the clients execute the job right after downloading it. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Expiration Time]	Set the date and time to expire the job. If the clients have downloaded the job after the time, it will not be executed. If you select "No" (default), an expiration date is not set for the job. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

✎ *Note*
The Expiration time must be later than the Execution time.

[Memo] You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.

[Activate JOB After Creation] Check the box if you want to make the job active right after it is created.
If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created. When you want to make the job active, right-click in the job list, and select "Active."

3. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."


4. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."ÅB

5. When the system log files are obtained successfully, the status in the job list screen moves to "Success."

6. Select the [Upload Files] tab to display the information on the system log files obtained and stored in the job confirmation screen.
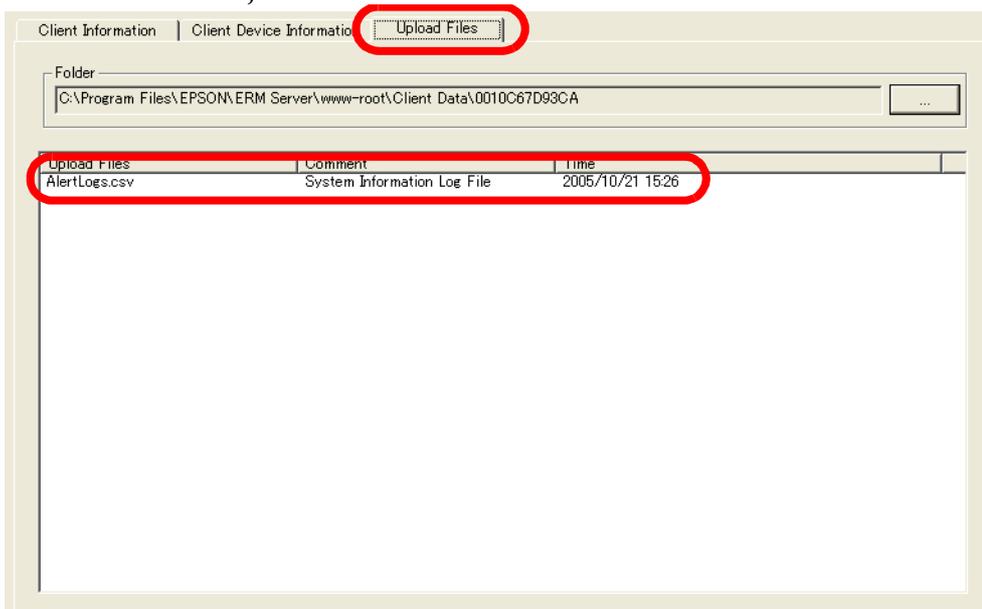
✎ *Note*
System log files are stored in the folder shown in Folder on the Upload File tab.
If system log files have been obtained before, they are overwritten.

How to Confirm System Log

Files that Get System Log can obtain are in "AlertLogs.csv."
Follow the steps below to confirm.

1. Select the Upload Files tab, and click the Explorer button.
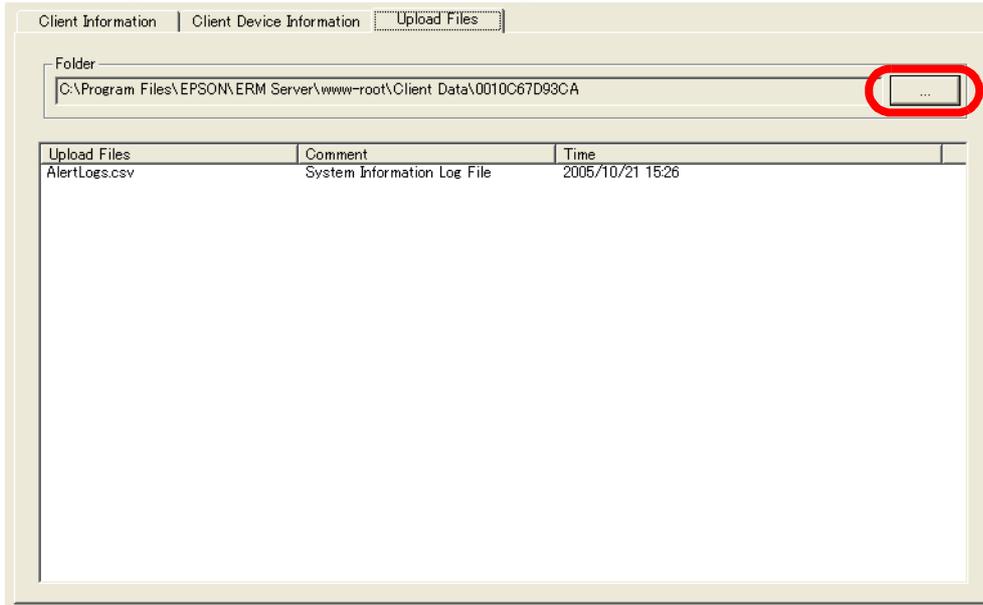
2. Explorer starts up, and the destination folder is opened. Select the file.
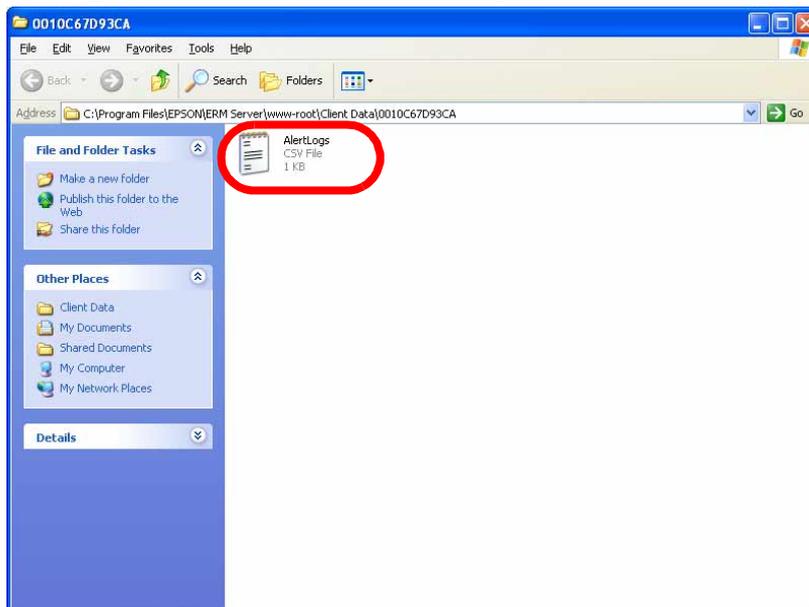
3. The client system logs are displayed.

Update Printer Firmware

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	90 seconds
Dial-up	270 seconds

✎ *Note:*
The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

⚠ CAUTION

Be sure to confirm that applications on the client are closed before executing this job. If the job is executed during printer operation, the firmware can be damaged.

Execute the job with the following conditions:

- When the client is not operating

- When the client is ready to reboot

· When an operator (manager) is at the client

Procedure

Follow the steps below to update the printer firmware:

1. Prepare the printer firmware data file.

2. Right-click on a target client, and select [Create job], and then [Update Printer Firmware] from the menu.
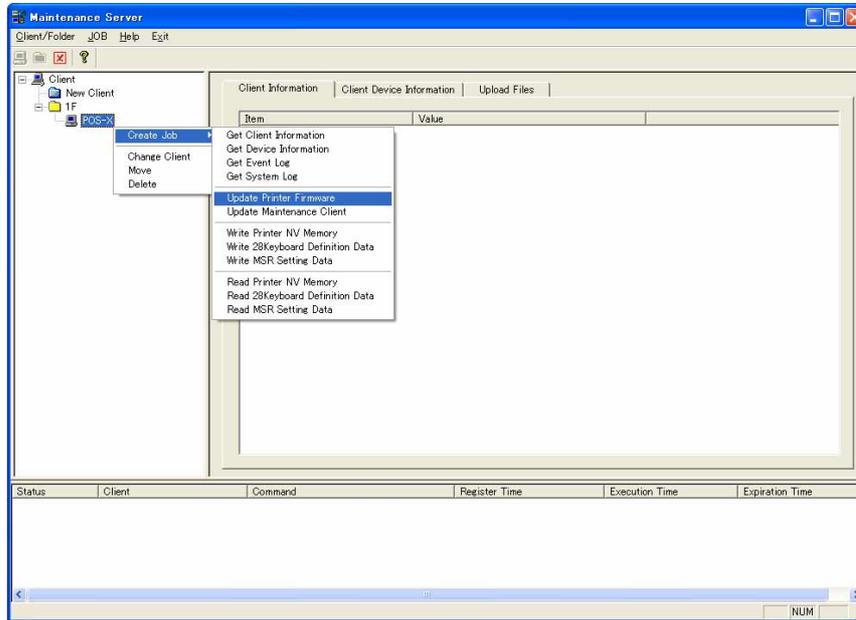
3. The Update Printer Firmware screen appears. Specify the printer firmware file, configure the following settings, and then click [OK].

[Target Client]	Select target clients. The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
[Printer Firmware]	Specify the firmware file to rewrite. You can specify the file from the dialog by clicking the Explorer button.
[Execution Time]	Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it. If you select "Immediately" (default), the clients execute the job right after downloading it. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Expiration Time]	The date and time the job expired are displayed. If the clients have downloaded the job after the time, it will not be executed. If you select "No" (default), an expiration date is not set for the job. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Memo]	You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.
[Activate JOB After Creation]	Check the box if you want to make the job active right after it is created. If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created. When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*
The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

4. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."


5. Let the client operator to execute Download JOB.
   When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

6. When the printer firmware is rewritten successfully, the status in the job list screen moves to "Success."

7. Execute Get Client Information to confirm the printer firmware version.

Update Remote Maintenance Software on Client

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	30 seconds
Dial-up	430 seconds

✎ *Note:*
The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

Execute the job with the following conditions:

- When the client is not operating

- When the client is ready to reboot

- When an operator (manager) is at the client
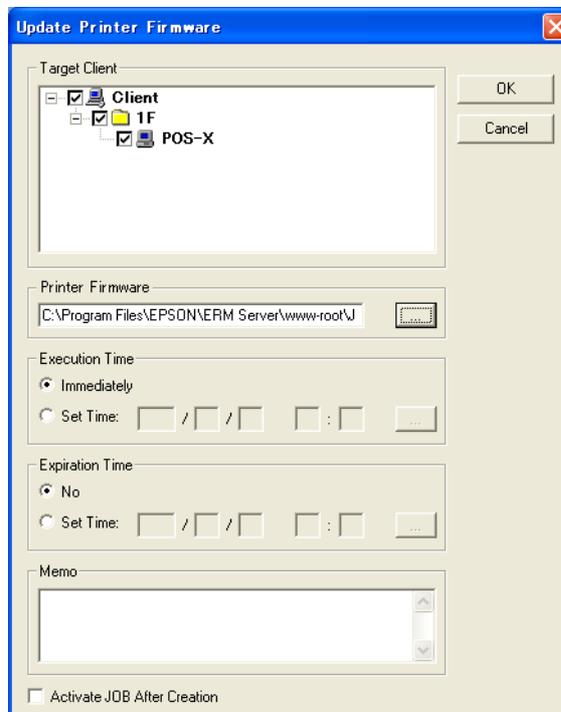
Procedure

Follow the steps below to update the Remote Maintenance Software on a client.

1. Right-click on a target client, and select [Create job], and then [Update Maintenance Client] from the menu.
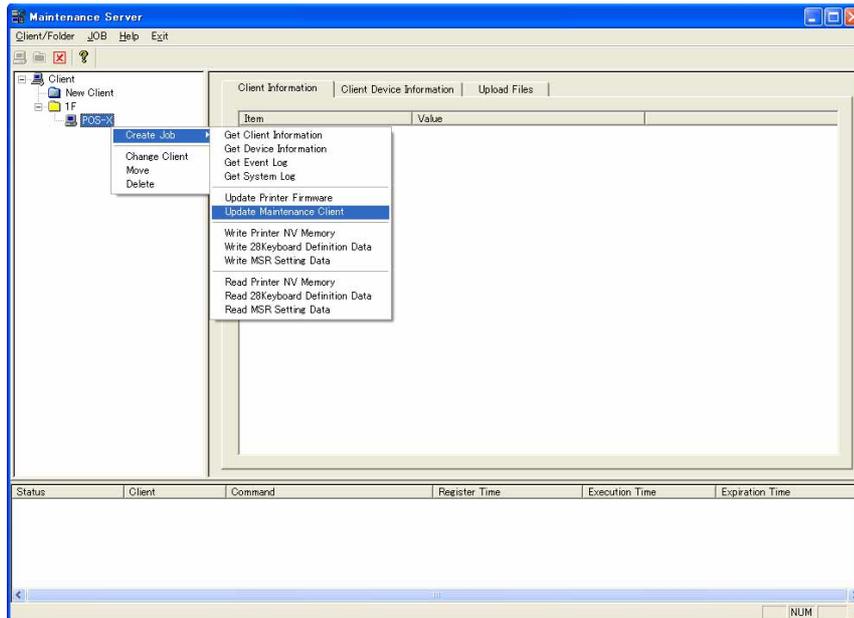
2. The Update Maintenance Client screen appears. Configure the following settings, and then click [OK].

[Target Client]	Select target clients. The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
[Update Client Parameter]	Set parameters given to the client installer. If you check the box (default), all the files to be copied to the client are overwritten. If you do not check the box, only the recent files are overwritten.
[Execution Time]	Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it. If you select "Immediately" (default), the clients execute the job right after downloading it. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Expiration Time]	The date and time the job expired are displayed. If the clients have downloaded the job after the time, it will not be executed. If you select "No" (default), an expiration date is not set for the job. The date and time do not indicate those on the server,

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but those on the clients.
If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

[Memo]   You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.

[Activate JOB After Creation] Check the box if you want to make the job active right after it is created.
If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created.
When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*
The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

3. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

4. Let the client operator to execute Download JOB.
When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

5. When the client software is rewritten successfully, the status in the job list screen moves to "Success."

6. Let the operator reboot the client.

7. Execute Get Client Information to confirm the version of the client software.

Write Printer NV Memory

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	45 to 130 seconds
Dial-up	120 to 420 seconds

✎ *Note:*
The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

Close applications on the client because the printer cannot be used during data rewriting.

Procedure

You can update the NV memory data such as logo print data. Follow the steps below to rewrite the printer NV memory data.

1. Prepare a printer NV memory data file.

2. Right-click on a target client, and select [Create job], and then [Write Printer NV Memory] from the menu.
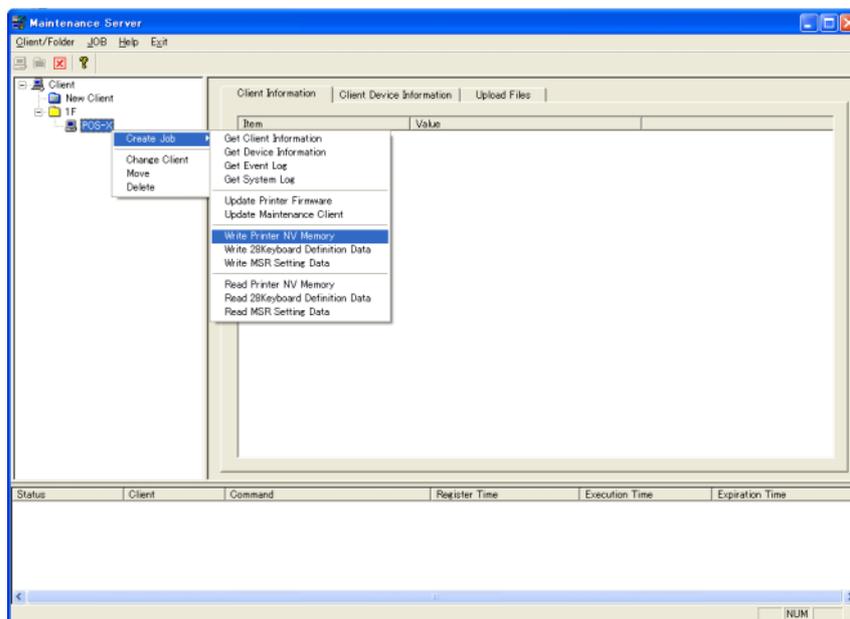
3. The Write Printer NV Memory screen appears. Specify the printer NV memory data file, configure the following settings, and then click [OK].

<table>
<tr><td>[Target Client]</td><td>Select target clients.
The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.</td></tr>
<tr><td>[NV Memory File]</td><td>Specify the NV memory file to write.
You can specify the file from the dialog by clicking the Explorer button.</td></tr>
<tr><td>[Execution Time]</td><td>Set the date and time for the clients to execute the job.
The clients execute the job on the date and time after downloading it.
If you select "Immediately" (default), the clients execute the job right after downloading it.
The date and time do not indicate those on the server, but those on the clients.
If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.</td></tr>
<tr><td>[Expiration Time]</td><td>The date and time the job expired are displayed.
If the clients have downloaded the job after the time, it will not be executed.
If you select "No" (default), an expiration date is not set for the job.
The date and time do not indicate those on the server, but those on the clients.</td></tr>
</table>

If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

[Memo]   You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.

[Activate JOB After Creation] Check the box if you want to make the job active right after it is created.
If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created.
When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*

The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

4. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

5. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

6. When the NV memory is rewritten successfully, the status in the job list screen moves to "Success."
Print the written images with the TM printer for the Clients to confirm the writing has been done.

Write 28Keyboard Definition Data

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	30 seconds
Dial-up	160 seconds

✎ *Note:*

The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

Close applications on the client because the 28 key POS key board cannot be used during data rewriting.

✎ *Note:*

If the touch panel driver is not installed on a client, the customer display/printer may display/print meaningless characters.

Procedure

Follow the steps below to write the 28 key POS keyboard definition data.

1. Prepare a 28 key POS keyboard definition data file.

2. Right-click on a target client, and select [Create job], and then [Write 28Keyboard Definition Data] from the menu.
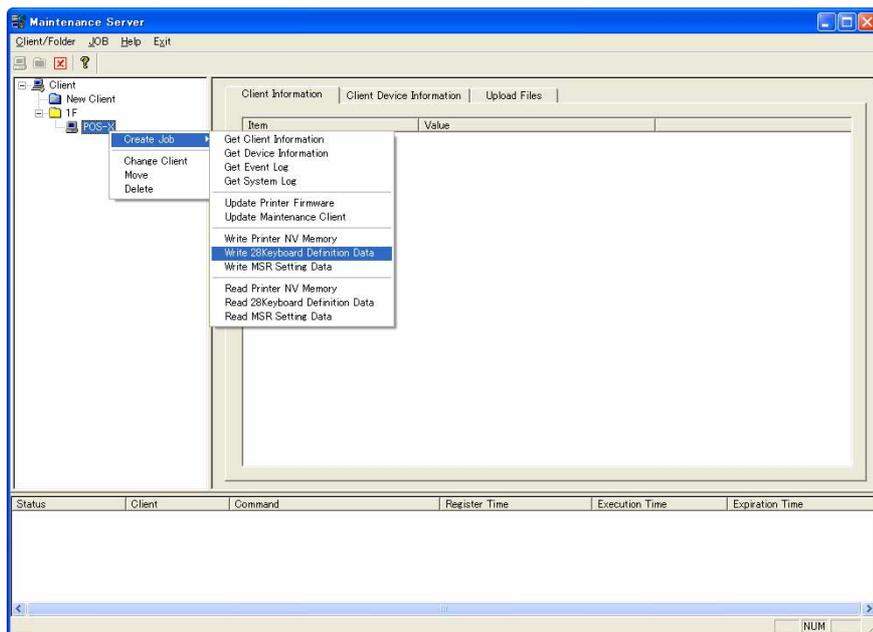
3. The Write 28Keyboard Definition Data screen appears. Specify the definition data file,
   configure the following settings, and then click [OK].

[Target Client]	Select target clients. The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
[Definition File]	Specify the 28 key POS keyboard definition data file to write. You can specify the file by clicking the Explorer button and opening the dialogue to specify the file path.
[Execution Time]	Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it. If you select "Immediately" (default), the clients execute the job right after downloading it. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Expiration Time]	The date and time the job expired are displayed. If the clients have downloaded the job after the time, it will not be executed. If you select "No" (default), an expiration date is not set for the job. The date and time do not indicate those on the server,

but those on the clients.
If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

[Memo]   You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.

[Activate JOB After Creation] Check the box if you want to make the job active right after it is created.
If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created.
When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*
The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

4. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

Status	Client	Command	Register Time	Execution Time	Expiration Time
Wait Download	POS-X	Read 28Keyboard Definition Data	2005/10/02 22:46	Immediately	–

5. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

Status	Client	Command	Register Time	Execution Time	Expiration Time
Execute	POS-X	Read 28Keyboard Definition Data	2005/10/02 22:46	Immediately	–

6. When the definition data is written successfully, the status in the job list screen moves to "Success."

7. Input data from the 28 key POS keyboard of the Clients to confirm that the writing definition data has been done.

Write MSR Setting Data

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	30 seconds
Dial-up	160 seconds

✎ *Note:*
The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

✎ *Note:*
Do not execute this job to a SR-610 client without an MSR.

Prepare a definition file corresponding to the client model. There is no compatibility between the definition files for the IR-700 and the SR-610.

Close applications on the client because the MSR cannot be used during data rewriting.

✎ *Note:*
If the touch panel driver is not installed on a client, the customer display/printer may display/print meaningless characters.

Procedure

Follow the steps below to write the MSR setting data.

1. Prepare a MSR setting data file.

2. Right-click on a target client, and select [Create job], and then [Write MSR Setting Data] from the menu.
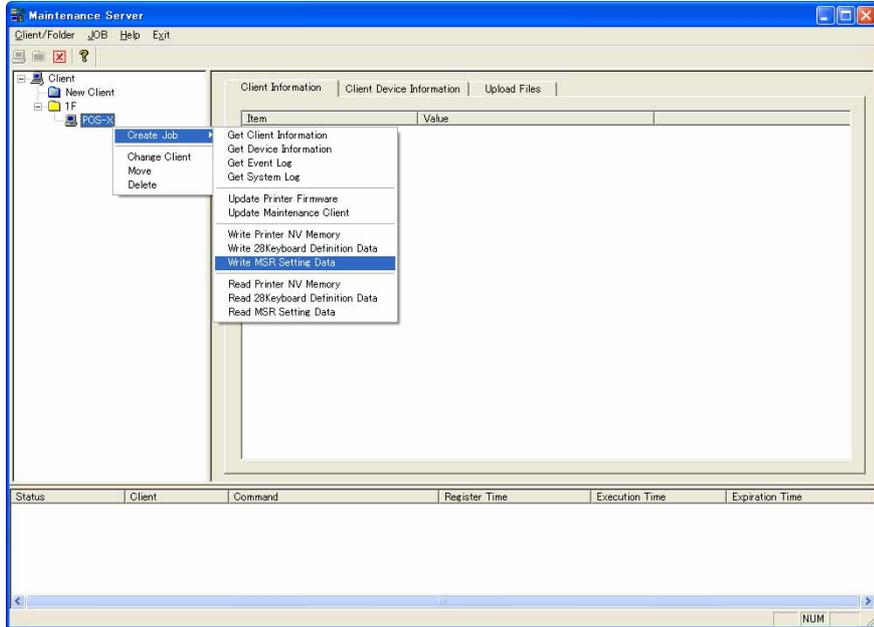
3. The Write MSR Settings Data screen appears. Specify the setting data file, configure the following settings, and then click [OK].

[Target Client]   Select target clients.
The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.

[Setting File]   Specify the MSR setting file to write.
You can specify the file from the dialog by clicking the Explorer button.

[Execution Time]   Set the date and time for the clients to execute the job.
The clients execute the job on the date and time after downloading it.
If you select "Immediately" (default), the clients execute the job right after downloading it.
The date and time do not indicate those on the server, but those on the clients.
If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

[Expiration Time]   The date and time the job expired are displayed.
If the clients have downloaded the job after the time, it will not be executed.
If you select "No" (default), an expiration date is not set for the job.
The date and time do not indicate those on the server, but those on the clients.
If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.

[Memo]   You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.

[Activate JOB After Creation]   Check the box if you want to make the job active right after it is created.
If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created.
When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*
The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

4. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

Status	Client	Command	Register Time	Execution Time	Expiration Time
Wait Download	POS-X	Write MSR Setting Data	2005/10/02 22:46	Immediately	–

5. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

Status	Client	Command	Register Time	Execution Time	Expiration Time
Execute	POS-X	Write MSR Setting Data	2005/10/02 22:46	Immediately	–

6. When the setting data is written successfully, the status in the job list screen moves to "Success."

7. Read a magnetic card with the Clients to confirm that the writing setting data has been done.

Read Printer NV Memory

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	45 to 300 seconds
Dial-up	120 to 600 seconds

✎ *Note:*
The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

Data cannot be obtained while the printer is being used.

Procedure

Follow the steps below to obtain the printer NV memory data.

1. Right-click on a target client, and select [Create job], and then [Read Printer NV Memory] from the menu.

2. The Read Printer NV Memory screen appears. Configure the following settings, and then click [OK].

[Target Client]	Select target clients. The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
[Read NV Memory Area]	Specify the NV memory area to read. Select [NV Bit Image] or [User NV memory].
[Execution Time]	Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it. If you select "Immediately" (default), the clients execute the job right after downloading it. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Expiration Time]	The date and time the job expired are displayed. If the clients have downloaded the job after the time, it will not be executed. If you select "No" (default), an expiration date is not set for the job. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Memo]	You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. If you use the Memo function, the NV memory area specified with Read NV Memory Area is automatically input.
[Activate JOB After Creation]	Check the box if you want to make the job active right after it is created. If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created. When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*
The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

3. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

Status	Client	Command	Register Time	Execution Time	Expiration Time
Wait Download	POS-X	Read Printer NV Memory	2005/10/02 22:46	Immediately	–

4. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

Status	Client	Command	Register Time	Execution Time	Expiration Time
Execute	POS-X	Read Printer NV Memory	2005/10/02 22:46	Immediately	–

5. When the NV memory data is obtained successfully, the status in the job list screen moves to "Success."

6. Select the [Upload Files] tab to display the information on the client NV memory data files obtained and stored in the job confirmation screen.

Client Information	Client Device Information	Upload Files

Folder
C:\Program Files\EPSON\ERM Server\www-root\Client Data\0010C67D93CA   ...

Upload Files	Comment	Time
BITNV.mot	NV Bit Image File	2005/10/21 15:42
UNV.mot	User NV Memory File	2005/10/21 15:26

✎ *Note:*
The NV memory data obtained is stored as BIT NV.mot or UNV. mot in the folder shown in Folder on the Upload File tab.
If NV memory data files have been obtained before, they are overwritten.

Obtained files

The files obtained by Read Printer NV Memory are BITNV.mot and UNV.mot.

Read 28Keyboard Definition Data

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	30 seconds
Dial-up	160 seconds

✎ *Note:*
The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

✎ *Note:*
If the touch panel driver is not installed on a client, the customer display/printer may display/print meaningless characters.

Procedure

Follow the steps below to obtain the 28 key POS keyboard definition data.

1. Right-click on a target client, and select [Create job], and then [Read 28Keyboard Definition Data] from the menu.
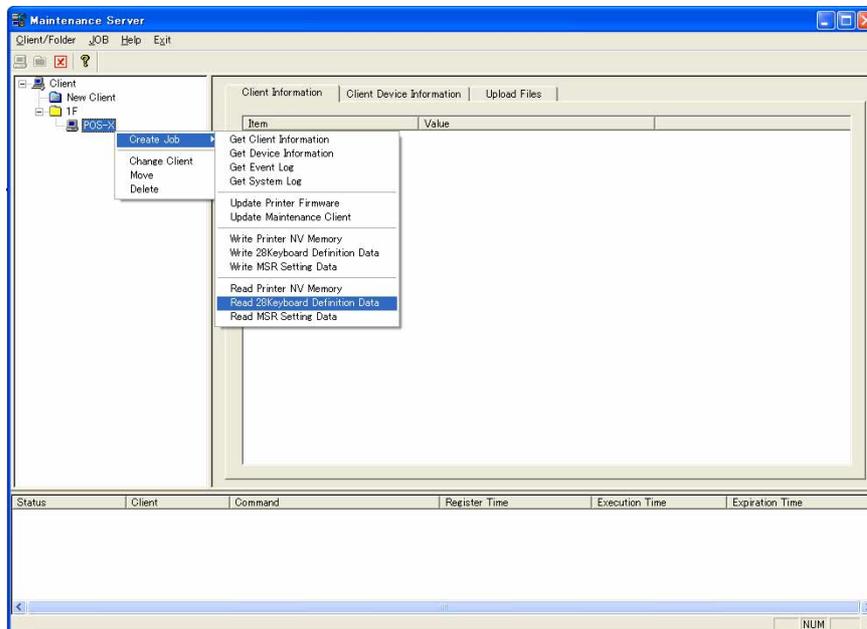
2. The Read 28Keyboard Definition Data appears. Configure the following settings, and
    then click [OK].

[Target Client]   Select target clients.
                           The selected folders (all the clients below a folder
                           should be target) and clients in the Client screen are
                           selected by default.

[Execution Time]   Set the date and time for the clients to execute the job.
                           The clients execute the job on the date and time after
                           downloading it.
                           If you select "Immediately" (default), the clients execute
                           the job right after downloading it.
                           The date and time do not indicate those on the server,
                           but those on the clients.
                           If you specify the date and time, select "Set Time" and
                           click the Explorer button. Set the date and time on the
                           Set Time screen.

[Expiration Time]   The date and time the job expired are displayed.
                           If the clients have downloaded the job after the time, it
                           will not be executed.
                           If you select "No" (default), an expiration date is not set
                           for the job.
                           The date and time do not indicate those on the server,
                           but those on the clients.
                           If you specify the date and time, select "Set Time" and
                           click the Explorer button. Set the date and time on the
                           Set Time screen.

| [Memo] | You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted. |

| [Activate JOB After Creation] | Check the box if you want to make the job active right after it is created.
If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created.
When you want to make the job active, right-click in the job list, and select "Active." |

✏ *Note:*
The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

3. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

4. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

5. When the definition data is obtained successfully, the status in the job list screen moves to "Success."

6. Select the [Upload Files] tab to display the information on the 28 key POS keyboard definition data files obtained and stored in the job confirmation screen.

✎ *Note:*
The 28 key POS keyboard definition data obtained is stored as 28Key.x28 in the folder shown in Folder on the Upload File tab.
If definition data files have been obtained before, they are overwritten.

Obtained files

The file obtained by Read 28Keyboard Definition Data is 28Key.x28.

Read MSR Setting Data

Job execution time

Time from when a job status in the job list screen has moved to "Wait Execute" until a server receives the execution result and the job status moves to "Success" is as follows:

Network environment	Execution time
LAN	30 seconds
Dial-up	160 seconds

✎ *Note:*
The execution time above is a rough estimate. It may take longer, depending on the environment or conditions of a server or client and network line conditions.

✎ *Note:*
Do not execute this job to a SR-610 client without an MSR.

Prepare a definition file corresponding to the client model. There is no compatibility between the definition files for the IR-700 and the SR-610.

✎ *Note:*
If the touch panel driver is not installed on a client, the customer display/printer may display/print meaningless characters.

Procedure

Follow the steps below to obtain the MSR setting data.

1. Right-click on a target client, and select [Create job], and then [Read MSR Setting Data] from the menu.
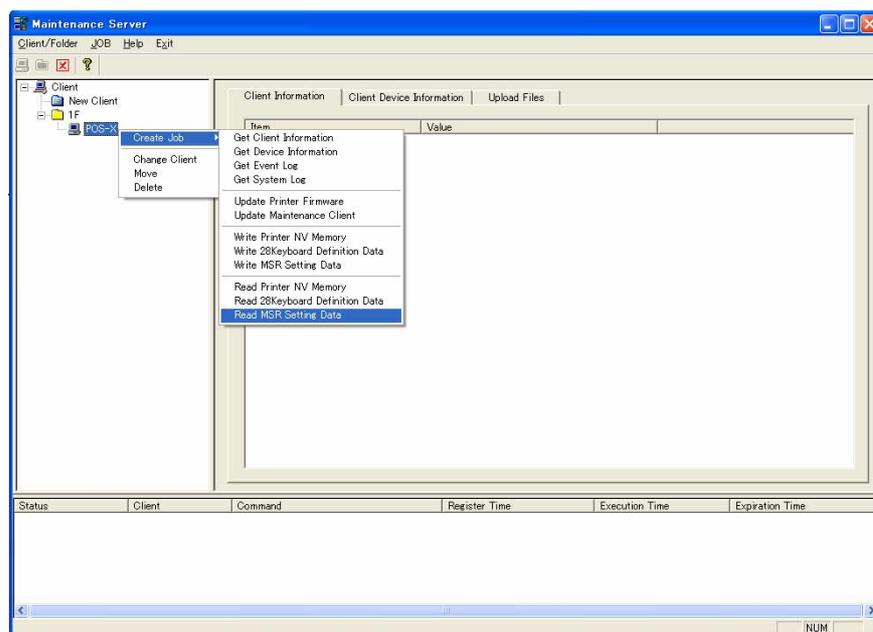
2. The Read MSR Setting Data appears. Configure the following settings, and then click [OK].

[Target Client]	Select target clients. The selected folders (all the clients below a folder should be target) and clients in the Client screen are selected by default.
[Execution Time]	Set the date and time for the clients to execute the job. The clients execute the job on the date and time after downloading it. If you select "Immediately" (default), the clients execute the job right after downloading it. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Expiration Time]	The date and time the job expired are displayed. If the clients have downloaded the job after the time, it will not be executed. If you select "No" (default), an expiration date is not set for the job. The date and time do not indicate those on the server, but those on the clients. If you specify the date and time, select "Set Time" and click the Explorer button. Set the date and time on the Set Time screen.
[Memo]	You can make a comment on the job. You can enter up to 255 one-byte characters or 127 double-byte characters. Excess characters will be deleted.

[Activate JOB After Creation] Check the box if you want to make the job active right after it is created.
If it is not checked (default), the status becomes "Inactive" and the job is not active right after it is created.
When you want to make the job active, right-click in the job list, and select "Active."

✎ *Note:*
The Expiration time must be later than the Execution time.

A difference between the date and time on the maintenance server and those on the clients causes a time lag between the setting on the maintenance server and execution time on the clients. It is recommended that you set the same time on the maintenance server and the clients. If a client is far away or abroad, set the local date and time.

3. The job is registered in the job list screen. If the job is active, the status in the job list screen is "Wait Download."

Status	Client	Command	Register Time	Execution Time	Expiration Time
Wait Download	POS-X	Read MSR Setting Data	2005/10/02 22:46	Immediately	-

4. When the job is requested from a client and the job is downloaded, the status in the job list screen moves from "Wait Download" to "Wait Execute." After the job is executed, it moves to "Execute."

Status	Client	Command	Register Time	Execution Time	Expiration Time
Execute	POS-X	Read MSR Setting Data	2005/10/02 22:46	Immediately	-

5. When the setting data is obtained successfully, the status in the job list screen moves to "Success."

6. Select the [Update Files] tab to display the information on the MSR setting data file obtained and stored in the job confirmation screen.

✎ *Note:*
The MSR setting data obtained is stored as MSR.xms in the folder shown in Folder on the Upload File tab. If setting data files have been obtained before, they are overwritten.

Obtained files

The file obtained by Read MSR Setting Data is MSR.xms.

Appendix-A
Return Code and Return Description

This chapter describes Return code and Return Description according to job execution results.

How to Confirm Job Execution Results

Follow the steps below to confirm job execution results.

1. Select a job whose execution result is "Error" from the jobs displayed in the Job list screen.
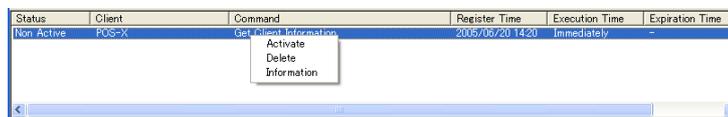
2. Right-click, and select [Information] from the menu.

3. The JOB Information screen appears.

4. Confirm the Return Code and Return Description displayed on the JOB Information screen, and take necessary actions.
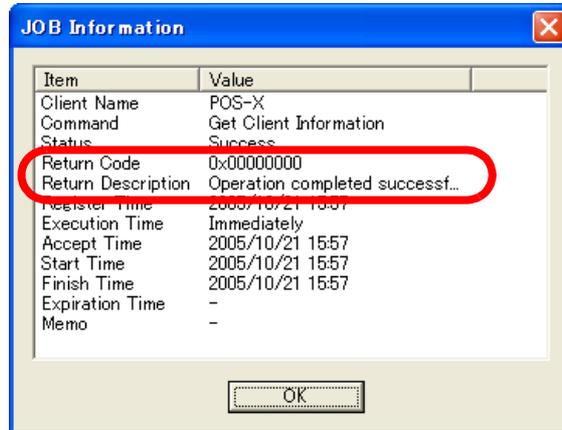
Return Code and Return Description

Common

Return Code	Return Description	Cause	Action
0x00000000	Operation completed successfully.	-	-
0x000001F4	Unknown server error.	Remote maintenance server or proxy server stopped the service.	Confirm the server status.
0x000001F7	Server Capacity reached.	Remote maintenance server or proxy server is temporarily in the busy status.	Create the failed job again with different execution time from that of the other jobs, and execute it again.
0x00002EE7	The server name could not be resolved.	Server URL is not correct.	Confirm if the server URL of the client is correct.
0x00002EFD	The attempt to connect to the server failed.	Cannot connect to the server.	Confirm the server status. Confirm if the server settings of the client are correct.
0x00002F83	The Internet connection has been lost.	Disconnected from the server.	Confirm the status of the server and network cable.
0x00002EE2	The request has timed out.	Server does not respond.	Confirm the status of the server and network cable.
0x00002EFE	The connection with the server has been terminated.	Server does not respond.	Confirm the server status.
0x00002EFF	The connection with the server has been reset.	Server does not respond.	Confirm the server status.

Get Client Information

Return Code	Return Description	Cause	Action
0x00004E25	ERROR: Unable to acquire Client Information.	Obtaining MAC address or name of the client failed.	Confirm if the client LAN card is correct. Confirm the client status.

Get Device Information

Return Code	Return Description	Cause	Action
0x00000002	File processing error, DevInf.txt.	There is no space in the disk or rewriting is prohibited.	Increase the space in the disk or confirm if rewriting is prohibited.
0x00000003	Memory allocation failed.	Memory is not in the normal status.	Reboot the client.

Get Event Log

Return Code	Return Description	Cause	Action
0x00004E23	ERROR: Sending status, Job not found.	Job was deleted on the server while it is being executed.	-
0x00004E26	ERROR: Failed to output Application Log file.	Application log file cannot be created.	Confirm the client PC.
0x00004E27	ERROR: Failed to output System Log file.	System log file cannot be created.	Confirm the client PC.
0x00004E28	ERROR: Failed to output Security Log file.	Security log file cannot be created.	Confirm the client PC.
0x00004E29	ERROR: Failed to upload file. Source file or target path does not exist or is in use.	The file is open, path to write cannot be found, or more than 10 of the same files exist.	Close the file if it is open. Delete unnecessary files if there are more than 10 of the same files.
0x00004E2A	ERROR: Failed to upload file. Target resource capacity is not enough.	There is no space in the disk.	Delete unnecessary files to increase space in the disk.

Update Printer Firmware

Return Code	Return Description	Cause	Action
0x00000001	ERROR: Version info does not match.	Rewriting was not normal.	Specify the correct firmware file, and then rewrite again.
0x00000002	ERROR: Failed to get version information. Cannot communicate with the printer.	Rewriting was not normal	Turn off and on the printer power, and then rewrite again.
0x00000003	ERROR: Failed to start printer properly even though it was updated successfully.	Rewriting was not normal.	Turn off and of the printer power, and then confirm the printer operation. Rewrite again.
0x00000004	WARNING: Failed to confirm boot version information even though it was updated successfully.	Boot information is missing in the rewritten firmware data.	Specify the correct firmware file, and then rewrite again.
0x00000064	Failed to open Communication port.	Another program or driver is using the COM port.	Close the application using the COM port, and then execute the job.
0x00000065	Communication test failed.	Communication condition with printer does not correspond.	Confirm if the communication condition between the printer and client corresponds.
0x00000066	Failed to switch to Memory update mode.	The printer is the old model that has no command to move to rewriting mode.	You cannot rewrite with Remote Maintenance Software. Use other methods than the Remote Maintenance Software.
0x000000C8	ERROR: Failed to open firmware file.	Opening firmware file failed.	Specify the correct firmware file, and then rewrite again.
0x000000C9	ERROR: Wrong firmware file format. (Compression/ Decompression error.)	Unzipping/decoding failed.	Specify the correct firmware file, and then rewrite again.
0x000000CA	ERROR: Wrong firmware file format. (MOT format error.)	MOT format is not correct.	Specify the correct firmware file, and then rewrite again.
0x000000CB	ERROR: Wrong firmware file format. (Unsupported file format.)	File type is not supported.	Specify the correct firmware file, and then rewrite again.
0x000000CC	ERROR: Some files for automatic update are missing.	Necessary firmware files to execute automatic update are not prepared.	Specify the correct firmware file, and then rewrite again.
0x000000CD	Printer Type Missmatch	Firmware to rewrite and printer model does not correspond.	Confirm if the firmware to rewrite and printer model corresponds. Specify the correct firmware file, and then execute the job again.

Update Maintenance Client

Return Code	Return Description	Cause	Action
0x00000002	ERROR: Creating Directory	Writing is prohibited or no space is left in the disk.	Confirm if writing the directory is prohibited or if the disk is full.
0x00000003	ERROR: Copying of Files	Writing is prohibited or no space is left in the disk.	Confirm if writing the directory is prohibited or if the disk is full.
0x00000004	ERROR: Deleting Registry	Registry related to remote maintenance is abnormal.	Manually uninstal the client software, and then install it again.
0x00000005	ERROR: Deleting of Files	Writing is prohibited.	Confirm if the file or directory is prohibited.

Write Printer NV Memory

Return Code	Return Description	Cause	Action
0x00000064	Failed to open Communication port.	Another program or driver is using the COM port.	Close the application using the COM port, and then execute the job.
0x00000065	Communication test failed.	Communication condition with printer does not correspond.	Confirm if the communication condition between the printer and client corresponds.

Read Printer NV Memory

Return Code	Return Description	Cause	Action
0x00000064	Failed to open Communication port.	Another program or driver is using the COM port.	Close the application using the COM port, and then execute the job.
0x00000065	Communication test failed.	Communication condition with printer does not correspond.	Confirm if the communication condition between the printer and client corresponds.

Write 28Key Definition data

Return Code	Return Description	Cause	Action
0x00000002	Communication channel is currently being used by another application. Please try again later.	Another application is using the communication port.	Close the application, and then execute the job again.
0x00000004	ERROR: No response from POS Controller.	POS controller is abnormal.	Replace the LCD module (DM-LX series).
0x00000008	ERROR: Serial port configuration failed.	Serial port setting is not correct.	Confirm if serial port setting is correct.
0x00000200	ERROR: Unknown file type.	Incorrect definition file was specified.	Specify the correct definition file.
0x00000400	ERROR: Reading from file failed.	Specified file cannot be read.	Specify the correct definition file.
0x00000800	ERROR: Writing to POS controller failed.	POS controller is not connected. (IR-700)	Confirm if the LCD module (DM-LX series) is connected.
		POS controller is defective. (IR-700)	Replace the LCD module (DM-LX series).
		Job was executed to the SR-610.	Do not execute this job to the SR-610.

Read 28Key Definition data

Return Code	Return Description	Cause	Action
0x00000002	Communication channel is currently being used by another application. Please try again later.	Another application is using the communication port.	Close the application, and then execute the job again.
0x00000004	ERROR: No response from POS Controller.	POS controller has a defect.	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00000008	ERROR: Serial port configuration failed.	Serial port setting is not correct.	Confirm if the serial port setting is correct.
0x00000200	ERROR: READKB command failed.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00000400	ERROR: READLAYERK command failed.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00002000	ERROR: READVAL command failed.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00004000	ERROR: POSREPORT command failed.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
		Job was executed to the SR-610.	Do not execute this job to the SR-610.
0x00008000	ERROR: Not enough memory space on the disk.	There is not enough space to write a file.	Delete unnecessary files, and then execute the job again.
0x00010000	ERROR: Writing to file failed.	Creating the definition file failed.	Execute the job again.

Write MSR Setting data

Return Code	Return Description	Cause	Action
0x00000002	Communication channel is currently being used by another application. Please try again later.	Another application is using the communication port.	Close the application, and then execute the job again.
0x00000004	ERROR: No response from POS Controller.	POS controller is abnormal.	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00000008	ERROR: Serial port configuration failed.	Serial port setting is not correct.	Confirm if serial port setting is correct.
0x00000200	ERROR: Unknown file type.	Incorrect definition file was specified.	Specify the correct definition file.
0x00000400	ERROR: Reading from file failed.	Specified file cannot be read.	Specify the correct definition file.
0x00000800	ERROR: Writing to POS controller failed.	POS controller is not connected or abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
		MSR device is not connected or abnormal. (SR-610)	Confirm if the MSR module (DM-MS series) is connected correctly. Replace the MSR module.

Read MSR Setting data

Return Code	Return Description	Cause	Action
0x00000002	Communication channel is currently being used by another application. Please try again later.	Another application is using the communication port.	Close the application, and then execute the job again.
0x00000004	ERROR: No response from POS Controller.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00000008	ERROR: Serial port configuration failed.	Serial port setting is not correct.	Confirm if serial port setting is correct.
0x00000800	ERROR: READSSES command failed.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00001000	ERROR: READSCANTBL command failed.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00002000	ERROR: READVAL command failed.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
0x00004000	ERROR: POSREPORT command failed.	POS controller is abnormal. (IR-700)	Confirm if the LCD module (DM-LX series) is connected correctly. Replace the LCD module.
		MSR device is not connected or abnormal. (SR-610)	Confirm if the MSR module (DM-MS series) is connected correctly. Replace the MSR module.
0x00008000	ERROR: Not enough memory space on the disk.	There is not enough space to write a file.	Delete unnecessary files, and then execute the job again.
0x00010000	ERROR: Writing to file failed.	Creating the definition file failed.	Execute the job again.

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