Network Guide

Introduction

This manual contains detailed instructions and notes on the operation and use of this machine. For your safety and benefit, read this manual carefully before using the machine. Keep this manual in a handy place for quick reference.
Do not copy or print any item for which reproduction is prohibited by law.
Copying or printing the following items is generally prohibited by local law:
bank notes, revenue stamps, bonds, stock certificates, bank drafts, checks, passports, driver's licenses.

Important

Contents of this manual are subject to change without prior notice. In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.
Two kinds of size notation are employed in this manual. With this machine refer to the inch version.

Notes

Some illustrations in this manual might be slightly different from the machine.
Certain options might not be available in some countries. For details, please contact your local dealer.
Depending on which country you are in, your machine may include certain options as standard. For details, please contact your local dealer.

Manuals for This Machine

Refer to the manuals that are relevant to what you want to do with the machine.

Important

- **Media differ according to manual.**
- **The printed and electronic versions of a manual have the same contents.**
- **Adobe® Acrobat® Reader®/Adobe Reader must be installed in order to view the manuals as PDF files.**
- **A Web browser must be installed in order to view the html manuals.**
- **For details about the functions of RW-7140, refer to the manuals for this option.**

About This Machine

Be sure to read the Safety Information in this manual before using the machine.

This manual provides an introduction to the functions of the machine. It also explains the control panel, preparation procedures for using the machine, how to enter text, and how to install the CD-ROMs provided.

Troubleshooting

Provides a guide to solving common problems, and explains how to replace paper, toner, and other consumables.

Copy/Document Server Reference

Explains Copier and Document Server functions and operations. Also refer to this manual for explanations on how to place originals.

Printer Reference

Explains Printer functions and operations.

Scanner Reference

Explains Scanner functions and operations.

Network Guide

Explains how to configure and operate the machine in a network environment, and use the software provided.

General Settings Guide

Explains User Tools settings, and Address Book procedures such as registering e-mail addresses, and user codes. Also refer to this manual for explanations on how to connect the machine.

Security Reference

This manual is for administrators of the machine. It explains security functions that you can use to prevent unauthorized use of the machine, data tampering, or information leakage. For enhanced security, we recommend that you first make the following settings:

- Install the Device Certificate.
- Enable SSL (Secure Sockets Layer) Encryption.
- Change the user name and password of the administrator using Web Image Monitor.

For details, see "Setting Up the Machine", Security Reference.

Be sure to read this manual when setting the enhanced security functions, or user and administrator authentication.

PostScript 3 Supplement

Explains how to set up and use PostScript® 3™.

UNIX Supplement

For "UNIX Supplement", please visit our Web site or consult an authorized dealer.

This manual includes descriptions of functions and settings that might not be available on this machine.

Information

Contains general notes on the machine, and information about the trademarks of product names used in the manuals.

Other manuals

- Manuals for DeskTopBinder Lite
  - DeskTopBinder Lite Setup Guide
  - DeskTopBinder Introduction Guide
  - Auto Document Link Guide

Note

- Manuals provided are specific to machine types.
- The following software products are referred to using general names:

Product name	General name
DeskTopBinder Lite and DeskTopBinder Professional*1	DeskTopBinder
ScanRouter EX Professional*1 and ScanRouter EX Enterprise*1	the ScanRouter delivery software

*1 Option

TABLE OF CONTENTS

3. Special Operations under Windows

4. Appendix

How to Read This Manual

Symbols

This manual uses the following symbols:

Important

Indicates points to pay attention to when using the machine, and explanations of likely causes of paper misfeeds, damage to originals, or loss of data. Be sure to read these explanations.

Note

Indicates supplementary explanations of the machine's functions, and instructions on resolving user errors.

Reference

This symbol is located at the end of sections. It indicates where you can find further relevant information.

[ ]

Indicates the names of keys on the machine's display or control panels.

About IP Address

In this manual, "IP address" covers both IPv4 and IPv6 environments. Read the instructions that are relevant to the environment you are using.

1. Using a Printer Server

Preparing Printer Server

This section explains how to configure the machine as a Windows network printer. The machine is configured to enabling network clients to use it. When the network printer is connected via SmartDeviceMonitor for Client, you can set the printing notification function to notify clients of the results of their print jobs.

Important

- **Under Windows XP Professional or Windows Server 2003/2003 R2, to change printer properties in the [Printer] folder, you need Printer Management access authentication; under Windows Vista, Full Control access authentication. Log on to the file server as an Administrator or member of the PowerUsers group.**

1. **Open the [Printers and Faxes] window from the [Start] menu.**

   The [Printers and Faxes] window appears.

2. **Click the icon of the machine you want to use. On the [File] menu, click [Properties]. The printer properties appear.**
3. **On the [Sharing] tab, click [Share this printer].**
4. **To share the machine with users using a different version of Windows, click [Additional Drivers...].**

   If you have installed an alternative driver by selecting [Share As:] during the printer driver installation, this step can be ignored.

5. **Click [OK], and then close the printer properties.**

Printing notification via SmartDeviceMonitor for Client

Follow the procedure below to configure the machine to use the printing notification function of SmartDeviceMonitor for Client.

Setting the print server

Important

- **Under Windows XP Professional or Windows Server 2003/2003 R2, to change printer properties in the [Printer] folder, you need Printer Management access authentication; under Windows Vista, Full Control access authentication. Log on to the file server as an Administrator or member of the PowerUsers group.**

1. **On the [Start] menu, point to [All Programs], [DeskTopBinder], [SmartDeviceMonitor for Client], and then click [Print Server Setting].**

   The print server setting dialog box appears.

2. **Select the [Notify client PCs of printout/data-transmission] check box, and then click [OK].**

   After print server setting is made, a dialog box appears. Confirm the dialog box content, and click [OK].

   Click [Cancel] to interrupt the procedure.

   A dialog box appears for client setting.

3. **Click [OK].**

   The print server setting is completed. Each client must be set to receive print notification.

   Note

   - Current printing jobs restart from the beginning after the spooler pauses briefly.
   - When the expansion function is not used, the function is automatically set as available.
   - If you log on using an account that does not have Administrator privileges, the client may not be notified.
   - For details, see “Using the SmartDeviceMonitor for Client Port”, Printer Reference.

Setting a Client

1. **On the [Start] menu, point to [All Programs], [DeskTopBinder], [SmartDeviceMonitor for Client], and then click [Extended Features Settings].**

   A dialog box for setting the expansion function appears.

2. **Select the [Notify of printout/data-transmission when using print server] check box.**

3. **Click [OK].**

   The client setting is completed.

   Note

   - Set the printing notification function on the printer driver as well as on SmartDeviceMonitor for Client.

Using NetWare

This section describes the setting procedure for network printers in the NetWare environment. In the NetWare environment, you can connect the machine as a "print server" or "remote printer".

Important

- **IPv6 cannnot be used on this function.**

Setting procedure

- When using the machine as a print server
  1. Installing SmartDeviceMonitor for Admin
  2. Setting the network interface board.
  3. Turning the machine off and then back on.
- When using the machine as a remote printer
  1. Installing SmartDeviceMonitor for Admin.
  2. Setting the network interface board.
  3. Setting NetWare.
  4. Starting the print server.

  Note

  - This procedure assumes an environment is already prepared for normal NetWare running the printing service setting.
  - The procedure is explained with the following example settings:
    - File server's name ...CAREE
    - Print server's name ...PSERV
    - Printer's name ...R-PRN
    - Queue name ...R-QUEUE

Using SmartDeviceMonitor for Admin

To use the machine in a NetWare environment, use SmartDeviceMonitor for Admin to set the NetWare printing environment.

Printers listed by SmartDeviceMonitor for Admin

SmartDeviceMonitor for Admin lists printers connected to the network. If you cannot identify the machine you want to configure, print configuration page, and then check the machine name.

Note

- The NetWare Client provided by Novell is required to set the printing environment using SmartDeviceMonitor for Admin under the following environments:
  - NDS or Bindery mode in Windows 2000/XP

- For details about SmartDeviceMonitor for Admin, see "Installing SmartDeviceMonitor for Admin".

Reference

- p.35 "Installing SmartDeviceMonitor for Admin"

Setting Up as a Print Server (NetWare 3.x)

Follow the procedure below to connect the machine as a print server using NetWare 3.x.

1. **Start Web Image Monitor.**
2. **Click [Login].**

   A dialog box for entering the login user name and password appears.
3. **Enter the login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.
4. **Click [Configuration] in the left area, and then click [NetWare Print Settings].**
   - Print Server Name: Enter the NetWare print server name. To use the interface board as a print server, enter the name of a print server that is not active on the file server. Use up to 47 characters.
   - Logon Mode: Specify whether to designate a file server or NDS tree when logging on to NetWare.
   - File Server Name: When a file server name is entered here, only the specified file server is searched for. This item is mandatory. Use up to 47 characters.
   - NDS Tree: To enable NDS mode, enter the name of the NDS tree you want to log on to. Use up to 32 alphanumeric characters.
   - NDS Context Name: To enable NDS mode, enter the print server context. Use up to 127 characters.
   - Operation Mode: Specify whether to use the interface board as a print server or a remote printer.
   - Remote Printer No.: This item is effective when the interface board is specified as a remote printer. Enter the same number as the number of the printer to be created on the print server (0 to 254 characters).
   - Job Timeout: When the interface board is used as a NetWare remote printer, the printer cannot detect when a print job ends. Therefore, the printer terminates printing when a certain period of time has elapsed since it last received print data (i.e., when it has not received print data for a certain period of time). Specify here this period of time (3 to 255 seconds). The initial value is 15 (seconds).
   - Frame Type: Select the frame type from the drop-down menu.
   - Print Server Protocol: Select the protocol for NetWare from the drop-down menu.

- NCP Delivery Protocol: Select the protocol for NCP delivery.

5. **Confirm the settings, and then click [Device Name].**

   Configuration is now complete. Wait several before restarting Web Image Monitor.

6. **Click [Logout].**

Note

- To check the configuration is correct, enter the following from the command prompt:

  `F:> USERLIST`

- If the printer works as configured, the name of the print server appears as a connected user.
- If you cannot identify the printer you want to configure, check the printer name against the configuration page printed from the printer. For details about printing a configuration page, see "Printing the Configuration Page", General Settings Guide.
- If no printer names appear in the list, match the frame types of IPX/SPXs for the computer and printer. Use the [Network] dialog box of Windows to change the frame type of the computer.
- For details about Web Image Monitor, see "Using Web Image Monitor".
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.

Reference

- p.21 "Using Web Image Monitor"

Setting Up as a Print Server (NetWare 4.x, 5 / 5.1, 6 / 6.5)

Follow the procedure below to connect the machine as a print server using NetWare 4.x, NetWare 5 / 5.1, or NetWare 6 / 6.5.

Important

- **When using the printer as a print server in NetWare 4.x, NetWare 5 / 5.1, or NetWare 6 / 6.5, set it to the NDS mode.**
- **When using NetWare 5 / 5.1 or NetWare 6 / 6.5, set the printer as a print server.**

1. **Start Web Image Monitor.**
2. **Click [Login].**

   A dialog box for entering the login user name and password appears.

3. **Enter the login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.

4. **Click [Configuration] in the left area, and then click [NetWare Print Settings].**

5. **Confirm the settings, and then click [Device Name].**

   Configuration is now complete. Wait several minutes before restarting Web Image Monitor.

6. **Click [Logout].**

7. **Quit Web Image Monitor.**

Note

- To check the configuration is correct, enter the following from the command prompt:

  `F:> USERLIST`

- If the printer works as configured, the name of the print server appears as a connected user.
- If you cannot identify the printer you want to configure, check the printer name against the configuration page printed from the printer. For details about printing a configuration page, see "Printing the Configuration Page", General Settings Guide.
- If no printer names appear in the list, match the frame types of IPX/SPXs for the computer and printer. Use the [Network] dialog box of Windows to change the frame type of the computer.
- For details about Web Image Monitor, see "Using Web Image Monitor".
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.

Reference

- p.21 "Using Web Image Monitor"

Using Pure IP in the NetWare 5 / 5.1 or 6 / 6.5 Environment

Follow the procedure below to connect the machine as a print server in a pure IP environment of NetWare 5 / 5.1 or NetWare 6 / 6.5.

Important

- **When creating a queued print server in a pure IP environment of NetWare 5 / 5.1 or NetWare 6 / 6.5, create a print queue on the file server using NetWare Administrator.**
- **This printer is not available as a remote printer for use in a pure IP environment.**
- **To use the printer in a pure IP environment, set it to IPv4.**

Setting up using NWadmin

1. **From Windows, start NWadmin.**

   For details about NWadmin, see the NetWare manuals.

2. **Select the object in which the print queue is located in the directory tree, and then click [Create] on the [Object] menu.**

3. **In the [Class of new object] box, click [Print Queue], and then click [OK].**

4. In the [Print Queue Name] box, enter the name of the print queue.
5. In the [Print Queue Volume] box, click [Browse].
6. In the [Available objects] box, click the volume in which the print queue is created, and then click [OK].
7. Check the settings, and then click [Create].
8. Select the object in which the printer is located, and then click [Create] on the [Object] menu.
9. In the [Class of new object] box, click [Printer], and then click [OK]. For NetWare 5, click [Printer (Non NDPS)].
10. In the [Printer name] box, enter the printer name.
11. Select the [Define additional properties] check box, and then click [Create].
12. Click [Assignments], and then click [Add] in the [Assignments] area.
13. In the [Available objects] box, click the queue you created, and then click [OK].
14. Click [Configuration], click [Parallel] in the [Printer type] list, and then click [Communication].
15. Click [Manual load] in the [Communication type] area, and then click [OK].
16. Check the settings, and then click [OK].
17. Select a context specified, and then click [Create] on the [Object] menu.
18. In the [Class of new object] box, click [Print Server], and then click [OK]. For NetWare 5, click [Print Sever (Non NDPS)].
19. In the [Print Server Name] box, enter the print server name.

    Use the same print server name specified using SmartDeviceMonitor for Admin.
20. Select the [Define additional properties] check box, and then click [Create].
21. Click [Assignments], and then click [Add] in the [Assignments] area.
22. In the [Available objects] box, click the queue you created, and then click [OK].
23. Check the settings, and then click [OK].
24. Start the print server by entering the following from the console of the NetWare server.

    If the print server is in operation, quit and restart it.

    To quit

    ```
    CAREE: unload pserver
    ```

    To start

    ```
    CAREE: load pserver print_server_name
    ```

Setting up using Web Image Monitor

1. Start Web Image Monitor.

2. **Click [Login].**

   A dialog box for entering the login user name and login password appears.

3. **Enter the user login user name and password, and then click [Login].**

   For details about the login name and password, consult your network administrator.

4. **Click [Configuration] in the left area, and then click [NetWare Print Settings].**

5. **Confirm the settings, and then click [Device Name].**

   Configuration is now complete. Wait several minutes before restarting Web Image Monitor.

6. **Click [Logout].**

7. **Quit Web Image Monitor.**

Note

- If you cannot identify the printer you want to configure, check the printer name against the configuration page printed from the printer. For details about printing a configuration page, see "Printing the Configuration Page", General Settings Guide.
- If no printer names appear in the list, match the frame types of IPX/SPXs for the computer and printer. Use the [Network] dialog box of Windows to change the frame type of the computer.
- For details about Web Image Monitor, see "Using Web Image Monitor".
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.

Reference

- p.21 "Using Web Image Monitor"

Setting Up as a Remote Printer (NetWare 3.x)

Follow the procedure below to use the machine as a remote printer under NetWare 3.x.

Setting up using PCONSOLE

1. **Enter "PCONSOLE" from the command prompt.**

   ```
   F:> PCONSOLE
   ```

2. **Create a print queue.**

   When using the existing print queue, go to the procedure for creating a printer.

3. **From the [Available Options] menu, select [Print Queue Information], and then press the [Enter] key.**

4. **Press [Insert] key, and then enter a print queue name.**

5. **Press [Esc] key to return to the [Available Options] menu.**

6. **Set up the network connection to a printer.**

7. **On the [Available Options] menu, click [Print Server Information], and then press the [Enter] key.**
8. **To create a new print server, press the [Insert] key, and then enter a print server name.**

   For a currently defined print server, select a print server in the [Print Server] list.

   Use the same printer name specified using SmartDeviceMonitor for Admin.
9. **From the [Print Server Information] menu, select [Print Server Configuration].**
10. **From the [Print Server Configuration] menu, select [Printer Configuration].**
11. **Select the printer indicated as [Not Installed].**

    Use the same printer number specified as the remote printer number using SmartDeviceMonitor for Admin.
12. **To change the printer name, enter a new name.**

    A name "printer x" is assigned to the printer. The "x" stands for the number of the selected printer.
13. **As type, select [Remote Parallel, LPT1].**

    The IRQ, Buffer size, Starting form, and Queue service mode are automatically configured.
14. **Press the [Esc] key, and then click [Yes] on the confirmation message.**
15. **Press the [Esc] key to return to [Print Server Configuration Menu].**
16. **Assign print queues to the created printer.**
17. **From [Print Server Configuration Menu], select [Queues Serviced By Printer].**
18. **Select the printer created.**
19. **Press the [Insert] key to select a queue serviced by the printer.**

    You can select several queues.
20. **Follow the instructions on the screen to make other necessary settings.**

    Following these steps, check that the queues are assigned.
21. **Press the [Esc] key until "Exit?" appears, and then select [Yes] to exit PCONSOLE.**
22. **Start the print server by entering the following from the console of the NetWare server.**

    If the print server is in operation, quit and restart it.

    To quit

    ```
    CAREE: unload pserver
    ```

    To start

    ```
    CAREE: load pserver print_server_name
    ```

    If the printer works as configured, the message "Waiting for job" appears.

Setting up using Web Image Monitor

1. **Start Web Image Monitor.**

2. **Click [Login].**

   A dialog box for entering the login user name and login password appears.

3. **Enter the login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.

4. **Click [Configuration] in the left area, and then click [NetWare Print Settings].**

5. **Confirm the settings, and then click [Device Name].**

   Configuration is now complete. Wait several minutes before restarting Web Image Monitor.

6. **Click [Logout].**

7. **Quit Web Image Monitor.**

Note

- If you cannot identify the printer you want to configure, check the printer name against the configuration page printed from the printer. For details about printing a configuration page, see "Printing the Configuration Page", General Settings Guide.
- If no printer names appear in the list, match the frame types of IPX/SPXs for the computer and printer. Use the [Network] dialog box of Windows to change the frame type of the computer.
- For details about Web Image Monitor, see "Using Web Image Monitor".
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.

Reference

- p.21 "Using Web Image Monitor"

Setting Up as a Remote Printer (NetWare 4.x, 5 / 5.1, 6 / 6.5)

Follow the procedure below to use the printer as a remote printer under NetWare 4.x, 5 / 5.1 and 6 / 6.5.

Important

- **To use the printer as a remote printer under NetWare 4.x, 5 / 5.1, 6 / 6.5, set it to NDS mode.**
- **Do not use the printer as a remote printer when Pure IP is used.**

Setting up using NWadmin

1. **From Windows, start NWadmin.**

   For details about NWadmin, see the NetWare manuals.

2. **Set up the network connection to a print queue. Select the object in which the print queue is located in the directory tree, and then click [Create] on the [Object] menu.**

3. **In the [Class of new object] box, click [Print Queue], and then click [OK].**

4. **In the [Print Queue Name] box, enter the name of the print queue.**
5. **In the [Print Queue Volume] box, click [Browse].**
6. **In the [Available objects] box, click the volume in which the print queue is created, and then click [OK].**
7. **Check the settings, and then click [Create].**
8. **Set up the network connection to a printer. Select the object in which the printer is located, and then click [Create] on the [Object] menu.**
9. **In the [Class of new object] box, click [Printer], and then click [OK]. For NetWare 5, click [Printer (Non NDPS)].**
10. **In the [Printer name] box, enter the printer name**
11. **Select the [Define additional properties] check box, and then click [Create].**
12. **Assign print queues to the created printer. Click [Assignments, and then click [Add] in the [Assignments] area.**
13. **In the [Available objects] box, click the queue you created, and then click [OK].**
14. **Click [Configuration], click [Parallel] in the [Printer type] list, and then click [Communication].**
15. **Click [Manual load] in the [Communication type] area, and then click [OK]. Check the settings, and then click [OK].**
16. **Set up the network connection to a print server. Select a context specified, and then click [Create] on the [Object] menu.**
17. **In the [Class of new object] box, click [Print Server], and then click [OK]. For NetWare 5, click [Print Sever (Non NDPS)].**
18. **In the [Print Server Name:] box, enter the print server name.**

    Use the same print server name specified using SmartDeviceMonitor for Admin.
19. **Select the [Define additional properties] check box, and then click [Create].**
20. **Assign the printer to the created print server. Click [Assignments], and then click [Add] in the [Assignments] area.**
21. **In the [Available objects] box, click the queue you created, and then click [OK].**
22. **In the [Printers] area, click the printer you assigned, and then click [Printer Number].**
23. **Enter the printer number, and then click [OK]. Check the settings, and then click [OK].**

    Use the same printer number specified as the remote printer number using SmartDeviceMonitor for Admin.
24. **Start the print server by entering the following from the console of the NetWare server.**

    If the print server is in operation, quit and restart it.

    To exit

    ```
    CAREE: unload pserver
    ```

To start

```
CAREE: load pserver print_server_name
```

25. **Enter the printer server name as the context name, and then press the [Enter] key.**
26. **Select the printer name on the context menu, and then press the [Enter] key.**

Setting up using Web Image Monitor

1. **Start Web Image Monitor.**
2. **Click [Login].**

   A dialog box for entering the login user name and login password appears.
3. **Enter the user login name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.
4. **Click [Configuration] in the left area, and then click [NetWare Print Settings].**
5. **Confirm the settings, and then click [Device Name].**

   Configuration is now complete. Wait several minutes before restarting Web Image Monitor.
6. **Click [Logout].**
7. **Quit Web Image Monitor.**

Note

- If you cannot identify the printer you want to configure, check the printer name against the configuration page printed from the printer. For details about printing a configuration page, see "Printing the Configuration Page", General Settings Guide.
- If no printer names appear in the list, match the frame types of IPX/SPXs for the computer and printer. Use the [Network] dialog box of Windows to change the frame type of the computer.
- For details about Web Image Monitor, see "Using Web Image Monitor".
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.

Reference

- p.21 "Using Web Image Monitor"

2. Monitoring and Configuring the Printer

Using Web Image Monitor

Using Web Image Monitor, you can check the machine status and change settings.

Available operations

The following operations can be remotely performed using Web Image Monitor from a client computer.

- Displaying machine status or settings
- Checking the print job status or history
- Checking, modifying, printing, or deleting print jobs stored in the Document Server
- Interrupting currently printing jobs
- Resetting the machine
- Managing the Address Book
- Making machine settings
- Making network protocol settings
- Making security settings

Configuring the machine

To perform the operations from Web Image Monitor, TCP/IP is required. After the machine is configured to use TCP/IP, operations from Web Image Monitor become available.

Recommended Web browser

- Windows:

  Internet Explorer 5.5 SP2 or higher

  Firefox 1.0 or higher

- Mac OS:

  Firefox 1.0 or higher

  Safari 1.0, 1.2, 2.0 (412.2) or higher

Web Image Monitor supports screen reader software. We recommend JAWS 7.0 or a later version.

Note

- Safari cannot be used on Mac OS X 10.4.1.

- Display and operation problems can occur if you do not enable JavaScript and cookies, or if you are using a non-recommended Web Browser.
- If you are using a proxy server, change the Web browser settings. Contact your administrator for information about the settings.
- Machine information is not automatically updated. To perform an update, click [Refresh] in the display area.
- We recommend using Web Image Monitor in the same network.
- You cannot access to the machine from outside the firewall.
- When using the machine under DHCP, the IP address may be automatically changed by the DHCP server settings. Enable DDNS setting on the machine, and then connect using the machine's host name. Alternatively, set a static IP address to the DHCP server.
- If the HTTP port is disabled, connection to the machine using the machine's URL cannot be established. SSL setting must be enabled on this machine. For details, consult your network administrator.
- When using the SSL encryption protocol, enter "https://(machine's IP address or host name)/".
- Internet Explorer must be installed on your computer. Use the most recent available version. We recommend Internet Explorer 6.0 or later.
- When you are using Firefox, fonts and colors may be different, or tables may be out of shape.
- When using a host name under Windows Server 2003 with IPv6 protocol, perform host name resolution using an external DNS server. The host file cannot be used.
- To use JAWS 7.0 under Web Image Monitor, you must be running Windows OS and Microsoft Internet Explorer 5.5 SP2, or a later version.

Displaying Top Page

This section explains the Top Page and how to display Web Image Monitor.

Important

- **When entering an IPv4 address, do not begin segments with zeros. For example: If the address is "192.168.001.010", you must enter it as "192.168.1.10".**

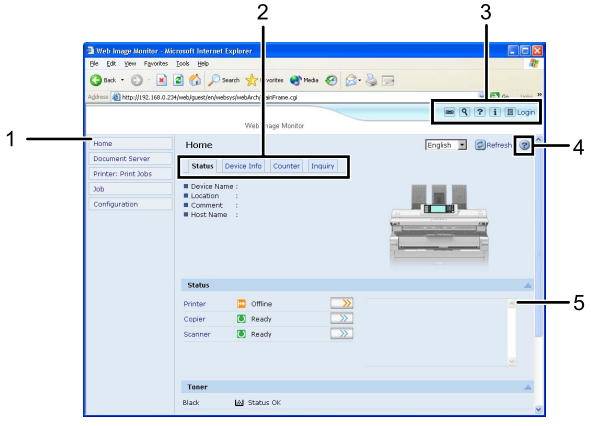
1. **Start your Web browser.**
2. **Enter "http://(machine's IP address or host name)/" in your Web browser's URL bar.**

   Top Page of Web Image Monitor appears.

   If the machine's host name has been registered on the DNS or WINS server, you can enter it.

   When setting SSL, a protocol for encrypted communication, under environment which server authentication is issued, enter "https://(machine's IP address or host name)/".

   Every Web Image Monitor page is divided into the following areas:



BLX300S

1. **Menu area**

   If you select menu, it's content will be shown on the work area, or the sub area.

2. **Tab area**

   Details about each menu appears.

3. **Header area**

   The dialog box for switching to the user mode and administrator mode appears, and each mode's menu will be displayed.

   The link to help and dialog box for keyword search appears.

4. **Help**

   Use Help to view or download Help file contents.

5. **Display area**

   Displays the contents of the item selected in the menu area.

   Machine information in the display area is not automatically updated. Click [Refresh] at the upper right in the display area to update the machine information. Click the Web browser's [Refresh] button to refresh the entire browser screen.

Note

- When using a host name under Windows Server 2003 or Windows Vista with IPv6 protocol, perform host name resolution using an external DNS server. The host file cannot be used.

When User Authentication is Set

Login (using Web Image Monitor)

Follow the procedure below to log on when user authentication is set.

1. **Click [Login].**
2. **Enter a login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.

Note

- For user code authentication, enter a user code in [Login User Name], and then click [Login].
- The procedure may differ depending on the Web browser used.

Log Off (using Web Image Monitor)

Click [Logout] to log off.

Note

- When you log on and made the setting, always click [Logout].

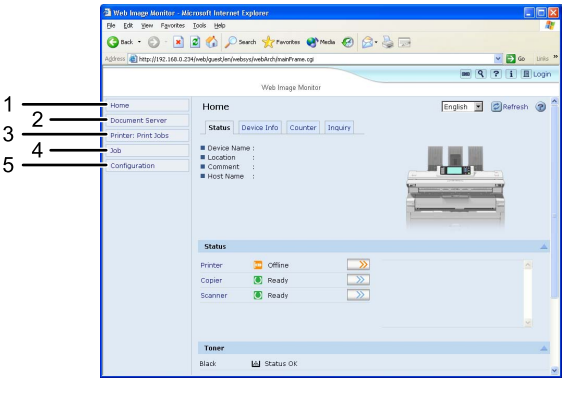
About Menu and Mode

There are two modes available with Web Image Monitor: guest mode and administrator mode.

Displayed Items may differ depending on the machine type.

About Guest Mode

In the guest mode, machine status, settings, and print job status can be viewed, but the machine settings cannot be changed.



BLX301S

1. **Home**

   The [Status], [Device Info], [Counter], and [Inquiry] tab are displayed. Details of the tab menu are displayed on the work area.

2. **Document Server**

   Display files stored in the Document Server.

3. **Printer: Print Jobs**

   Allows you to display list of Sample Print, Locked Print, Hold Print, and Stored Print jobs.

4. **Job**

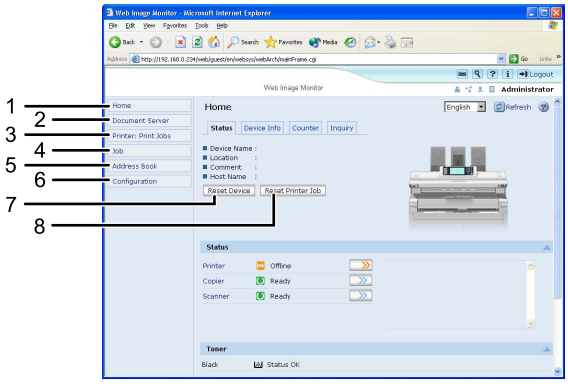
   Display all print files.

5. **Configuration**

   Display current machine and network settings.

Administrator Mode

In the administrator mode, you can configure various machine settings.



BLX302S

1. **Home**

   The [Status], [Device Info], [Counter], and [Inquiry] tab are displayed. Details of the tab menu are displayed on the work area.

2. **Document Server**

   Display files stored in the Document Server.

3. **Printer: Print Jobs**

   Allows you to display list of Locked Print, Sample Print, Hold Print, and Stored Print jobs.

4. **Job**

   Display all print files.

5. **Address Book**

   User information can be registered, displayed, changed, and deleted.

6. **Configuration**

   Make system settings for the machine, interface settings, and security.

7. **Reset Device**

   Click to reset the printer. If a print job is being processed, the printer will be reset after the print job is completed. This button is located on Top Page.

8. **Reset Printer Job**

   Click to reset current print jobs and print jobs in queue. This button is located on Top Page.

Access in the Administrator Mode

Follow the procedure below to access Web Image Monitor in the administrator mode.

1. **On Top Page, click [Login].**

   The window for entering the login user name and password appears.

2. **Enter your login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.

List of Setting Items

The following tables show Web Image Monitor items that can be viewed or modified depending on the selected mode on the Web browser. Select one of the following modes to log on Web Image Monitor:

- Guest mode: logged on as a user
- Administrator mode: logged on as an administrator

Home

Status

Menu	Guest mode	Administrator mode
Reset Device	None	Modify
Reset Printer Job	None	Modify
Status	Read	Read
Toner	Read	Read
Input Tray	Read	Read
Output Tray	Read	Read

Device Info

Menu	Guest mode	Administrator mode
Functions	Read	Read
System	Read	Read
Version	Read	Read
Printer Language	Read	Read

Counter

Menu	Guest mode	Administrator mode
Copier	Read	Read
Printer	Read	Read
Send/TX Total	Read	Read
Scanner Send	Read	Read

Inquiry

Menu	Guest mode	Administrator mode
Machine Maintenance/ Repair	Read	Read
Sales Representative	Read	Read

Document Server

Document Server

Guest mode	Administrator mode
Read/Modify	Read/Modify

Printer: Print Jobs

Print Job List

Guest mode	Administrator mode
Read/Modify	Read/Modify

Job

Job List

Menu	Guest mode	Administrator mode
Current/Waiting Jobs	Read	Read/Modify
Job History	Read	Read

Printer

Menu	Guest mode	Administrator mode
Spool Printing	Read	Read/Modify
Job History	Read	Read
Error Log	Read	Read

Document Server

Menu	Guest mode	Administrator mode
Print Job History	Read/Modify	Read/Modify
Scanner Remote Send History	Read/Modify	Read/Modify

Address Book

Menu	Guest mode	Administrator mode
Address Book	None	Read/Modify

Configuration

Device Settings

Menu	Guest mode	Administrator mode
System	Read	Read/Modify
Paper	Read	Read/Modify
Date/Time	Read	Read/Modify
Timer	Read	Read/Modify

Menu	Guest mode	Administrator mode
Logs	None	Read/Modify
E-mail	Read	Read/Modify
Auto E-mail Notification	None	Read/Modify
On-demand E-mail Notification	None	Read/Modify
File Transfer	None	Read/Modify
User Authentication Management	None	Read/Modify
Administrator Authentication Management	None	Read/Modify
Program/Change Administrator	None	Read/Modify
LDAP Server	None	Read/Modify
Firmware Update	None	Read/Modify
Program/Change Realm	None	Modify

Printer

Menu	Guest mode	Administrator mode
Basic Settings	Read	Read/Modify
Tray Parameters (PS)	None	Read/Modify
PDF Temporary Password	Modify	None
PDF Group Password	None	Modify
PDF Fixed Password	None	Modify

Scanner

Menu	Guest mode	Administrator mode
General Settings	Read	Read/Modify

Menu	Guest mode	Administrator mode
Scan Settings	Read	Read/Modify
Send Settings	Read	Read/Modify
Initial Settings	None	Read/Modify
Default Settings for Normal Screens on Device	Read	Read/Modify
Defaults Settings for Simplified Screens on Device	Read	Read/Modify

Interface

Menu	Guest mode	Administrator mode
Interface Settings	Read	Read/Modify
Wireless LAN Settings	Read	Read/Modify

Network

Menu	Guest mode	Administrator mode
IPv4	Read	Read/Modify
IPv6	Read	Read/Modify
NetWare	Read	Read/Modify
AppleTalk	Read	Read/Modify
SMB	Read	Read/Modify
SNMP	None	Read/Modify
SNMPv3	None	Read/Modify
SSDP	None	Read/Modify
Bonjour	Read	Read/Modify
System Log	Read	Read

Security

Menu	Guest mode	Administrator mode
Network Security	None	Read/Modify
Access Control	None	Read/Modify
IPP Authentication	None	Read/Modify
SSL / TLS	None	Read/Modify
ssh	None	Read/Modify
Site Certificate	None	Read/Modify
Device Certificate	None	Read/Modify
IPsec	None	Read/Modify
User Lockout Policy	None	Read/Modify
S/MIME	None	Read/Modify

RC Gate

Menu	Guest mode	Administrator mode
Setup RC Gate	None	Read/Modify
Update RC Gate Firmware	None	Read
RC Gate Proxy Server	None	Read/Modify

Webpage

Menu	Guest mode	Administrator mode
Webpage	Read/Modify	Read/Modify

Extended Feature Settings

Menu	Guest mode	Administrator mode
Startup Setting	None	Read/Modify
Extended Feature Info	Read	Read
Install	None	Read/Modify

Menu	Guest mode	Administrator mode
Uninstall	None	Read/Modify
Change Allocation	None	Read/Modify
Administrator Tools	None	Read/Modify
Copy Extended Features	None	Read/Modify
Copy Card Save Data	None	Read/Modify

Note

- Some items are not displayed depending on the security settings.

Displaying Web Image Monitor Help

When using Help for the first time, clicking the icon marked "? " ( ) makes the following screen appear, in which you can view Help in two different ways, as shown below:

Viewing Help on our Web site

Downloading Help to your computer

Downloading and Checking Help

You can download Help to your computer. As the Help URL, you can specify the path to the local file to view the Help without connecting to the Internet.

Note

- By clicking "?" ( ) in the header area, the contents of Help appear.
- By clicking "?" ( ), the Help icon in the display area, Help for the setting items in the display area appears.

Downloading Help

1. **In the [OS] list, select the operating system.**
2. **In the [Language] list, select the language.**
3. **Click [Download].**
4. **Download Help by following the instructions on the screen.**
5. **Store the downloaded compressed file in a given location, and then decompress the file.**

   To create a link for the Help button ( ), save the downloaded Help files on a Web server.

Linking the URL of the downloaded Help

You can link the URL of the help file on a computer or Web server to the "?" button.

1. **Log on to Web Image Monitor in the administrator mode.**
2. **In the menu area, click [Configuration].**
3. **Click [Webpage].**
4. **In the [Set Help URL Target] box, enter the URL of the help file.**

   If you saved the help file to "C:\HELP\EN", enter "file://C:/HELP/". For example, if you saved the file to a Web server, and the URL of the index file is "http:// a.b.c.d/HELP/EN/index.html", enter "http://a.b.c.d/HELP/".
5. **Click [OK].**

Note

- If you save the Help files on your hard disk, you must access them directly - you cannot link to them using the Help button ( ).

Using SmartDeviceMonitor for Admin

Using SmartDeviceMonitor for Admin, you can monitor the network printers. Also, you can change the configuration of the network interface board using TCP/IP or IPX/SPX.

Important

- **IPv6 cannnot be used on this function.**

Protocol stack provided with Operating System

- Windows 2000

  TCP/IP

  IPX/SPX

  NetWare

  Novell Client for Windows NT/2000/XP
- Windows Server 2003/2003 R2

  TCP/IP

  IPX/SPX
- Windows XP

  TCP/IP

  IPX/SPX

  Novell Client for Windows NT/2000/XP
- Windows Vista

  TCP/IP

  Novell Client for Windows NT/2000/XP/Vista

Available operations

The following functions are available:

- Limits settings done from the control panel, and disables changes made to certain items.
- Enables selection of paper type loaded in the machine.
- Switches to, and comes out of Energy Saver mode.
- Checks information about printing, paper quantity, etc.
- Simultaneously monitors multiple printers. When there are many printers, you can create groups and classify printers to facilitate management.
- Checks the machine's network settings and detailed device information.
- Enables you to change the machine's network settings.
- You can check details of print jobs sent from a computer.

- Allows you to check job histories of printed, scanned, and photocopied documents identified by user codes.
- Allows selection of functions such as printing and scanning for each user code.
- You can check each fax job history entry.
- You can make settings for and display the status changes of group devices.
- Using Address Management Tool, you can manage user names for Scan to Folder.
- The e-mail sender's name and folder can be protected.

Installing SmartDeviceMonitor for Admin

Follow the procedure below to install SmartDeviceMonitor for Admin.

1. **Quit all applications currently running.**
2. **Insert the CD-ROM into the CD-ROM drive.**

   The installer starts.
3. **Select an interface language, and then click [OK].**

   The following languages are available: Czech, Danish, German, English, Spanish, French, Italian, Hungarian, Dutch, Norwegian, Polish, Portuguese , Finnish, and Swedish.

   If you specify a language that is not shown in this list, the interface will be displayed in English.
4. **Click [SmartDeviceMonitor for Admin].**
5. **Click [Next].**

   The software license agreement appears in the [License Agreement] dialog box.
6. **After reading through its contents, click [Next].**
7. **Follow the instructions on the screen.**

   A message appears when the installation is completed.
8. **Click [OK].**

   A message about restarting the computer may appear. Restart the computer to complete installation.

Note

- Auto Run may not work under certain operating system settings. In this case, launch "Setup.exe" located on the CD-ROM root directory.
- If you are required to restart the computer after installing SmartDeviceMonitor for Admin, restart the computer and continue the configuration.

Changing the Network Interface Board Configuration

Follow the procedure below to change the network interface board configuration using SmartDeviceMonitor for Admin.

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using IPv4 SNMPv3, enter the user authentication.
3. **In the list, select a machine whose configuration you want to change.**
4. **On the [Tools] menu, click [NIB Setup Tool].**

   A Web browser opens and the window for entering the login user name and password for the Web Image Monitor administrator appears.

   NIB Setup Tool starts. Click [Web browser], and then click [OK].
5. **Enter the login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.
6. **Configure settings using Web Image Monitor.**
7. **Click [Logout].**
8. **Quit Web Image Monitor.**
9. **Quit SmartDeviceMonitor for Admin.**

Note

- For details about login user names and passwords, see Security Reference, which is the administrator's manual.
- For details about Web Image Monitor, see "Using Web Image Monitor".

Reference

- p.21 "Using Web Image Monitor"

Locking the Menus on the Machine's Control Panel

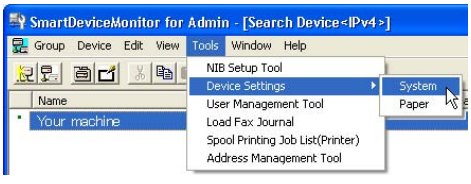
Follow the procedure below to lock the menus on the machine's control panel.

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using IPv4 SNMPv3, enter the user authentication.
3. **Select a machine.**
4. **On the [Tools] menu, point to [Device Settings], and then click [System].**



   A Web browser opens and the window for entering the login user name and password for the Web Image Monitor administrator appears.
5. **Enter the login user name and password, and then click [Login].**

   For details about the user name and password, consult your network administrator.

   The [System] page of Web Image Monitor appears.
6. **On the [Protect Printer Display Panel], select [Level 1] or [Level 2].**
7. **Click [OK].**
8. **Click [Logout].**
9. **Quit Web Image Monitor.**
10. **Quit SmartDeviceMonitor for Admin.**

Note

- For details about login user names and passwords, see Security Reference, which is the administrator's manual.
- For details about Web Image Monitor, see "Using Web Image Monitor".

Reference

- p.21 "Using Web Image Monitor"

Changing the Paper Type

Follow the procedure below to change the paper type.

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using IPv4 SNMPv3, enter the user authentication.
3. **In the list, select a machine whose configuration you want to change.**
4. **On the [Tools] menu, point to [Device Settings], and then click [Paper].**

   A Web browser opens and the window for entering the login user name and password for the Web Image Monitor administrator appears.
5. **Enter the login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.

   The [Paper] page appears.

   Select a paper type in the [Paper Type] list for each tray. Enter required setting items.
6. **Click [Logout].**
7. **Quit Web Image Monitor.**
8. **Quit SmartDeviceMonitor for Admin.**

Note

- For details about login user names and passwords, see Security Reference, which is the administrator's manual.
- For details about Web Image Monitor, see "Using Web Image Monitor".
- For details about setting items, see Help in the [General Settings] on [Configuration] page.

Reference

- p.21 "Using Web Image Monitor"

Managing User Information

Follow the procedure below to manage the user's information using SmartDeviceMonitor for Admin.

Prints jobs can be managed and functions restricted by user codes.

Starting User Management Tool

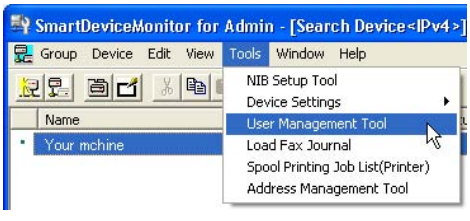
Follow the procedure below to start User Management Tool.

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using IPv4 SNMPv3, enter the user authentication.
3. **In the list, select a machine you want to manage.**
4. **On the [Tools] menu, click [User Management Tool].**



   A Web browser opens and the window for entering the login user mane and password for the Web Image Monitor administrator appears.
5. **Enter the user name and password, and then click [Login].**

   For details about the user name and password, consult your network administrator.

   User Management Tool starts.

Note

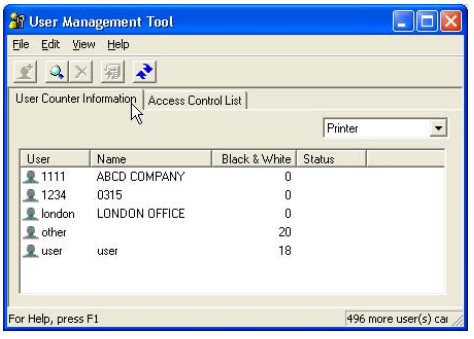
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.
- For details about User Management Tool, see SmartDeviceMonitor for Admin Help.

Displaying the Number of Sheets Printed

Follow the procedure below to display the number of sheets printed under each user.

1. **Start SmartDeviceMonitor for Admin User Management Tool.**

2. **Click the [User Counter Information] tab of User Management Tool.**



The number of pages printed under each user appears.

3. **Click [Exit] on the [File] menu to quit User Management Tool.**

Exporting the information about the number of pages printed

Follow the procedure below to export the information of the number of pages printed under each user as a .csv file.

1. **Start SmartDeviceMonitor for Admin User Management Tool.**
2. **Click the [User Counter Information] tab of User Management Tool.**
3. **On the [File] menu, click [Export User Statistics List].**

4. **Specify the save location and file name, and then click [Save].**
5. **Click [Exit] on the [File] menu to quit User Management Tool.**

Resetting the number of pages printed to 0.

Follow the procedure below to reset the number of pages printed under each user to 0.

1. **Start SmartDeviceMonitor for Admin User Management Tool.**

2. **Click the [User Counter Information] tab of User Management Tool.**
3. **Select the user whose information you want to reset.**
4. **On the [Edit] menu, click [Reset User Counters].**

5. **Select the check box of the items you want to reset, and then click [OK].**

   A confirmation message appears.

6. **Click [OK].**

   The count for the selected paper type becomes 0 and [Modified] is displayed for [Status].

7. **On the [Edit] menu, click [Apply Settings].**

Changes are applied to information on the [User Counter Information] tab.

8. **Click [Exit] on the [File] menu to quit User Management Tool.**

Restricting Functions

Follow the procedure below to restrict use of individual functions.

1. **Start SmartDeviceMonitor for Admin User Management Tool.**
2. **Click the [User Counter Information] tab of User Management Tool.**
3. **Click the user whose functions you want to restrict.**
4. **On the [Edit] menu of User Management Tool, click [Restrict Access To Device].**

5. **Select the check box of the functions you want to restrict.**
6. **Click [OK].**

   A confirmation message appears.
7. **Click [Yes].**

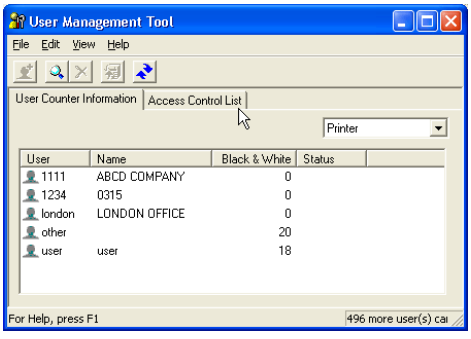
   The settings are applied.
8. **Click [Exit] on the [File] menu to quit User Management Tool.**

Setting Applicable Functions to New Users

Follow the procedure below to add new users and set functions applicable to them.

1. **Start SmartDeviceMonitor for Admin User Management Tool.**

2. **Click the [Access Control List] tab of User Management Tool.**



3. **On the [Edit] menu, click [Adds New User].**

4. **Enter the user code and user name.**
5. **Select the check box of the functions applicable to the new user.**

   If the check boxes are unavailable, there is no restriction to use that function.
6. **Click [OK].**

   The user is added, and [New] is displayed for [Status].
7. **On the [Edit] menu, click [Apply Settings].**

   The settings are applied.
8. **Click [Exit] on the [File] menu to quit User Management Tool.**

Note

- For details about setting restrictions, see SmartDeviceMonitor for Admin Help.

Configuring the Energy Saver Mode

Follow the procedure below to configure Energy Saver mode.

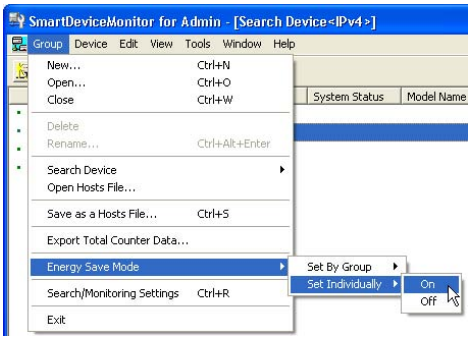
1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using IPv4 SNMPv3, enter the user authentication.
3. **Select the machine whose settings you want to make.**

   To make settings for all machines in the selected group, select no machine.
4. **Click the [Group] menu, point to [Energy Save Mode], [Set Individually], and then click [On].**



   To select all the machines in the group, select [Set By Group].

   To disable Energy Save mode, click [Off].
5. **Quit SmartDeviceMonitor for Admin.**

Note

- For details about the setting for Energy Saver mode, see SmartDeviceMonitor for Admin Help.

Setting a Password

Follow the procedure below to set a password.

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

Select the protocol of the machine whose configuration you want to change.

If you are using IPv4 SNMPv3, enter the user authentication.

3. **In the list, select a machine whose configuration you want to change.**
4. **On the [Tools] menu, click [NIB Setup Tool].**

A Web browser opens and the dialog box for entering the login user name and password for the Web Image Monitor administrator appears.

NIB Setup Tool starts when the network interface board is default. Follow the instructions on the screen.

5. **Enter the login user name and password, and then click [Login].**

   For details about the user name and password, consult your network administrator.
6. **Click [Configuration].**
7. **Click [Program/Change Administrator] on the [Device Settings] area, and then change the settings.**
8. **Click [Logout].**
9. **Quit Web Image Monitor.**
10. **Quit SmartDeviceMonitor for Admin.**

Note

- For details about login user names and passwords, see Security Reference, which is the administrator's manual.

Checking the Machine Status

Follow the procedure below to check machine status.

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using TCP/IP SNMP v3, enter the user authentication.

3. **Click the [View] menu, and then click [Select List Columns].**
4. **From [Device] in the [Select List Columns] dialog box, select the items you want to display, and then click [Add].**

   Selected items will move to [Show].
5. **Move all the items you want to display, and then click [OK].**

   An icon in the list indicates the machine's status.
6. **For information about a machine's status, select the machine you want to know about, and then click [Open] in the [Device Settings] menu.**

   The dialog box of the selected machine appears.
7. **Click the application whose status you want to view.**

   The machine's status is displayed.
8. **Quit SmartDeviceMonitor for Admin.**

Note

- For details about items in the dialog box, see SmartDeviceMonitor for Admin Help.

Changing Names and Comments

Follow the procedure below to change the names and comments of the machine.

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using IPv4 SNMPv3, enter the user authentication.
3. **Select a machine in the list, and then click [NIB Setup Tool] on the [Tools] menu.**

   A Web browser opens and the window for entering the login user name and password for the Web Image Monitor administrator appears.

   NIB Setup Tool starts when the network interface board is default. Follow the instructions on the screen.
4. **Enter the login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.
5. **Click [System] on the [Device Settings] area, and then change the settings.**
6. **Click [Logout].**
7. **Quit Web Image Monitor.**

8. **Quit SmartDeviceMonitor for Admin.**

Note

- In the [Device Name] box, enter a device name on the machine using up to 31 characters.
- In the [Comment] box, enter a comment on the machine using up to 31 characters.
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.
- For details about Web Image Monitor, see "Using Web Image Monitor".

Reference

- p.21 "Using Web Image Monitor"

Viewing and Deleting Spool Print Jobs

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using IPv4 SNMPv3, enter the user authentication.
3. **Select a machine in the list, and then click [Spool Printing Job List(Printer)] on the [Tools] menu.**

   A Web browser opens and the dialog box for entering the login user name and password for the Web Image Monitor administrator appears.
4. **Enter the login user name and password, and then click [Login].**

   For details about the login user name and password, consult your network administrator.

   [Spool Printing Job List] appears in the Web Image Monitor.
5. **Click [Logout].**
6. **Quit Web Image Monitor.**
7. **Quit SmartDeviceMonitor for Admin.**

Note

- To display Spool Printing Job List, [Spool Printing] must be set to [Active] on Web Image Monitor in advance.
- To delete the Spool Printing Job, select the document you want to delete and then click [Delete].
- For details, see Help in the [Spool Printing Job List] area.
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.

- For details about Web Image Monitor, see "Using Web Image Monitor".

Reference

- p.21 "Using Web Image Monitor"

Managing Address Information

1. **Start SmartDeviceMonitor for Admin.**
2. **On the [Group] menu, point to [Search Device], and then click [IPv4], [IPX/SPX] or [IPv4 SNMPv3].**

   A list of machines using the selected protocol appears.

   Select the protocol of the machine whose configuration you want to change.

   If you are using IPv4 SNMPv3, enter the user authentication.
3. **Select a machine in the list, and then click [Address Management Tool] on the [Tools] menu.**

   The dialog box for entering the login user name and password appears.
4. **Enter the login user name and password, and then click [OK].**

   For details about the login user name and password, consult your network administrator.

   [Address Management Tool] starts. Make the necessary settings.
5. **Click [Exit].**
6. **Quit SmartDeviceMonitor for Admin.**

Note

- For details, see Address Management Tool Help.
- For details about login user names and passwords, see Security Reference, which is the administrator's manual.
- For details about Web Image Monitor, see "Using Web Image Monitor".

Reference

- p.21 "Using Web Image Monitor"

Using SmartDeviceMonitor for Client

To view the status of machines using SmartDeviceMonitor for Client, configure SmartDeviceMonitor for Client beforehand.

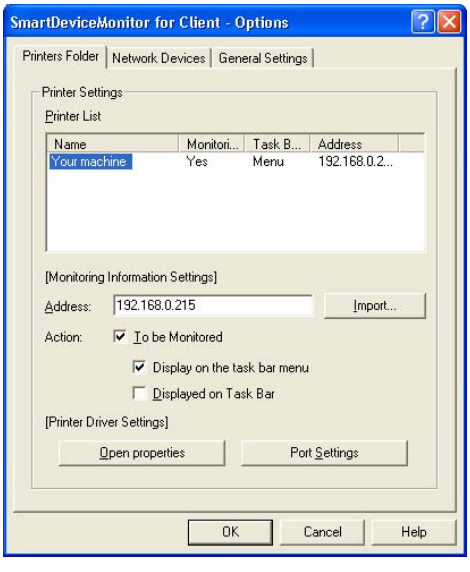
Monitoring Printers

Follow the procedure below to monitor the machine using SmartDeviceMonitor for Client.

1. **Right-click the SmartDeviceMonitor for Client icon, point to [Properties], and then click [Monitor Device Settings...].**

   The SmartDeviceMonitor for Client [- Options] dialog box appears.

2. **On the [Printers Folder] tab, select the machine you want to monitor, and then select the [To Be Monitored] check box in the Monitoring Information Settings area.**



   To display the machine status on the task bar, you must first select the [To be Monitored] check box, and then select the [Display on the task bar menu] check box.

3. **Click [OK].**

   The dialog box closes and the configured machine is monitored.

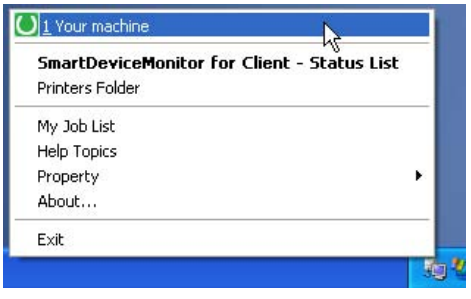
Note

- For details about status icons, see SmartDeviceMonitor for Client Help.

Checking the Machine Status

Follow the procedure below to check machine status using SmartDeviceMonitor for Client.

1. **Right-click the SmartDeviceMonitor for Client icon, and then click the machine.**



The machine status appears in the dialog box.

Note

- For details about items in the dialog box, see SmartDeviceMonitor for Client Help.

When Using IPP with SmartDeviceMonitor for Client

When using IPP with SmartDeviceMonitor for Client, note the following:

- The network printer can only receive one print job from SmartDeviceMonitor for Client at a time. While the network printer is printing, another user cannot access it until the job is finished. In this case, SmartDeviceMonitor for Client tries to access the network printer until the retry interval expires.
- If SmartDeviceMonitor for Client cannot access the network printer and times out, it will stop sending the print job. In this case, you should cancel the paused status from the print queue window. SmartDeviceMonitor for Client will resume access to the network printer. You can delete the print job from the print queue window, but canceling a print job printed by the network printer might cause the next job sent from another user to be incorrectly printed.
- If a print job sent from SmartDeviceMonitor for Client is interrupted and the network printer cancels the job because something went wrong, send the print job again.
- Print jobs sent from another computer do not appear in the print queue window, regardless of protocol.
- If various users send print jobs using SmartDeviceMonitor for Client to network printers, the printing order might not be the same as that in which the jobs were sent.

- An IP address cannot be used for the IPP port name because the IP address is used for the SmartDeviceMonitor for Client port name.
- When setting SSL, a protocol for encrypted communication, under environment which server authentication is issued, enter “https://(machine's IP address or host name)/ ”. Internet Explorer must be installed on your computer. Use the highest version. Internet Explorer 6.0 or higher is recommended.
- If the [Security Alert] dialog box appears when accessing the machine using IPP to create or configure an IPP port, or when printing, install the certificate. To select the certificate store location when using Certificate Import Wizard, click [Place all certificates in the following store], and then click [Local Computer] under [Trusted Root Certification Authorities].

Note

- For details about SSL settings, consult your network administrator.

Printer Status Notification by E-Mail

Whenever a paper tray becomes empty or paper is jammed, an e-mail alert is issued to the registered addresses to notify the printer status.

For this notification, you can make the e-mail notification settings.

Notification timing and e-mail content can be set.

Important

- **Depending on your e-mail application, a phishing warning might appear after you receive an e-mail message. To prevent phishing warnings appearing after you receive e-mail from a specified sender, you must add the sender to your e-mail application's exclusion list. For details about how to do this, see your e-mail application's Help.**

You can be notified of the following events:

- Service call.
- Toner cartridge is empty.
- Toner cartridge is nearly empty.
- Paper has jammed.
- Open door is detected.
- The paper tray is empty.
- The paper tray is nearly empty.
- A paper tray error occurred.
- Output paper tray is full.
- Unit connection error.
- Waste toner bottle is full.
- Service call is successful.
- File storage memory is nearly full.
- Log error.
- Device access is violated.

1. **Log on to Web Image Monitor in administrator mode.**
2. **In the menu area, click [Configuration].**
3. **Click [E-mail] on the [Device Settings] area.**
4. **Make the following settings:**
    - Items in the Reception column: Make the necessary settings for sending and receiving e-mail.

- Items in the SMTP column: Configure the SMTP server. Check your mailing environment, and then specify the necessary items. You can also perform mail authentication for the SMTP server.
- Items in the POP before SMTP column: Configure the POP server. Check your mailing environment, and then specify the necessary items. You can also perform mail authentication for the POP server.
- Items in the POP3/IMAP4 column: Configure the POP3 or IMAP4 server. Check your mailing environment, and then specify the necessary items.
- Items in the E-mail Communication Port column: Configure the port to be used for access to the mail server.

5. **Click [OK].**
6. **Click [Logout].**
7. **Quit Web Image Monitor.**

Note

- For details about login user name and password, see Security Reference, which is the administrator's manual.
- For details about the settings, see Web Image Monitor Help.
- For details about Web Image Monitor, see “Using Web Image Monitor”.

Reference

- p.21 "Using Web Image Monitor"

Auto E-mail Notification

1. **Log on to Web Image Monitor in administrator mode.**
2. **Click [Configuration] in the menu area, and then click [Auto E-mail Notification] on the [Device Settings] area.**

   The dialog box for making notification settings appears.
3. **Make the following settings:**
   - Items in Notification Message column: You can set this according to your needs, for example, the machine's location, service representative contact information.
   - Items in the Groups to Notify column: E-mail notification addresses can be grouped as required.
   - Items in the Select Groups/Items to Notify column: Select groups for each notification type, such as machine status and error.

     To make detailed settings for these items, click [Edit] next to [Detailed Settings of Each Item].
4. **Click [OK].**

5. **Click [Logout].**
6. **Quit Web Image Monitor.**

Note

- For details about Web Image Monitor, see “Using Web Image Monitor”.
- For details about the settings, see Web Image Monitor Help.

Reference

- p.21 "Using Web Image Monitor"

On-demand E-mail Notification

1. **Log on to Web Image Monitor in administrator mode.**
2. **Click [Configuration] in the menu area, and then click [On-demand E-mail Notification] on the [Device Settings] area.**

   The dialog box for making notification settings appears.
3. **Make the following settings:**
   - Notification Subject column: Enter a text string to be added to the subject line of return e-mails.
   - Items in Notification Message column: You can set this according to your needs, for example, the machine's location, service representative contact information.
   - Items in the Access Restriction to Information column: Select whether to restrict accesses based on a specific category of information.
   - Items in the Receivable E-mail Address/Domain Name Settings column: Enter an e-mail address or domain name to use for requesting information by e-mail and to receive its return e-mail.
4. **Click [OK].**
5. **Click [Logout].**
6. **Quit Web Image Monitor.**

Note

- For details about Web Image Monitor, see “Using Web Image Monitor”.
- For details about the settings, see Web Image Monitor Help.

Reference

- p.21 "Using Web Image Monitor"

Mail Authentication

You can configure mail authentication to prevent illegal use of the mail server.

SMTP Authentication

Specify SMTP authentication.

When mail is sent to the SMTP server, authentication is performed using the SMTP AUTH protocol by prompting the mail originator to enter the user name and password. This prevents illegal use of the SMTP server.

1. Log on to Web Image Monitor in administrator mode.
2. Click [Configuration] in the menu area, and then click [E-mail] on the [Device Settings] area.
3. Make the following settings in SMTP column:
    - SMTP Server Name: Enter the IP address or host name of the SMTP server
    - SMTP Port No.: Enter the port number used when sending e-mail to the SMTP server.
    - SMTP Authentication: Enable or disable SMTP authentication.
    - SMTP Auth. E-mail Address: Enter the e-mail address.
    - SMTP Auth. User Name: Enter the SMTP account name.
    - SMTP Auth. Password: To set or change the password for SMTP AUTH.
    - SMTP Auth. Encryption: Select whether to encrypt the password or not.

      [Encryption]-[Auto Select]: If the authentication method is PLAIN, LOGIN, CRAM-MD5, or DIGEST-MD5.

      [Encryption]-[Active]: If the authentication method is CRAM-MD5 or DIGEST-MD5.

      [Encryption]-[Inactive]: If the authentication method is PLAIN or LOGIN.
4. Click [OK]
5. Click [Logout].
6. Quit Web Image Monitor.

POP before SMTP Authentication

Select whether to log on to the POP3 server before sending e-mail.

1. Log on to Web Image Monitor in administrator mode.
2. Click [Configuration] in the menu area, and then click [E-mail] Notification on the [Device Settings] area.
3. Make the following settings in POP before SMTP column:
    - POP before SMTP: Enable or disable POP before SMTP.
    - POP E-mail Address: Enter the e-mail address.
    - POP User Name: Enter the POP account name.

- POP Password: To set or change the POP password.
- Timeout setting after POP Auth.: Enter the time available before connecting to the SMTP server after logging on to the POP server.

4. Click [OK].
5. Click [Logout].
6. Quit Web Image Monitor.

Sending E-mail Notification

To use on-demand e-mail notification, perform the following configuration tasks in Web Image Monitor.

1. Log on to Web Image Monitor in administrator mode.
2. Click [Configuration] in the menu area, and then click [E-mail] on the [Device Settings] area.
3. Make the following settings:
   - E-mail Notification E-mail Address: Enter the address using alphanumeric characters.
   - Receive E-mail Notification: Specify whether to use on-demand e-mail notification.
   - E-mail Notification User Name: Enter the administrator's user name as the mail originator name.
   - E-mail Notification Password: Enter the password of the mail notification user.
4. Click [OK].
5. Click [Logout].
6. Quit Web Image Monitor.

Format of on-demand e-mail messages

To use mail notification, you need to send an on-demand e-mail message to this machine.

Using your mail software, enter the following:

Item	Description
Subject (Referred to as Subject)	Enter a request regarding the device. For details, see the table below.
From (Referred to as From)	Specify a valid mail address. The device information will be sent to the address specified here.

Note

- A mail message must be within 1 MB in size.
- E-mail may be incomplete if sent immediately after power on.

Subject field

Format: devicestatus?parameter-name=parameter[&=parameter][& =parameter]...

Note

- The Subject field is case-insensitive.
- Parameter names can be written in any order.

Subject field coding examples

Coding example	Action
devicestatus?request=sysconfig& format=text&lang=en	The device's system configurationinformation will be sent in an English text format.
devicestatus?request=sysconfig	The device's system configurationinformation will be sent in a preset format and language.

Note

- The Subject field is case-insensitive.
- Parameter names can be written in any order.

Parameters

Parameter	Meaning	Default
request	Information to be obtained	Mandatory
format	Mail format	Mail will be sent in the format presetfor each mail address.
lang	Language for mail body	Mail will be sent in the languagepreset for each mail address.

Parameters specifying the information to be obtained

Information to be obtained	Parameter
System configuration information	sysconfig
Network configuration information	netconfig
Printer configuration information	prtconfig
Supplies information	supply
Device status information	status

Parameters specifying the mail format

Mail format	Parameter
Text	text
HTML	html
XML	xml

Note

- HTML and XML can be seleceted for subject field, but output is text only.

Parameters that specify the language for mail bodies

Language	Parameter
Japanese	ja
English	en

Remote Maintenance by telnet

Important

- **Remote Maintenance should be protected so that access is allowed to administrators only.**
- **The password is the same as the one of Web Image Monitor administrator. When the password is changed using "mshell", other's change also.**

Using telnet

Follow the procedure below to use telnet.

Important

- **Only one user at a time can log on to perform remote maintenance.**
- **If you are using Windows Vista, you must enable the telnet server and telnet client beforehand.**

1. **Use the IP address or the host name of the machine to start telnet.**

   ```
   % telnet "IP_address"
   ```

2. **Enter your user name and password.**

   For details about the user name and password, consult your network administrator.

   For user authentication, enter a login user name and password.

   For user code authentication, enter a user code in User Name.

3. **Enter a command.**
4. **Quit telnet.**

   ```
   msh> logout
   ```

   The configuration message about saving the changes appears.

5. **Enter "yes" to save the changes, and then press the [Enter] key.**

   If you do not want to save the changes, enter "no", and then press the [Enter] key. To make further changes, enter "return" at the command line, and then press the [Enter] key.

Note

- If the message "Can not write NVRAM information" appears, the changes are not saved. Repeat the procedure above.
- When the changes are saved, the network interface board is reset automatically with that changes.
- When the network interface board resets, the print job in print process will be printed. However, print jobs in queue will be canceled.
- To use Telnet under Windows Vista, SmartDeviceMonitor for Client must be installed.

access

Use the "access" command to view and configure access control. You can also specify two or more access ranges.

View settings

```
msh> access
```

IPv4 configration display

```
msh> access ID range
```

IPv6 configuration display

```
msh> access ID range6
```

IPv6 access mask configuration display

```
msh> access ID mask6
```

IPv4 configuration

```
msh> access ID range "start-address end-address"
```

Example: to specify accessible IPv4 addresses between 192.168.0.10 and 192.168.0.20:

```
msh> access 1 range 192.168.0.10 192.168.0.20
```

IPv6 configuration

```
msh> access ID range6 "start-address end-address"
```

Example: to specify accessible IPv6 addresses between 2001:DB8::100 and 2001:DB8::200.

```
msh> access 1 range6 2001:DB8::100 2001:DB8::200
```

IPv6 access mask configuration

```
msh> access ID mask6 "base-address prefixlen"
```

Example: to specify accessible IPv6 addresses to 2001:DB8::/32

```
msh> access 1 mask6 2001:DB8:: 32
```

Access control initialization

```
msh> access flush
```

- Use the "flush" command to restore the default settings so that all access ranges become "0.0.0.0" for IPv4, and "::" for IPv6.

Note

- You can specify each IPv6 entry by either range or mask. For the range parameter, you can select "start-address end-address". For the mask parameter, you can select "baseaddress prefixlen".
- The access range restricts computers from use of the machine by IP address. If you do not need to restrict printing, make the setting "0.0.0.0" for IPv4, and "::" for IPv6.
- Valid ranges must be from lower (start address) to higher (end address).

- For IPv4 and IPv6, you can select an ID number between 1 and 5.
- IPv6 can register and select the range and the mask for each access ranges.
- IPv6 mask ranges between 1 - 128 can be selected.
- Up to five access ranges can be specified. The entry is invalid if the target number is omitted.
- You cannot send print jobs, or access Web Image Monitor and diprint from a restricted IP address.

appletalk

Use the "appletalk" command to view and configure AppleTalk parameters.

View settings

```
msh> appletalk
```

- [2] means "active" and [0] means "inactive".
- The default is [2].

Changing PAP timeout configuration

```
msh> appletalk ptimeout value > 0
```

- Timeout value becomes effective.

```
msh> appletalk ptimeout value = 0
```

- Timeout value becomes ineffective.

autonet

Use the "autonet" command to configure AutoNet parameters.

View settings

The following command displays the current AutoNet settings:

```
msh> autonet
```

Configuration

You can configure AutoNet settings.

```
msh> autonet {on|off}
```

- {on} means "active" and {off} means "inactive".

Current interface priority configuration display

```
msh> autonet priority
```

Interface priority configuration

```
msh> autonet priority "interface_name"
```

- You can give interface's AutoNet parameter priority.

- Priority settings are available when multiple interfaces are installed.
- wlan can be specified only when the IEEE 802.11 interface is installed.

Interface	Interface configured
ether	Ethernet interface
wlan	IEEE 802.11 interface

Note

- If an interface is not selected, the current interface connection settings remain in effect.
- For details about AutoNet, refer to autonet parameters.

bonjour (rendezvous)

Use the "bonjour (rendezvous)" command to display bonjour (rendezvous)-related settings.

View settings

Bonjour settings are displayed.

```
msh> bonjour
```

Bonjour service name setting

You can specify the bonjour service name.

```
msh> bonjour cname "computer name"
```

- The computer name can be entered using up to 63 alphanumeric characters.
- If you do not specify a character string, the current setting is displayed.

Bonjour Installation location information setting

You can enter information about the location where the printer is installed.

```
msh> bonjour location "location"
```

- Information about location can be entered using up to 32 alphanumeric characters.
- If you do not specify a character string, current setting is displayed.

Setting order of priority for each protocol

- msh> bonjour diprint [0-99]
- msh> bonjour lpr [0-99]
- msh> bonjour ipp [0-99]

You can specify the order of priority for "diprint", "lpr", and "ipp". Smaller numbers indicate higher priority.

IP TTL setting

```
msh> bonjour ip ttl [1-255]
```

You can specify the IP TTL (the number of routers a packet can pass through).

- The default is 255.

Resetting the computer name and location information

You can reset the computer name and location information.

```
msh> bonjour clear {cname|location}
```

- cname: Reset the computer name. The default computer name will be displayed when the computer is restarted.
- location: Reset the location information. The previous location information will be deleted.

Interface configuration

```
msh> bonjour linklocal "interface_name"
```

- If you do not specify an interface, the Ethernet interface is selected automatically.
- If many types of interface are installed, configure the interface that communicates with linklocal address.
- If you do not specify an interface, the Ethernet interface is automatically selected.
- wlan can be specified only when the IEEE 802.11 interface is installed.

Interface	Interface configured
ether	Ethernet interface
wlan	IEEE 802.11 interface

Setting IPP-SSL printing

```
msh> bonjour ippport {ipp|ssl}
```

- If IPP-SSL Printing is set to ssl, the IPP port number will appear as 443, and IPP-SSL printing can be performed with higher security.
- If IPP-SSL Printing is set to ipp, the IPP port number will appear as 631. Port 631 is the port for normal IPP printing.

btconfig

Use the "btconfig" command to make Bluetooth settings.

View settings

Bluetooth settings are displayed.

```
msh> btconfig
```

Mode settings

You can set the Bluetooth operation mode to {private} or {public}.

```
msh> btconfig {private|public}
```

- The default is {public}.

devicename

Use the "devicename" command to display and change the printer name.

View settings

```
msh> devicename
```

Printer name configuration

```
msh> devicename name "string"
```

- Enter a printer name using up to 31 alphanumeric characters.
- Set single names for each printer.

Printer name initialization

```
msh> devicename clear name
```

- Reset the printer name to its default.

dhcp

Use the "dhcp" command to configure DHCP settings.

View settings

The following command displays the current DHCP settings.

```
msh> dhcp
```

Configuration

You can configure DHCP.

```
msh> dhcp "interface_name" {on|off}
```

- Click {on} to enable dhcp. Click {off} to disable DHCP.
- If the DNS server address and domain name are obtained from DHCP, be sure to click {on}.
- wlan can be specified only when the IEEE 802.11 interface is installed.

Interface name	Interface configured
ether	Ethernet interface
wlan	IEEE 802.11 interface

Current interface priority configuration display

```
msh> dhcp priority
```

Interface priority configuration

```
msh> dhcp priority "interface_name"
```

- You can select which interface has DHCP parameter priority.
- Priority settings are available when multiple interfaces are installed.

DNS server address selection

```
msh> dhcp dnsaddr {dhcp|static}
```

- Specify whether to obtain the DNS server address from the DHCP server or use the address set by a user.
- To obtain the DNS server address from the DHCP server, specify "dhcp". To use the address set by a user, specify "static".

Domain name selection

```
msh> dhcp domainname {dhcp|static}
```

- Specify whether to obtain the domain name from the DNS server or use the domain name set by a user.
- To obtain the domain name from the DHCP server, specify "dhcp". To use the domain name set by a user, specify "static".

Reference

- p.67 "dns"
- p.68 "domainname"
- p.133 "Using DHCP"

dhcp6

Use the "dhcp6"command to display or configure DHCPv6 settings.

View settings

The following command displays the current DHCPv6 settings.

```
msh> dhcp6
```

DHCPv6-lite configuration and display

```
msh> dhcp6 "interface_name" lite {on|off}
```

Viewing and specifying DNS server address selection (obtained from the dhcpv6 server/user specified value)

```
msh> dhcp6 dnsaddr {dhco|static}
```

DUID(DHCP unique ID) deletion and display

```
msh> dhcp6 duid clear
```

Viewing and specifying the time required to re-obtain the parameter obtained from dhcpv6

```
msh> dhcp6 option lifetime [0-65535]
```

- It can be entered between 0 and 65535 minutes.
- The default is 60 minutes.
- If you specify "0", you cannot re-obtain the value.

diprint

The direct printing port enables direct printing from a network-connected computer.

Use the "diprint" command to change direct printing port settings.

View settings

The following command displays the current direct printing port settings:

```
msh> diprint
```

Example output:

```
port 9100
timeout=300(sec)
bidirect on
conn multi
apl async
```

- The "port" specifies the port number of the direct printing port.
- The "bidirect" setting indicates whether the direct printing port is bidirectional or not.

Setting timeout

```
msh> diprint timeout [30-5535]
```

- You can specify the timeout interval to use when the printer is expecting data from the network.
- The default is 300 seconds.

Specifying the number of concurrent connections

```
msh> diprint conn {multi|single}
```

- The above command specifies the number of concurrent diprint connections. Specify "multi" for multiple connections or "single" for a single connection.
- The default is "multi".

dns

Use the "dns" command to configure or display DNS (Domain Name System) settings.

View settings

The following command displays current DNS settings:

```
msh> dns
```

IPv4 DNS server configuration

The following command enables or disables the IPv4 DNS server address:

```
msh> dns "ID" server "server address"
```

The following command displays a configuration using the IP address 192.168.15.16 on a DNS 1 server:

```
msh> dns 1 server 192.168.15.16
```

- You can register IPv4 DNS Server address.
- You can select an ID number between 1 and 3. You can select up to three ID numbers.
- You cannot use "255.255.255.255" as the DNS server address.

IPv6 DNS server configuration

The following command enables or disables the IPv4 DNS server address:

```
msh> dns "ID" server6 "server address"
```

- You can register IPv6 DNS Server address.
- The selectable ID number is between 1 and 3. You can select up to 3 ID.

Dynamic DNS function setting

```
msh> dns "interface_name" ddns {on|off}
```

- You can set the dynamic DNS function "active" or "inactive".
- {on} means "active" and {off} means "inactive".
- wlan can be specified only when the IEEE 802.11 interface is installed.

Interface name	Interface configured
ether	Ethernet interface
wlan	IEEE 802.11 interface

Specifying the record overlap operation

```
msh> dns overlap {update|add}
```

- You can specify operations performed when records overlap.
- update: To delete old records and register new records.

- add: To add new records and store the old records.
- When CNAME overlaps, it is always changed, irrespective of settings.

CNAME registration

```
msh> dns cname {on|off}
```

- You can specify whether to register CNAME.
- {on} means "active" and {off} means "inactive".
- The CNAME registered is the default name beginning with rnp. CNAME cannot be changed.

A records registration

```
msh> dns arecord {dhcp|own}
```

- dhcp: You can specify the method of registering an A record when the dynamic DNS function is enabled and DHCP is used.
- own: To register an A record using the printer as the DNS client.

  The DNS server address and the domain name already designated are used for the registration.

Record updating interval settings

```
msh> dns interval [1-255]
```

- You can specify the interval after which records are updated when using the dynamic DNS function.
- The updating interval is specified hourly. It can be entered between 1 and 255 hours.
- The default is 24 hours.

resolv.conf display

```
msh> dns resolv
```

Specifying the protocol when asking names during dual stacking

```
msh> dns resolv protocol {ipv4|ipv6}
```

- Appears during dual stacking only.

domainname

Use the "domainname" command to display or configure the domain name settings.

You can configure the Ethernet interface,or IEEE 802.11 interface.

View settings

The following command displays the current domain name:

```
msh> domainname
```

Interface domain configuration

```
msh> domainname "interface_name"
```

Setting the Domain Name

```
msh> domainname "interface_name" name "domain name"
```

- A domain name can be entered using up to 63 alphanumeric characters.
- The Ethernet interface and IEEE 802.11 interface will have the same domain name.
- wlan can be specified only when the IEEE 802.11 interface is installed.

Interface	Interface set
ether	Ethernet interface
wlan	IEEE 802.11 interface

Deleting the Domain Name

```
msh> domainname "interface_name" clear name
```

help

Use the "help" command to display the available command list and the procedures for using those commands.

Command list display

```
msh> help
```

Display of procedure for using commands

```
msh> help "command_name"
```

hostname

Use the "hostname" command to change the printer name.

View settings

```
msh> hostname
```

IPv4 Configuration

```
msh> hostname "interface_name" "printer_name"
```

- Enter the printer name using up to 63 alphanumeric characters.
- You cannot use a printer name beginning "RNP" (in either upper or lower case).
- The Ethernet interface and IEEE 802.11 interface will have the same printer name.

- wlan can be specified only when the IEEE 802.11 interface is installed.
- If you do not specify an interface, the Ethernet interface is selected automatically.

Interface name	Interface configured
ether	Ethernet interface
wlan	IEEE 802.11 interface

Initializing the printer name for each interface

```
msh>hostname "interface_name" clear name
```

ifconfig

Use the "ifconfig" command to view and configure TCP/IP (IP address, subnet mask, broadcast address, default gateway address) for the printer.

View settings

```
msh> ifconfig
```

IPv4 configuration

```
msh> ifconfig "interface_name" "parameter" "address"
```

- If you did not enter an interface name, it is automatically set to the Ethernet interface.
- wlan can be specified only when the IEEE 802.11 interface is installed.

Interface name	Interface configured
ether	Ethernet Interface
wlan	IEEE 802.11 Interface

The following explains how to configure an IPv4 address 192.168.15.16 on Ethernet interface.

```
msh> ifconfig ether 192.168.15.16
```

IPv6 configuration

```
msh> ifconfig ether inet6 "interface_name" "printer_name"
```

The following explains how to configure a IPv6 address to 2001:DB8::100 with prefix length 64 on the Ethernet interface.

```
msh> ifconfig ether inet6 2001:DB8::100 64
```

Netmask configuration

```
msh> ifconfig "interface_name" netmask "address"
```

The following explains how to configure a subnet mask 255.255.255.0 on Ethernet interface.

```
msh> ifconfig ether netmask 255.255.255.0
```

Broadcast address configuration

```
msh> ifconfig "interface_name" broadcast "address"
```

Changing the interface

```
msh> ifconfig "interface" up
```

- When using the optional IEEE 802.11 interface unit, you can specify either Ethernet or IEEE 802.11 interface.

Note

- To get the above addresses, contact your network administrator.
- Use the default configuration if you cannot obtain setting addresses.
- The IP address, subnet mask and broadcast address are the same as that for the ethernet interface and IEEE 802.11 interface.
- TCP/IP configuration is the same for both Ethernet and IEEE 802.11 interface. If interfaces are changed, the new interface inherits the configuration.
- Use "0x" as the initial two letters of a hexadecimal address.

info

Use the "info" command to display printer information such as paper tray, output tray, and printer language.

Printer information display

```
msh> info
```

Reference

- p.107 "Understanding the Displayed Information"

ipp

Use the "ipp" command to view and configure IPP settings.

Viewing settings

The following command displays the current IPP settings:

```
msh> ipp
```

IPP timeout configuration

Specify how many seconds the computer waits before canceling an interrupted print job. The time can be entered between 30 to 65535 seconds.

```
msh> ipp timeout [30-65535]
```

IPP user authorization configuration

Use IPP user authorization to restrict users to print with IPP. The default is "off".

```
msh> ipp auth {basic|digest|off}
```

- User authorization settings are "basic" and "digest".
- If user authorization is specified, register a user name. You can register up to 10 users.

IPP user name configuration

Configure IPP users according to the following messages:

```
msh> ipp user
```

The following message appears:

```
msh> Input user number (1 to 10):
```

Enter the number, user name, and password.

```
msh> IPP user name:user1
msh> IPP :*******
```

After configuring the settings, the following message appears:

```
User configuration changed.
```

ipv6

Use the "ipv6" command to display and configure IPv6 settings.

View Setting

```
msh> ipv6
```

IPv6 stateless address

```
msh> ipv6 stateless {on|off}
```

If "on" is selected, IPv6 requests information required for maintaining stateful connection to the router for as long as the printer power is turned on. This setting allows information from the router to be obtained constantly, and periodically refreshes the effective period of the stateless address.

lpr

Use the "lpr" command to view and configure LPR settings.

View Setting

```
msh> lpr
```

Checking host name when deleting the job

```
msh> lpr chkhost {on|off}
```

If "on" is selected, you can delete print jobs only from the IP address of the host that sent the print job. If LPR is disabled, you can also delete print jobs sent from IP addresses other than that of the host.

Printer Error Detection Function

```
lpr prnerrchk {on|off}
```

If you set this to "on", the printer stops receiving data and will wait until the error is resolved before continuing processing a job.

netware

Use the "netware" command to view and configure the NetWare settings such as the print server name or file server name.

NetWare Printer Server Names

```
msh> netware pnamecharacter string
```

- Enter the NetWare print server name using up to 47 characters.

NetWare File Server Names

```
msh> netware fname character string
```

- Enter the NetWare file server name using up to 47 characters.

Encap type

```
msh> netware encap {802.3|802.2|snap|ethernet2|auto}
```

Remote Printer Number

```
msh> netware rnum [0-254]
```

- The default is 0.

Timeout

```
msh> netware timeout [3-255]
```

- The default is 15.

Printer server mode

```
msh> netware mode pserver
msh> netware mode ps
```

Remote printer mode

```
msh> netware mode rprinter
msh> netware mode rp
```

NDS context name

```
msh> netware context "character string"
```

SAP interval

```
msh> netware "sap_interval[0-3600]"
```

It can be entered between 0 and 3600 seconds.

Setting login mode for file server

```
msh> netware login server
```

Setting login mode for NDS tree

```
msh> netware login tree
```

Setting login mode for NDS tree name

```
msh> netware tree "NDS tree name"
```

File transfer protocol

```
msh> netware trans {ipv4pri|ipxpri|ipv4|ipx}
```

- If you do not specify the protocol, the current setting is displayed.

Protocol	Set Protocol
ipv4pri	IPv4+IPX(IPv4)
ipxpri	IPv4+IPX(IPX)
ipv4	IPv4
ipx	IPX

passwd

Use the "passwd" command to change the remote maintenance password.

Changing the

```
msh> passwd
```

- Enter the current password.
- Enter the new password.
- Renter the new password to confirm it.

Changing the password of the administrators using the Supervisor

```
msh> passwd {Administrator ID}
```

- Enter the new password.
- Renter the new password to confirm it.

Note

- Be sure not to forget or lose the password.
- The password can be entered using up to 32 alphanumeric characters. s are case-sensitive. For example, "R" is not the same as "r".

pathmtu

Use the "pathmtu" command to display and configure the PathMTU Discovery service function.

View settings

```
msh> pathmtu
```

Configuration

```
msh> pathmtu {on|off}
```

- The default is "on".
- If the MTU size of the sent data is larger than the router's MTU, the router will declare it impassable, and communication will fail. If this happens, selecting the "pathmtu" to "off" optimizes the MTU size and prevents data output failure.
- Depending on the environment, information might not be obtained from the router, and communication will fail. If this happens, select the "pathmtu" to "off".

prnlog

Use the "prnlog" command to obtain printer log information.

Print logs display

```
msh> prnlog
```

- Display previous print jobs.

```
msh> prnlog "ID Number"
```

- Specify the ID number of the displayed print log information to display additional details about a print job.

route

Use the "route" command to view and control the routing table.

Specified route information display

```
msh> route get "destination"
```

- Specify the IPv4 address to destination.

"0.0.0.0" cannot be specified as destination address.

Enabling/disabling specified IPv4 destination

```
msh> route active {host|net} "destination" {on|off}
```

- If you do not specify {host|net}, the host setting is automatically selected.

Adding IPv4 Routing Table

```
msh> route add {host|net} "destination" "gateway"
```

- Adds a host or network route to "destination", and a gateway address to "gateway" in the table.
- Specify the IPv4 address to destination and gateway.
- If you do not specify {host|net}, the host setting is selected automatically.
- You cannot specify"0.0.0.0" as the destination address.

Setting the Default IPv4 Gateway

```
msh> route add default "gateway"
```

Deleting specified IPv4 destination from Routing Table

```
msh> route delete {host|net} "destination"
```

- If you do not specify {host|net}, the host setting is automatically selected.
- IPv4 address of destination can be specified.

Setting IPv6 Default Gateway

```
msh> route add6 default gateway
```

Adding a specified IPv6 destination to Routing Table

```
msh> route add6 "destination" "prefixlen[1-128]" "gateway"
```

- Specify the IPv6 address to destination and gateway.
- If the prefix of the address is between 1 and 127, the network is selected. If the prefix of the address is 128, the host is selected.
- You cannot register a record that has the same destination and prefix as a registered record.
- You cannot register a record that uses "0000:0000:0000:0000:0000:0000:0000:0000" as its destination.

Deleting a specified IPv6 destination from Routing Table

```
msh> route delete6 "destination" "prefixlen"
```

- Specify the IPv6 address to destination and gateway.

Display information about a specified IPv6 route information

```
msh> route get6 "destination"
```

- Specify the IPv6 address to destination and gateway.

Enabling/disabling a specified IPv6 destination

```
msh> route active6 "destination" "prefixlen[1-128]" {on|off}
```

Route initialization

```
msh> route flush
```

Note

- The maximum number of IPv4 routing tables is 16.
- The maximum number of IPv6 routing tables is 2.
- Set a gateway address when communicating with devices on an external network.
- The same gateway address is shared by all interfaces.
- "Prefixlen" is a number between 1 and 128.

rhpp

Use the "rhpp" command to view and configure RHPP settings.

View settings

```
msh> rhpp
```

Changing rhpp port number

```
msh> rhpp [1024-65535]
```

- The default is 59100.

Setting timeout

```
msh> rhpp timeout [30-65535]
```

- The default is 300 seconds.

Note

- "RHPP" is an abbreviation of "Reliable Host Printing Protocol", which is a manufacturer-original printing protocol.

set

Use the "set" command to set the protocol information display "active" or "inactive".

View settings

The following command displays protocol information (active/inactive).

```
msh> set ipv4
msh> set ipv6
msh> set appletalk
```

```
msh> set netware
msh> set smb
msh> set protocol
```

- When protocol is specified, information about TCP/IP, AppleTalk, NetWare and SMB appears.

```
msh> set lpr
msh> set lpr6
msh> set ftp
msh> set ftp6
msh> set rsh
msh> set rsh6
msh> set diprint
msh> set diprint6
msh> set web
msh> set snmp
msh> set ssl
msh> set ssl6
msh> set nrs
msh> set rfu
msh> set rfu6
msh> set ipp
msh> set ipp6
msh> set http
msh> set http6
msh> set bonjour
msh> set bonjour6
msh> set nbt
msh> set ssdp
msh> set ssh
msh> set sftp
msh> set sftp6
msh> set wsdev
msh> set wsdev6
```

```
msh> set wsprn
msh> set rhpp
msh> set rhpp6
```

Configuration

- Enter "up" to enable protocol, and enter "down" to disable protocol.

You can set the protocol to "active" or "inactive".

```
msh> set ipv4 {up|down}
```

- If you disable IPv4, you cannot use remote access after logging off. If you did this by mistake, you can use the control panel to enable remote access via IPv4.
- Disabling IPv4 also disables lpr, ftp, rsh, diprint, web, snmp, ssl, ipp, http, bonjour, wsdev, and sftp.

```
msh> set ipv6 {up|down}
```

- If you disable IPv6, you cannot use remote access after logging off. If you did this by mistake, you can use the control panel to enable remote access via IPv6.
- Disabling IPv6 also disables lpr6, ftp6, rsh6, diprint6, ssl6, ipp6, http6, bonjour 6, wsdev6, and sftp6.

```
msh> set ipsec {up|down}
msh> set appletalk {up|down}
msh> set netware {up|down}
msh> set smb {up|down}
msh> set lpr {up|down}
msh> set lpr6 {up|down}
msh> set ftp {up|down}
msh> set ftp6 {up|down}
msh> set rsh {up|down}
msh> set rsh6 {up|down}
msh> set diprint {up|down}
msh> set diprint6 {up|down}
msh> set web {up|down}
msh> set snmp {up|down}
msh> set ssl {up|down}
msh> set ssl6 {up|down}
```

- If Secured Sockets Layer (SSL, an encryption protocol) function is not available for the printer, you cannot use the function by enabling it.

```
msh> set nrs {up|down}
msh> set rfu {up|down}
msh> set rfu6 {up|down}
msh> set ipp {up|down}
msh> set ipp6 {up|down}
msh> set http {up|down}
msh> set http6 {up|down}
msh> set bonjour {up|down}
msh> set bonjour6 {up|down}
msh> set ssh {up|down}
msh> set ssdp {up|down}
msh> set nbt {up|down}
msh> set sftp {up|down}
msh> set sftp6 {up|down}
msh> set wsdev {up|down}
msh> set wsdev6 {up|down}
```

- If "wsdev" and "wsdev6" are enabled simultaneously, both appear as "up" on the protocol information display, but both use IPv4 for WS-Device and WS-Printer.

```
msh> set wsprn {up|down}
msh> set rhpp {up|down}
msh> set rhpp6 {up|down}
```

show

Use the "show" command to display network interface board configuration settings.

View settings

```
msh> show
```

- If "-p" is added, you can view settings one by one.

slp

Use "slp" command to view and configure SLP settings.

```
msh> slp ttl "ttl_val[1-255]"
```

- You can search the NetWare server using SLP in the PureIP environment of NetWare 5/5.1. Using the "slp" command, you can configure the value of TTL which can be used by SLP multicast packet.
- The default value of TTL is 1. A search is executed only within a local segment. If the router does not support multicast, the settings are not available even if the TTL value is increased.
- The acceptable TTL value is between 1 and 255.

smb

Use the "smb" command to configure or delete the computer or workgroup name for SMB.

Computer name settings

```
msh> smb comp "computer name"
```

- Set computer name using up to 15 characters.
- Names beginning with "RNP" or "rnp" cannot be entered.

Working group name settings

```
msh> smb group "work group name"
```

- Set workgroup name using up to 15 characters.

Comment settings

```
msh> smb comment "comment"
```

- Set comment using up to 31 characters.

Notify print job completion

```
msh> smb notif {on|off}
```

- To notify print job completion, specify "on". Otherwise, specify "off".

Deleting computer name

```
msh> smb clear comp
```

Deleting group name

```
msh> smb clear group
```

Deleting comment

```
msh> smb clear comment
```

View protocol

```
msh> smb protocol
```

snmp

Use the "snmp" command to display and edit SNMP configuration settings such as the community name.

View settings

```
msh> snmp
```

- Default access settings 1 is as follows:

  Community name:public

  IPv4 address:0.0.0.0

  IPv6 address:::

  IPX address:00000000:000000000000

  Access type:read-only

  Effective Protocol:IPv4/IPv6/IPX
- Default access settings 2 is as follows:

  Community name:admin

  IPv4 address:0.0.0.0

  IPv6 address:::

  IPX address:00000000:000000000000

  Access type:read-write

  Effective Protocol:IPv4/IPv6/IPX
- If "-p" is added, you can view settings one by one.
- To display the current community, specify its registration number.

Display

```
msh> snmp ?
```

Community name configuration

```
msh> snmp "number" name "community_name"
```

- You can configure ten SNMP access settings numbered 1-10.
- The printer cannot be accessed from SmartDeviceMonitor for Admin or SmartDeviceMonitor for Client if "public" is not registered in numbers 1-10. When changing the community name, use SmartDeviceMonitor for Admin and SNMP Setup Tool to correspond with printer settings.
- The community name can be entered using up to 15 characters.

Deleting community name

```
msh> snmp "number" clear name
```

Access type configuration

```
msh> snmp "number" type "access_type"
```

Access type	Type of access permission
no	not accessible

Access type	Type of access permission
read	read only
write	read and write
trap	user is notified of trapmessages

Protocol configuration

Use the following command to set protocols "active" or "inactive": If you set a protocol "inactive", all access settings for that protocol are disabled.

```
msh> snmp {ipv4|ipv6|ipx} {on|off}
```

- Specify "ipv4" for IPv4, "ipv6" for IPv6, or "ipx" for IPX/SPX.
- {on} means "active" and {off} means "inactive".
- All protocols cannot be turned off concurrently.

Configuration of protocol for each registration number

```
msh> snmp "number" active {ipv4|ipv6|ipx} {on|off}
```

- To change the protocol of access settings, use the following command. However, if you have disabled a protocol with the above command, activating it here has no effect.

Access configuration

```
msh> snmp "number" {ipv4|ipv6|ipx} "address"
```

- You can configure a host address according to the protocol used.
- The network interface board accepts requests only from hosts that have IPv4, IPv6, and IPX addresses with access types of "read-only" or "read-write". Enter "0" to have network interface board accept requests from any host without requiring a specific type of access.
- Enter a host address to deliver "trap" access type information to.
- To specify IPv4 or IPv6, enter "ipv4" or "ipv6" followed by a space, and then the IPv4 or IPv6 address.
- To specify IPX/SPX, enter "ipx" followed by a space, the IPX address followed by a decimal, and then the MAC address of the network interface board.

sysLocation configuration

```
msh> snmp location
```

Deleting sysLocation

```
msh> snmp clear location
```

sysContact setting

```
msh> snmp contact
```

Deleting sysContact

```
msh> snmp clear contact
```

SNMP v1v2 function configuration

```
msh> snmp v1v2 {on|off}
```

- Specify "on" to enable, and "off" to disable.

SNMP v3 function configuration

```
msh> snmp v3 {on|off}
```

- Specify "on" to enable, and "off" to disable.

SNMP TRAP configuration

```
msh> snmp trap{v1|v2|v3} {on|off}
```

- Specify "on" to enable, and "off" to disable.

Remote Configuration Authorization configuration

```
msh> snmp remote {on|off}
```

- Specify "on" to enable, and "off" to disable the SNMP v1v2 setting.

SNMP v3 TRAP configuration display

```
msh> snmp v3trap
msh> snmp v3trap [1-5]
```

- If a number from 1 to 5 is entered, settings are displayed for that number only.

Configuring a sending address for SNMP v3 TRAP

```
msh> snmp v3trap [1-5] {ipv4|ipv6|ipx} "address"
```

Configuring a sending protocol for SNMP v3 TRAP

```
msh> snmp v3trap [1-5] active {ipv4|ipv6|ipx} {on|off}
```

Configuring a user account for SNMP v3 TRAP

```
msh> snmp v3trap [1-5] account "account_name"
```

- Enter an account name using up to 32 alphanumeric characters.

Deleting an SNMP v3 TRAP user account

```
msh> snmp v3trap [1-5] clear account
```

Configuring an SNMP v3 encryption algorithm

```
msh> snmp v3auth {md5|sha1}
```

Configuring SNMP v3 encryption

```
msh> snmp v3priv {auto|on}
```

- Set "auto" for automatic encryption configuration.

- If you select "on", plain-text communication becomes impossible - only encrypted communication is possible.

Note

- "Encrypted communication" means an encrypted password is set on the machine.

sntp

The printer clock can be synchronized with a NTP server clock using Simple Network Time Protocol (SNTP). Use the "sntp" command to change SNTP settings.

View settings

```
msh> sntp
```

NTP IPv4 server address configuration

You can specify the IPv4 address of the NTP server.

```
msh> sntp server "IPv4_address"
```

NTP hostname configuration

You can specify the hostname of the NTP server.

```
msh> sntp server "hostname"
```

Deleting NTP server configuration

```
msh> sntp server clear
```

Interval configuration

```
msh> sntp interval "polling_time"
```

- You can specify the interval at which the printer synchronizes with the operator-specified NTP server. The default is 60 minutes.
- The interval can be entered from 0, or between 15 and 10,080 minutes.
- If you set 0, the printer synchronizes with the NTP server only when you turn the printer on. After that, the printer does not synchronize with the NTP server.

Time-zone configuration

```
msh> sntp timezone "±hour_time"
```

- You can specify the time difference between the printer clock and NTP server clock. The values are between -12:00 and +13:00.

Note

- You can only select either the address or host name for the ntp server.

spoolsw

Use the "spoolsw" command to view and configure Job Spool settings.

You can only specify diprint, trap, lpr, ipp, ftp, sftp, ws-printer, and smb (TCP/IP) protocol.

- The "spoolsw" command for configuring Job Spool settings is available only when the optional hard disk is installed.

View settings

The Job Spool setting appears.

```
msh> spoolsw
```

Job Spool setting

```
msh> spoolsw spool {on|off}
```

- Specify "on" to enable Job Spool, or "off" to disable it.

Resetting Job spool setting

```
msh> spoolsw clear job {on|off}
```

- When the printer power is cut during job spooling, this determines whether to reprint the spooled job.

Protocol configuration

```
msh> spoolsw diprint {on|off}
msh> spoolsw lpr {on|off}
msh> spoolsw ipp {on|off}
msh> spoolsw smb {on|off}
msh> spoolsw ftp {on|off}
msh> spoolsw sftp {on|off}
msh> spoolsw {on|off}
```

ssdp

Use the "ssdp" command to view and configure SSDP settings.

View settings

```
msh> ssdp
```

Setting effective time

```
msh> ssdp profile [1801-86400]
```

The default is 10800 seconds.

Advertise packet TTL settings

```
msh> ssdp ttl [1-255]
```

The default is 4.

ssh

Use the "ssh" command to view and configure SSH settings.

View settings

```
msh> ssh
```

Data compression communication settings

```
msh> ssh compression {on|off}
```

The default is "on".

SSH/SFTP communication port setting

```
msh> ssh port [22, 1024-65535]
```

The default is 22.

SSH/SFTP communication timeout setting

```
msh> ssh timeout [0-65535]
```

The default is 300.

SSH/SFTP communication login timeout setting

```
msh> ssh logintimeout [0-65535]
```

The default is 300.

Setting an open key for SSH/SFTP

```
msh> ssh genkey {512|768|1024} "character string"
```

Create an open key for SSH/SFTP communication.

Usable characters are ASCII 0x20-0x7e (32 bytes) other than "0".

The default key length is 1024, and the character string is blank.

If you do not specify this parameter, an open key with the default value will be created.

Deleting open key for ssh/sftp communication

```
msh> ssh delkey
```

Note

- If you do not specify a character string, current setting is displayed.

status

Use the "status" command to display the printer status.

view messages

```
msh> status
```


syslog

Use the "syslog" command to display the information stored in the printer's system log.

View message

```
msh> syslog
```

upnp

Use the "upnp" command to display and configure the universal plug and play.

Public URL display

```
msh> upnp url
```

Public URL configuration

```
msh> upnp url "string"
```

- Enter the URL string in the character string.

web

Use the "web" command to display and configure parameters on Web Image Monitor.

View Settings

```
msh> web
```

URL Configuration

You can set URLs linked by clicking [URL] on Web Image Monitor.

```
msh> web "ID" url http:// "The URL or IP address you want to register"/
```

Specify "1" or "2" for ID as the number corresponding to the URL. Up to two URLs can be registered and specified.

Resetting URLs registered as link destinations

```
msh> web "ID" clear url
```

Specify "1" or "2" for ID as the corresponding number to the URL.

Link name configuration

You can enter the name for URL that appears on Web Image Monitor.

```
msh> web "ID" name "Name you want to display"
```

Specify "1" or "2" for ID the corresponding number to the link name.

Resetting URL names registered as link destinations

```
msh> web "ID" clear name
```

Specify "1" or "2" for ID as the number corresponding to the link name.

Help URL Configuration

You can set URLs linked by clicking "?" on Web Image Monitor.

```
msh> web help http://"Help URL or IP address"/help/
```

Resetting Help URL

```
msh> web clear help
```

wiconfig

Use the "wiconfig" command to make settings for IEEE 802.11.

View settings

```
msh> wiconfig
```

View IEEE 802.11 settings

```
msh> wiconfig cardinfo
```

- If IEEE 802.11 is not working correctly, its information is not displayed.

Configuration

```
msh> wiconfig "parameter"
```

Parameter	Value configured
mode {ap|802.11adhoc}	You can set the infrastructure mode (ap) or the 802.11 Ad hoc mode (802.11adhoc). The default is the infrastructure mode.
ssid "**ID value**"	You can specify an SSID in infrastructure mode. The characters you can enter in the SSID string are ASCII 0x20-0x7e (32 bytes). If you do not specify a character string, the machine will connect to the nearest access point. The default SSID is blank.

Parameter	Value configured
channel frequency "**channel no.**"	In 802.11 ad hoc mode, you can select a channel between 1 and 14, or 36, 40, 44, or 48. Be sure to set the same channel for all ports that will transmit and receive data. The default is "11".
key "**key value**" val [1|2|3|4]	You can specify the WEP key when entering in hexadecimal. With a 64-bit WEP, you can use 10 digit hexadecimals. With a 128-bit WEP, you can use 26 digit hexadecimals. Up to four WEP keys can be registered. Specify the number to be registered with "val". When a WEP is specified by key, the WEP specified by key phrase is overwritten. To use this function, set the same key number and WEP key for all ports that transmit data to each other. Put "0x"on the front of WEP key. You can omit the numbers with "val". The key number is set to 1 when making these omissions. The default is blank.
keyphrase "**phrase**" val [1|2|3|4]	You can specify the WEP key when entering in ASCII. With a 64-bit WEP, you can use 5 digit hexadecimals. With a 128-bit WEP, you can use 13 digit hexadecimals. Up to four WEP keys can be registered. Specify the number to be registered with "val". When a WEP is specified by key phrase, the WEP specified by key is overwritten. To use this function, set the same key number and WEP key for all ports that transmit data to each other. You can omit the numbers with "val". The key number is set to1 when making these omissions. The default is blank.

Parameter	Value configured
encval [1|2|3|4]	You can specify which of the four WEP keys is used for packet encoding. "1" is set if a number is not specified.
wepauth {open|shared}	You can set an authorization mode when using WEP. The specified value and authorized mode are as follows: open: open system authorized (default) shared: shared key authorized rate
security {none|wep|wpa}	You can specify the security mode. none: No encryption(default) wep: WEP encryption wpa: WPA encryption
wpaenc {tkip|ccmp}	You can specify WPA encryption key when using WPA encryption. tkip: TKIP ccmp: CCMP (AES) (default)
wpaauth {wpapsk|wpa|wpa2psk|wpa2}	You can specify the WPA authentication mode when using WPA encryption. wpapsk: WPA-PSK authentication(default) wpa: WPA authentication wpa2psk: WPA2-PSK authentication wpa2: WPA2 authentication
psk "character string"	You can specify the Pre-Shared key. Usable characters: ASCII 0x20-0x7e (8 to 63 bytes). The default is blank.

Parameter	Value configured
eap {tls|ttls|leap|peap} {chap|mschap|mschapv2|pap|md5|tls}	You can specify the EAP authentication type. tls: EAP-TLS (default) ttls: EAP-TTLS leap: LEAP peap: PEAP chap, mschap, mschapv2, pap, md5, or tls are settings for the phase 2 method, and must be set when using EAP-TTLS or PEAP. Do not make these settings when using other EAP authentication types. If you select EAP-TTLS, you can select chap, mschap, mschapv2, pap, or md5. If you select PEAP, you can select mschapv2 or tls.
username "character string"	You can specify the login user name for the Radius server. Usable characters: ASCII 0x20-0x7e (31 bytes). The default is blank.
username2 "character string"	You can specify the phase 2 username for EAP-TTLS/PEAP phase 2 authentication. Usable characters: ASCII 0x20-0x7e (31 bytes). The default is blank.
domain "character string"	You can specify the login domain name for the Radius server. The characters you can enter are ASCII 0x20-0x7e (31 bytes), but not "@" or "\". The default is blank.
password "character string"	You can specify the login for the Radius server. Usable characters: ASCII 0x20-0x7e (128 bytes). The default is blank.

Parameter	Value configured
srvcert {on|off}	You can set the server certificate. The default is "off".
imca {on|off}	You can enable or disable the certificate when the intermediate certificate authority is present. The default is "off".
srvid "character string"	You can set the server ID and subdomain of the certificate server. Usable characters: ASCII 0x20-0x7e(128 bytes). The default is blank.
connectinfo	Obtains connection information.
claer {a each command|all}	Returns the selected setting to its default value. If you specify "all", all settings will be restored to their default values.
miccheck {on|off}	You can enable or disable the MIC check function. The default setting is "On" (enabled). If you specify "Off", you cannot perform MIC checks. We recommend you specify "On" for the MIC check function when using this machine.

wins

Use the "wins" command to configure WINS server settings.

Viewing settings

```
msh> wins
```

- If the IPv4 address obtained from DHCP differs from the WINS IPv4 address, the DHCP address is the valid address.

Configuration

```
msh> wins "interface_name" {on|off}
```

- {on} means "active" and {off} means "inactive".
- Be sure to specify the interface.
- wlan can be specified only when the IEEE 802.11 interface is installed.

Interface name	Interface configured
ether	Ethernet interface
wlan	IEEE 802.11 interface

Address configuration

Use the following command to configure a WINS server IP address:

```
wins "interface_name" {primary|secondary} "IP address"
```

- Use the "primary" command to configure a primary WINS server IP address.
- Use the "secondary" command to configure a secondary WINS server IP address.
- Do not use "255.255.255.255" as the IP address.

NBT (NetBIOS over TCP/IP) Scope ID Selection

You can specify the NBT scope ID.

```
msh> wins "interface_name" scope "scope ID"
```

- The scope ID can be entered using up to 31 alphanumeric characters.
- Be sure to specify the interface.
- wlan can be specified only when the IEEE 802.11 interface is installed.

Interface name	Interface configured
ether	Ethernet interface
wlan	IEEE 802.11 interface

wsmfp

Use the "wsmfp" command to view and configure WS-MFP settings.

Viw settings

```
msh> wsmfp
```

Comment settings

```
msh> wsmfp comments "comment"
```

- If you do not specify a comment, current setting is displayed.

Location configuration

```
mah> wsmfp location "location"
```

- If you do not specify a comment, current setting is displayed.

Presentation URL configuration

```
msh> wsmfp url "URL"
```

- Ebter the URL string in the "URL".

WS-Device TCP port configuration

```
msh> wsmfp devport "port_number"
```

- The Default is 53000.

WS-Printer TCP port configuration

```
msh> wsmfp prnport "port_number"
```

- The Default is 53001.

Timeout configuration

```
msh> wsmfp prntimeout [30-65535]
```

- The default is 900 seconds.

Comment initialization

```
msh> wsmfp clear comments
```

Location initialization

```
msh> wsmfp clear location
```

Presentation URL initialization

```
msh> wsmfp clear url
```

SNMP

Using the SNMP manager, you can get information about the machine.

The SNMP agent operating on UDP and IPX is incorporated into the built-in Ethernet board and optional IEEE 802.11 interface unit of this machine.

This machine also supports SNMPv3, which increases user authentication, data encryption, and access control security.

To encrypt communication by SNMPv3, you must specify the machine's encrypted password.

Important

- **If you changed the machine's community name, change the configuration of the connected computer accordingly, using SNMP Setup Tool. For details, see SNMP Setup Tool Help.**

The default community names are [public] and [admin]. You can get MIB information using these community names.

Start SNMP Setup Tool

- Windows 2000:

  Click the [Start] button.

  Point to [SmartDeviceMonitor for Admin] on the [Programs] menu.

  Click [SNMP Setup Tool].

- Windows XP/Vista:

  Click the [Start] button.

  Point to [SmartDeviceMonitor for Admin] on the [All Programs] menu.

  Click [SNMP Setup Tool].

Supported MIBs(SNMPv1/v2)

- MIB-II
- PrinterMIB
- HostResourceMIB
- IPv6-TCP-MIB
- IPv6-UDP-MIB
- IPv6-MIB
- IPv6-ICMP-MIB
- RicohPrivateMIB

Supported MIBs(SNMPv3)

- MIB-II
- PrinterMIB

- HostResourceMIB
- IPv6-TCP-MIB
- IPv6-UDP-MIB
- IPv6-MIB
- IPv6-ICMP-MIB
- RicohPrivateMIB
- SNMP-FRAMEWORK-MIB
- SNMP-TARGET-MIB
- SNMP-NOTIFICATION-MIB
- SNMP-USER-BASED-SM-MIB
- SNMP-VIEW-BASED-ACM-MIB

Getting Printer Information over the Network

This section explains details of each item displayed in the printer status and information.

Current Printer Status

This section explains how you can check the machine's status and the items displayed. Depending on the options installed on the machine, some items might not be displayed.

- UNIX: Use the "lpq" command and "rsh", "rcp", "ftp", and "sftp" parameters.
- mshell: Use the "status" command.

Messages	Description
Access Restricted	The job was canceled because user have no authority.
Adjusting...	The machine is initializing or calibrating.
Call Service Center	There is a malfunction in the machine.
Canceled	The job is reset.
Canceling Job...	The job is being reset.
Cannot Eject Original Through	The original cannot be ejected.
Cannot multi-install: SD Card	SD Card software cannot be installed multi times.
Card/Counter not inserted	The machine is waiting for prepaid card or key.
Coin or amount not inserted	The machine is waiting for coin to be inserted.
Coin/Key Counter not inserted	The machine is waiting for coin or key counter.
Configuring...	Setting is being changed.
Cooling Down Fusing Unit...	The fusing unit is cooling down.
Cover Open: Finisher cover	The cover of folding finisher is open.
Cover Open: Front Cover	The front cover is open.
Cover Open: Mainframe	The mainframe cover is open.
Cover Open: Exit	The paper exit cover is open.

Messages	Description
Data Size Error	The data size error occurred.
Empty: Black Toner	The black toner cartridge is almost empty.
Energy Saver Mode	The machine is in Energy Saver Mode.
Envelope Setting Error: None	Printing paper type other than envelope is instructed when B2 lever is down.
Envelope Setting Error: Others	Printing envelope is instructed when B2 lever is down.
Error	An error has occurred.
Error: Address Book	An error has occurred in the data of the address book.
Error: Command Transmission	An error has occurred in the machine.
Error: DIMM Value	A memory error occurred.
Error: Ethernet Board	An Ethernet board error has occurred.
Error: HDD Board	A hard disk drive board error has occurred.
Error: Media Link Board	An error has occurred on the media link board.
Error: Memory Switch	A memory switch error has occurred.
Error: Optional Font	An error has occurred in the font file of the machine.
Error: Optional RAM	An error has occurred in the optional memory unit.
Error: Parallel I/F Board	An error has occurred in the parallel interface.
Error: PDL	An error has occurred in the page description language.
Error: Rem. Certificate Renewal	An error has occurred in the remote sever renewal.
Error: USB Board	An error has occurred in the USB interface board.
Error: USB Interface	An error has occurred in the USB interface.

Messages	Description
Error: Wireless Card	IEEE 802.11a/g interface unit is taken out after start up.
Exceed Stapling Limit	The printing has exceeded the stapling limit.
Fold-Fin. Stamper not put back	The folding finisher stamper is not put back to its place.
Full: Finisher	Finisher tray is full.
Full: Finisher Shift Tray	Shift tray of Finisher is full.
Full: Front Paper Exit	Front paper exit is full.
Full: Log Data Capacity	The log data capacity is full.
Full: Shift Tray	Shift tray is full.
Full: Waste Toner	Waste toner is full.
Hex Dump Mode	It is a hex dump mode.
Immed. Trans. not connected	It did not connect directly with the other party of the transmission.
Immediate Transmission Failed	An error has occurred while transmitting directly.
Independent-supplier Toner	Toner that is not recommended is set.
In Use: Copier	The copier is being used.
In Use: Finisher	Other function is using Finisher.
In Use: Input Tray	Other function is using the input tray.
Jobs Suspended	All jobs are suspended.
Key Card not inserted	The machine is waiting for key card to be inserted.
Key Card/Counter not inserted	The machine is waiting for key card or key counter to be inserted.
Key Counter not inserted	The machine is waiting for key counter to be left in it.
Loading Toner...	Toner is being supplied.

Messages	Description
Log Data Transfer failed	Log transfer has failed.
Low: Black Toner	The black toner cartridge is not set correctly, or toner is almost running out.
Low: Toner	The toner cartridge is not set correctly, or toner is almost running out.
Malfunction: Ext. Charge Unit	There is a problem with the external charge unit.
Malfunction: Finisher	There is a problem with the finisher.
Malfunction: Lower Paper Tray(s)	There is a problem with the bank motor.
Malfunction: Output Tray	There is a problem with the output tray.
Malfunction: Tray 1(Paper Roll 1)	There is a problem with tray 1 (Paper Roll 1).
Malfunction: Tray 2(Paper Roll 2)	There is a problem with tray 2 (Paper Roll 2).
Malfunction: Tray 3(Cut Paper 1)	There is a problem with tray 3 (Cut Paper 1).
Malfunction: Tray 3(Paper Roll 3)	There is a problem with tray 3 (Paper Roll 3).
Malfunction: Tray 4(Cut Paper 2)	There is a problem with tray 4 (Cut Paper 2).
Malfunction: Tray 4(Paper Roll 4)	There is a problem with tray 4 (Paper Roll 4).
Memory Low: Copy	Memory shortage has occurred while the copy was operating.
Memory Low: Data Storage	Memory shortage has occurred while the document was being accumulated.
Memory Low: Scanning	Memory shortage has occurred while the scanner was working.
Miscellaneous Error	Other error has occurred.
Mismatch: Paper Size	Indicated paper tray does not contain paper of selected size.
Mismatch: Paper Size and Type	Indicated paper tray does not contain paper of selected size and type.
Mismatch: Paper Type	Indicated paper tray does not contain paper of selected type.

Messages	Description
Near Replacing: Black PCU	Prepare the new black photoconductor unit.
Near Replacing: Develop. Unit K	Prepare the new development unit (black).
Near Replacing: Fusing Unit	Prepare the new fusing unit.
Nearly Full: Log Data Capacity	The log is nearing data capacity.
Nearly Full: Waste Toner	Waste toner bottle is nearly full.
No Paper: Tray 1(Paper Roll 1)	There is no paper in tray 1 (Paper Roll 1).
No Paper: Tray 2(Paper Roll 2)	There is no paper in tray 2 (Paper Roll 2).
No Paper: Tray 3(Cut Paper 1)	There is no paper in tray 3 (Cut Paper 1).
No Paper: Tray 3(Paper Roll 3)	There is no paper in tray 3 (Paper Roll 3).
No Paper: Tray 4(Cut Paper 2)	There is no paper in tray 4 (Cut Paper 2).
No Paper: Tray 4(Paper Roll 4)	There is no paper in tray 4 (Paper Roll 4).
Not Detected: Black Toner	Black toner is not correctly set.
Not Detected: Finisher	Finisher is not correctly set.
Not Detected: Fusing Unit	The fusing unit is not correctly set.
Not Detected: Input Tray	The paper feed tray is not correctly set.
Not Detected: PCU (K)	The photoconductor unit (black) is not correctly set.
Not Detected: Tray 1(Paper Roll 1)	Tray 1 (Paper Roll 1) is not correctly set.
Not Detected: Tray 2(Paper Roll 2)	Tray 2 (Paper Roll 2) is not correctly set.
Not Detected: Tray 3(Cut Paper 1)	Tray 3 (Cut Paper 1) is not correctly set.
Not Detected: Tray 3(Paper Roll 3)	Tray 3 (Paper Roll 3) is not correctly set.
Not Detected: Tray 4(Cut Paper 2)	Tray 4 (Cut Paper 2) is not correctly set.
Not Detected: Tray 4(Paper Roll 4)	Tray 4 (Paper Roll 4) is not correctly set.
Not Detected: WasteToner Bottle	Waste toner bottle is not correctly set.
Not Reached, Data Deleted	Unreached job is deleted.

Messages	Description
Not Reached, Data Stored	Unreached documents are saved.
Offline	Machine is offline.
Operating Thermo-range Error	The machine is operating outside the permissible temperature range.
Panel Off Mode	The machine is in Panel-Off mode.
Panel Off Mode>>Printing ava.	The machine is in Control Panel-Off mode.
Paper Error: Remaining in Bypass	Since paper is loaded in the bypass tray, the document can not be printed from the paper trays.
Paper in Finisher	The paper remains in Finisher.
Paper Misfeed: Finisher	The paper has jammed in folding finisher.
Paper Misfeed: Internal/Output	The paper has jammed in the internal or output tray.
Paper Misfeed: Paper Tray	The paper has jammed in the paper tray.
Prepaid Card not inserted	The prepaid card is not inserted, or has insufficient credit.
Print Complete	The print was completed.
Printing...	Printing is in progress.
Processing	Data is being processed.
Proxy Address / Port Incorrect	The proxy address and port setting is incorrect.
Proxy User / Password Incorrect	The proxy user name and password setting is incorrect.
Ready	The machine is ready to print.
Renewing Remote Certificate	The remote certificate is being renewed.
Replace Black PCU	It is time to replace the black photoconductor unit.
Replace Charger Kit	It is time to replace the charger kit.
Replace Cleaning Web	It is time to replace the Cleaning Web.

Messages	Description
Replace Develop. Unit	It is time to replace the development unit.
Replace Develop. Unit (Black)	It is time to replace the development unit (black).
Replace Fusing Unit	It is time to replace the fusing unit.
Replace Int. Transfer Unit	It is time to replace the transfer unit.
Replace Transfer Cleaning Unit	It is time to replace the transfer cleaning unit.
Reset IPDS fonts	The IPDS fonts are being reset.
Retarding...	Printing has stopped momentarily to allow printed sheets to dry.
SD Card Authentication failed	SD card authentication failed.
SD Card not inserted	The machine is waiting for SD card.
Setting Remotely	The RDS setting is being processed.
Skipped due to Error	Skipped the error.
Storage Complete	The storage is complete.
Storage Failed	The storage has failed.
Supplies Order Call failed	The supply order call has failed.
Suspend / Resume Key Error	Finisher stop button was pressed.
Transmission Aborted	The transmission was interrupted.
Transmission Complete	The transmission completion was completed.
Transmission Failed	The transmission has failed.
Tray Error: Chaptering	The paper feed tray specification error has occurred because chaptering as well as the normal paper use the same tray for printing.
Waiting for Job Suspension	The machine is waiting for Job Suspension.
Warming Up...	The machine is warming up.

Note

- For details about UNIX commands, see UNIX Supplement.

- Check the error contents that may be printed in the configuration page. For details about printing a configuration page, see “Printing the Configuration Page”, General Settings Guide.

Printer configuration

You can check the printer configuration using telnet.

This section explains the checking procedure for input/output tray and printer language.

- UNIX: Use the “info” command and “rsh”, “rcp”, “ftp”, and “sftp” parameters.
- mshell: Use the “info” command.

Input Tray

Item	Description
No.	ID number of the paper tray
Name	Name of the paper tray
PaperSize	Size of paper loaded in the paper tray
Status	Current status of the paper tray • Normal: Normal • NoInputTray: No tray • PaperEnd: No paper

Output Tray

Item	Description
No.	ID number of the output tray
Name	Name of the output tray
Status	Current status of the output tray • Normal: Normal • PaperExist: Paper exist • OverFlow: Paper is full • Error: Other errors

Printer Language

Item	Description
No.	ID number of the printer language used by the printer
Name	Name of the printer language used in the printer
Version	Version of the printer language

Note

- For details about UNIX commands and parameters, see UNIX Supplement.

Understanding the Displayed Information

This section explains how to read status information returned by the network interface board.

Print Job Information

Use the following command to display print job information:

- UNIX: Use the “info” command and “rsh”, “rcp”, “ftp”, and “sftp” parameters.
- mshell: Use the “info” command.

Item	Description
Rank	Print job status. • Active Printing or preparing for printing. • 1st, 2nd, 3rd, 4th... Waiting to be transferred to the printer.
Owner	Print request user name.
Job	Print request number.
Files	The name of the document.
Total Size	The size of the data (spooled). The default is 0 bytes.

Note

- For details about UNIX commands and parameters, see UNIX Supplement.

Print Log Information

This is a record of the most recent jobs printed.

Use the following command to display print log information:

- UNIX: Use the “prnlog” command and “rsh”, “rcp”, “ftp”, and “sftp” parameters.
- telnet : Use the “prnlog” command.

Item	Description
ID	Print request ID.
User	Print request user name.
Page	Number of pages printed
Result	Print Request Result Communication Result • OK Print was completed normally. However, the print result may not be as required due to printer problems. • NG Printing was not completed normally. • Canceled An "rcp", "rsh", or "lpr" command print request was canceled, possibly due to the printing application. Not applicable to the "ftp" or "rprinter" command.
Time	Time the print requested was received. Time of print request reception
User ID (when designating Job ID on telnet)	Printer driver-configured User ID. Appears when the print request ID is specified.
JobName (when designating Job ID on telnet)	Name of the document for printing Appears when the print request ID is specified.

Note

- For details about UNIX commands and parameters, see UNIX Supplement.

Configuring the Network Interface Board

Use the following command to display network interface board settings:

- telnet : Use the "show" command.

Item	Description
Common	
Mode	
Protocol Up/Down	Protocol Settings
AppleTalk	
IPv4	
IPv6	
IPsec	
NetWare	
SMB	
Device Up/Down	Device Settings
Parallel	
USB	
Ethernet interface	
Syslog priority	
NVRAM version	
Device name	
Comment	
Location	
Contact	
Soft switch	
AppleTalk	AppleTalk settings
Mode	
Net	
Object	
Type	

Item	Description
Zone	
TCP/IP	TCP/IP settings
Mode(IPv4)	
Mode(IPv6)	
ftp	
lpr	
rsh	
telnet	
diprint	
web	
http	
ftpc	
snmp	
ipp	
autonet	
bonjour	
ssl	
nrs	
rfu	
nbt	
ssdp	
ssh	
sftp	
WS-Device	
WS-Print	

Item	Description
rhpp	
IPv4	
DHCP	
Address	
Netmask	
Broadcast	
Gateway	
IPv6	
Stateless	
Manual	
Gateway	
EncapType	
DHCPv6-lite	
DUID	
DHCPv6 option lifetime	
IPsec	
Manual Mode	
Excluded Protocol	
https	
dns	
dhcp	
wins	
EncapType	
Host name	
DNS Domain	

Item	Description
Access Control	Access Control settings
IPv4	X can be set between 1 and 5.
AccessEntry[X]	
IPv6	
AccessEntry[X]	X can be set between 1 and 5.
SNTP Server	Time settings
Time Zone	
SNTP Server polling time	
SYSLOG server	Websys settings
Home page URL1	
Home page linkname1	
Home page URL2	
Home page linkname2	
Help page URL	
IPDS Port	
IPDS timeout	
RHPP Port	
RHPP timeout	
NetWare	
EncapType	
RPRINTER number	
Print server name	
File server name	
Context name	
Switch	

Item	Description
Mode	
NDS/Bindery	
Packet negotiation	
Login Mode	
Print job timeout	
Protocol	
SAP interval time	
NDS Tree Name	
Transfer Protocol	
SMB	SMB settings
Switch	
Mode	
Direct print	
Notification	
Workgroup name	
Computer name	
Comment	
Share name[1]	
Protocol	
Wireless LAN	Wireless LAN settings
Communication Mode	
SSID	
Channel	
Security	
WEP Authentication	

Item			Description
	WEP Encryption key number		
	WEP Encryption key number [X]		X can be set between 1 and 4.
	WEP Encryption		
	WPA Encryption		
	WPA Authentication		
	Pre-Shared Key		
	User name		
	Domain name		
	EAP Type		
	Password		
	Phase 2 user name		
	Phase 2 Method TTLS		
	Phase 2 Method PEAP		
	Server cert.		
	IntermediateCA		
	Server ID		
	Sub domain		
	MIC check		
DNS			DNS settings
	IPv4		
		Server[X]	X can be set between 1 and 3.
		Selected IPv4 DNS Server	
	IPv6		
		Server[X]	X can be set between 1 and 3.
		Selected IPv6 DNS Server	

Item	Description
Resolver Protocol	
Domain Name	
ether	
wlan	
DDNS	
ether	
wlan	
WINS	WINS settings
ether	
Primary WINS	
Secondary WINS	
wlan	
Primary WINS	
Secondary WINS	
SSDP	SSDP settings
UUID	
Profile	
TTL	
UPnP	UPnP settings
URL	
Bonjour	Bonjour (Redezvous) settings
Computer Name (cname)	
Local Hostname (ether)	
Local Hostname (wlan)	
Location	

Item	Description
Priority (diprint)	
Priority (lpr)	
Priority (ipp)	
IP TTL	
LinkLocal Route for MultiI/F	
IPP Port	
SNMP	SNMP settings
SNMPv1v2	
SNMPv3	
protocol	
v1Trap	
v2Trap	
v3Trap	
SNMPv1v2 Remote Setting	
SNMPv3 Privacy	
ssh	ssh settings
Compression	
Port	
TimeOut	
Login TimeOut	
AuthFree	Authfree settings
IPv4	
AuthFreeEntry[X]	X can be set between 1 and 5.
IPv6	
AuthFreeEntry[X]	X can be set between 1 and 5

Item		Description
	Parallel	
	USB	
LPR		
	lprm check host	
	lpr prnerr chk	
Certificate		
	Verification	
WS-MFP		
	Network Device Name	
	Comments	
	Location	
	Presentation URL	
	WS-Device TCP Port	
	WS-Printer TCP Port	
	WS-Printer Job Timeout	
	MetadataVersion	
	UUID	
Shell mode		Remote maintenance tool mode

Message List

This is a list of messages that appear in the machine's system log. The system log can be viewed using the "syslog" command.

System Log Information

Use the following command to display the system log information:

- UNIX: Use the "syslog" command and "rsh", "rcp", "ftp", and "sftp" parameters.
- telnet: Use the "syslog" command.

Message	Problem and solutions
account is unavailable: Same account name be used.	User account is disabled. This could be because it use the same account name as the administrator account.
account is unavailable: The authentication password is not set up.	User account is disabled. This could be because the authentication password is not set, and only the encryption account is set.
account is unavailable: encryption is impossible.	Encryption is not possible and account is disabled. This could be because: • Security option is not installed. • Encryption password has not been specified.
add_sess_IPv4: bad trap <IPv4 address> community <community name>	The IPv4 address (0.0.0.0.) is unavailable when the community access type is TRAP. Specify the host IPv4 address for the TRAP destination.
add_sess_IPv6: bad trap <IPv6 address> community <community name>	The IPv6 address [::] is unavailable when the community access type is TRAP. Specify the host IPv6 address for the TRAP destination.
add_sess_IPv4: community <community name> already defined.	The same community name already exists. Use another community name.
add_sess_IPv6: community <community name> already defined.	The same community name already exists. Use another community name.

Message	Problem and solutions
add_sess_IPX: bad trap <IPX address> community <community name>	The IPX address (00:00:00:00:00:00) is unavailable when the community access type is TRAP. Specify the host IPX address for the TRAP destination.
add_sess_ipx: community <communityname> already defined.	The same community name already exists. Use another community name.
adjust time server <NTP server name> offset: xx sec.	ncsd tells you the timing of the NTP server and whether or not the time system clock is set. NTP Server: NTP server name offset: number of seconds of delay (minus number if a time in advance is specified)
authenticated	The supplicant is authenticated.
authenticating	The supplicant is authenticating with the access point (EAP or WPA).
Authentication mode mismatch	The authentication mode of the access point is different from the authentication mode of the supplicant. Use the authentication mode between the access point and the supplicant.
Client EAP method rejected	The authentication mode of the access point is different with the authentication mode of the supplicant. Use the same authentication mode between the access point and the supplicant.
Client password rejected	The client's password was rejected. Check the client password.
Client TLS certificate rejected	The client's TLS certificate was rejected. Check the certificate.
cipher suite mismatch	The uni-cast / multi-cast suite (TKIP/AES/WEP) of the access point is different from the suite used by the supplicant.
connecting	The supplicant is waiting for wireless connection to the access point.

Message	Problem and solutions
Current Interface Speed: xxxMbps	Speed of the network (10Mbps, 100 Mbps, or 1Gbps).
Duplicate IP = <IP address> (from <MAC address>).	The same IP address (IPv4, or IPv6 address) was used. Each IP address (IPv4, or IPv6 address) must be unique. Check the address of the device indicated in [MAC address].
IEEE 802.11 Card does NOT support WPA .	A wireless card that does not support WPA is installed. Install a wireless card that supports WPA.
IEEE 802.11 Card Firmware REV.<version>	Displays the version number of the 802.11 card's firmware.
IEEE 802.11 card removed	The wireless card managed by the supplicant has been removed.
IEEE 802.11 current channel <channel nember>	Displays the current channel number of the active wireless card (in ad hoc and infrastructure mode).
IEEE 802.11 interface down	The IEEE 802.11 interface managed by the supplicant is disabled, or cannot connect to the access point.
IEEE 802.11 interface up	The IEEE 802.11 interface managed by the supplicant is enabled, or is connected to the access point.
IEEE 802.11 MAC Address = <MAC address>	Displays the MAC address of the wireless interface.
IEEE 802.11 SSID <ssid> (AP MAC Address <MAC address>)	The MAC address and SSID of the access point are connected in infrastructure mode.
IEEE 802.11 <communication mode> mode	Displays IEEE 802.11 communication mode.
inetd start.	The inetd service has started.
Interface (interface name): Duplicate IP Address (<IP address>).	The same IP (IPv4 or IPv6) address was used. Each IP address must be unique. Check the address of the device indicated in [IP address].
< Interface > started with IP: < IP address >	IP address (IPv4 or IPv6 address) has been set for the interface and is operating.

Message	Problem and solutions
< Interface >: Subnet overlap.	The same IP address (IPv4, orIPv6 address) and the subnet mask is used with other device.
LEAP challenge to access point failed	The LEAP challenge to the access point has failed.
MIC failure TKIP counter measures started	The supplicant using TKIP has detected two instances of tampering within 60 seconds and has started counter measures.
MIC failure TKIP counter measures stopped	Counter measures have stopped after 60 seconds (since the supplicant using TKIP started counter measures against tampering).
no RADIUS/authentication server	The supplicant has received a message reporting that a usable RADIUS server cannot be found.
no smart card detected on device	PEAP/GTC (Generic Token Card) is selected, but a smart card using GTC authentication cannot be found.
no WPA information element in probe response, rescanning	There is no WPA information on the response from the SSID probe of the access point you want to use. The supplicant is rescanning.
server certificate invalid	The server ID is disabled. Check the server authentication.
server identity invalid	The server ID is disabled. Check the server authentication.
server not trusted	The RADIUS server cannot be trusted.
session IPv4 <community name> not defined.	The requested community name is not defined.
session IPv6 <community name> not defined.	The requested community name is not defined.
session_ipx <community name> not defined.	The requested community name is not defined.
shutdown signal received. network service rebooting...	The smbd service has started.

Message	Problem and solutions
SMTPC: failed to get smtp server ip-address.	The SMTP server IP address could not be obtained. This could be because: • The specified DNS server could not be found. • No connection to the network has been established. • The specified DNS server could not be found. • An incorrect DNS server is specified. • The specified SMTP server IP address could not be found in the DNS server.
SMTPC: failed to connect smtp server. timeout.	Connection to the SMTP server failed due to timeout. This could be because the specified SMTP server name is incorrect, or no connection to the network has been established, or the network configuration is incorrect, so there is no response from the SMTP server. Check the SMTP server name, or the network connection and configuration.
SMTPC: refused connect by smtp server.	Connection to the SMTP server is denied. This could be because server other than the SMTP server has been specified, or the specified SMTP server port number is incorrect. Check the SMTP server name, port number, or the SMTP server port number.
SMTPC: no smtp server. connection close.	Connection to the SMTP server failed due to no response from SMTP. This could be because a server other than the SMTP server has been specified, or the specified SMTP server port number is incorrect. Check the SMTP server name, port number, or the SMTP server port number.

Message	Problem and solutions
SMTPC: failed to connect smtp server.	Connection to the SMTP server failed. This could be because no connection to the network has been established, or the network configuration is incorrect, so there is no response from the SMTP server, or the specified SMTP server name is incorrect, or the specified SMTP server IP address could not be found in the DNS server, or a server other than the SMTP server has been specified, or the specified SMTP server port number is incorrect. Check the DNS Server's IP address and SMTP server's IP address, or the SMTP server name and SMTP port number, or the SMTP server's SMTP port number, or the network connection and configuration.
SMTPC: username or password wasn't correct. [response code] (information)	Connection to the SMTP server failed, because the specified SMTP user name is incorrect, or the specified SMTP password is incorrect. Check the SMTP user name and password.
Snmp over IPv4 is ready	Communication over IPv4 with snmp is available.
Snmp over IPv6 is ready.	Communication over IPv6 with snmp is available.
Snmp over ipx is ready.	Communication over IPX with snmp is available.
snmpd start.	The snmpd service has started.
started.	The direct print service has started.
Started.	The bonjour (rendezvous) function is enabled.
stopped	The supplicant is terminating.
success key received	The supplicant received the EAP-Success key.
success but invalid key	The supplicant received a message reporting that EAP authentication was successful, but the EAPOL key was invalid.
Terminated.	The bonjour (rendezvous) function is disabled.

Message	Problem and solutions
There is problem in dhcp server operation.	There is a problem with the DHCP server. If multiple DHCP servers are active on the network, check that they are assigning unique IP addresses to each machine.
trap account is unavailable.	v3Trap cannot be sent. This could be because the Trap destination account is different from the account specified by the printer.
unauthenticated	The authentication failed. The supplicant was denied access to the access point, or was not authenticated.
waiting for keys	The supplicant is waiting for the session key.
WPA supplicant started	The WPA supplicant has started.
WPA supplicant unbound	The WPA supplicant is not connected to the unbound access point.
WS-Device started.	WS-Device has started.
WS-Printer started.	WS-Printer has started.

Note

- For details about UNIX commands and parameters, see UNIX Supplement.

3. Special Operations under Windows

Printing Files Directly from Windows

You can print files directly using Windows commands. For example, you can print PostScript files for PostScript 3.

Windows 2000/XP/Vista, Windows Server 2003/2003 R2

You can print files directly using lpr, rcp ftp or sftp command.

Setup

Follow the procedure below to make network environment settings.

1. **Enable TCP/IP with the control panel, and then set up the printer's network environment about TCP/IP including IP addresses.**

   TCP/IP of the printer is set as default.

2. **Install a TCP/IP in Windows to set up the network environment.**

   Consult the network administrator for the local setting information.

3. **To print under Windows 2000/XP/Vista, Windows Server 2003/2003 R2, install "Printing service for UNIX" as the network application.**

Reference

- p.133 "Using DHCP"

Using a Host Name Instead of an IPv4 Address

When a host name is defined, you can specify a printer by host name instead of IP address. The host names vary depending on the network environment.

When using DNS

Use the host name set to the data file on the DNS server.

When setting the IPv4 address of a printer using DHCP

Use the printer name on the configuration page as the host name.

Note

- For details about printing a configuration page, see "Printing the Configuration Page", General Setting Guide.

In other cases

Add the IP address and host name of the network printer to the hosts file on the computer used for printing. Methods of addition vary depending on operating systems.

Windows 2000/XP/Vista, Windows Server 2003/2003 R2

1. **Open the hosts file using memo pad files, for instance.**

   The hosts file is in the following folder:

   `\WINNT\SYSTEM32\DRIVERS\ETC\HOSTS`

   "\WINNT" is the directory of the installation destination for Windows 2000/XP, and Windows Server 2003/2003 R2.

2. **Add an IPv4 or IPv6address and host name to the hosts file using the following format:**

   `192.168.15.16 host # NP`

   "192.168.15.16" is the IPv4 address, "host" is the printer's host name, and "#NP" is replaced by comments. Insert a space or tab between "192.168.15.16" and "host", between "host" and "#NP" respectively, using one line for this format.

   `2001:DB::100 host # NP`

   "2001:DB::100" is the IPv6 address, "host" is the printer's host name, and "#NP" is replaced by comments. Insert a space or tab between "2001:DB::100" and "host", between "host" and "#NP" respectively, using one line for this format.

3. **Save the file.**

Note

- When using a host name under Windows Server 2003/2003 R2 with IPv6 protocol, perform host name resolution using an exrernal DNS server. The host file cannot be used.

Printing Commands

The following explains printing operations using the "lpr", "rcp", "ftp" and "sftp" commands.

Enter commands using the command prompt window. The location of the command prompts varies depending on operating systems:

- Windows 2000

  [Start] - [Programs] - [Accessories] - [Command Prompt]

- Windows XP, Windows Vista, Windows Server 2003/2003 R2

  [Start] - [All Programs] - [Accessories] - [Command Prompt]

Note

- Match the data format of the file to be printed with the emulation mode of the printer.
- If the message "print requests full" appears, no print jobs can be accepted. Try again when sessions end. For each command, the amount of possible sessions is indicated as follows:
  - lpr: 5(When the spool printing function is available: 10)
  - rcp, rsh: 5
  - ftp: 3
  - sftp: 3
- Enter the file name in a format including the path from the directory executing commands.
- The "option" specified in a command is an intrinsic printer option and its syntax is similar to printing from UNIX. For details, see UNIX Supplement.

lpr

When specifying a printer by IP address

```
c:> lpr -S(printer's IP address) [-P(option)] [-ol] \(pass name)\(file name)
```

When using a host name instead of an IP address

```
c:> lpr -S(printer's host name) [-P(option)] [-ol] \(pass name)\(file name)
```

When printing a binary file, add the "-ol" option (lowercase O, and lowercase L).

When using a printer with the host name "host" to print a PostScript file named "file 1" located in the "C:\PRINT" directory, the command line is as follows:

```
c:> lpr -Shost -Pfiletype=RPS -ol C:\PRINT\file1
```

rcp

First, register the printer's host name in the hosts file.

```
c:> rcp [-b] \(pass name)\(file name) [(pass name)\(file name)...] (printer's host name):[option]
```

In file names, "*" and "?" can be used as wild cards.

When printing a binary file, add the "-b" option.

When using a printer with the host name "host" to print a PostScript file named "file 1" or "file 2" located in the "C:\PRINT" directory, the command line is as follows:

```
c:> rcp -b C:\PRINT\file1 C:\PRINT\file2 host:filetype=RPS
```

Reference

- p.125 "Using a Host Name Instead of an IPv4 Address"

ftp / sftp

Use the "put" or "mput" command according to the number of files to be printed.

When one file is printed

```
ftp> put \(pass name)\(file name) [option]
```

When multiple files are printed

```
ftp> mput \(pass name)\(file name) [\(pass name)\(file name)...] [option]
```

Follow the procedure below to print using the "ftp" command.

1. **Formulate the printer's IP address or the host name of the hosts file printer as an argument and use the "ftp" command.**

   ```
   % ftp "printer's IP address"
   ```

2. **Enter the user name and password, and then press the [Enter] key.**

   For details about the user name and password, consult your network administrator.

   ```
   User:
   Password:
   ```

   When user authentication is set, enter a login user name and password.

3. **When printing a binary file, set the file mode to binary.**

   ```
   ftp> bin
   ```

   When printing a binary file in ASCII mode, print may not come out correctly.

4. **Specify files to be printed.**

   The following shows the examples of printing a PostScript file named "file 1" in the "C:\PRINT" directory and printing file 1 and file 2.

   ```
   ftp> put C:\PRINT\file1 filetype=RPS
   ftp> mput C:\PRINT\file1 C:\PRINT\file2
   ```

5. **Quit ftp.**

   ```
   ftp> bye
   ```

Note

- "=", ",", "_", and ";" cannot be used for filenames. File names will be read as option strings.
- If you are using ftp, you cannot specify an option using the "mput" command.
- If you are using ftp, you cannot specify an option using the "pwd" command.
- If you are using sftp, you cannot specify an option using the "cd" command.

- If you are using sftp, you cannot specify an option using the "pwd" command.
- If personal authentication (Basic, Windows, LDAP, or Integrated Server Authentication) is enabled, only authenticated users (users authenticated by login user name and password) can log on.
- For "mput" command, "*" and "?" can be used as wild cards in file names.
- When printing a binary file in ASCII mode, print may not come out correctly.
- For details about registering the machine's host name to the host file, see "Using a Host Name Instead of an IPv4 Address".
- For details about login user name and password, see Security Reference, which is the administrator's manual.

4. Appendix

When Using Windows Terminal Service/ MetaFrame

The following explains how to use Windows Terminal Service and Maintenance.

Operating Environment

The following operating systems and MetaFrame versions are supported.

Windows 2000 Server / Advanced Server

- MetaFrame 1.8 SP3 / FR1+SP3 / SP4 / FR1+SP4
- MetaFrame XP 1.0 SP1 / SP2 / FR1 / FR1+SP2 / FR2 / SP3 / FR2+SP3 / FR3
- MetaFrame Presentation Server 3.0
- Citrix Presentation Server 4.0

Windows 2003 Server

- MetaFrame XP 1.0 FR3
- MetaFrame Presentation Server 3.0
- Citrix Presentation Server 4.0

Supported Printer Drivers

When Windows Terminal Service is operating

- PostScript 3
- RPCS drivers

Note

- Some RPCS printer driver functions do not work if Windows Terminal Service is installed.

Limitations

The following limitations apply to the Windows Terminal Service environment.

These limitations are built in Windows Terminal Service or MetaFrame.

Windows Terminal Service

In the Windows Terminal Service environment, some of the printer driver's functions is unavailable. In an environment where Windows Terminal Service is installed, some of the printer driver's functions is unavailable, even if any function of Windows Terminal Service is not used. When you install SmartDeviceMonitor for Client in an environment where the Terminal Service is running on a Windows NT Server 4.0 Terminal Server Edition or the Windows 2000 Server family computer, be sure to install it using the install mode. The following are the two methods of installation using the install mode:

1. Use [Add/Remove Programs] in [Control Panel] to install SmartDeviceMonitor for Client.
2. Enter the following command in the MS-DOS command prompt:

To quit the install mode, enter the following command in the MS-DOS command prompt.

MetaFrame's [Auto-creating client printers]

Using [Auto-creating client printers] can select a logical printer created by copying the client's local printer data to the MetaFrame server. We strongly recommend testing this function in your network environment before using it for your work.

- The settings for optional equipment will not be stored in the server after the equipment is disconnected. The settings for optional equipment will be restored to its defaults each time the client computer logs on to the server.
- When printing a large number of bitmap images or using the server in a WAN environment over dial-up lines such as ISDN, printing may not be possible or errors may occur, depending on data transfer rates.
- When using MetaFrame XP 1.0 or higher versions, we recommend making settings in [Client Printer bandwidth] under [Citrix Management Console] according to the environment.
- If a print error occurs on the server and the print job or a printer created in [Auto-creating client printers] cannot be deleted, we recommend the following:
  - MetaFrame 1.8 SP3, MetaFrame XP 1.0 SP1/FR1

    Make settings in [Delete unfinished print jobs] in the registry. For details, see the Readme file provided with MetaFrame.
  - MetaFrame XP 1.0 FR2

    Make settings in [Delete pending print jobs at logout] under [Printer Properties Management] of Citrix Management Console.

MetaFrame's [Printer driver replication]

Using [Printer driver replication] can distribute printer drivers across all servers in a server farm. We strongly recommend testing this function in your network environment before using it for your work.

- If the printer drivers are not properly copied, install them directly onto each server.

Using DHCP

You can use the printer in a DHCP environment. You can also register the printer NetBIOS name on a WINS server when it is running.

- Printers that register the printer NetBIOS name on a WINS server must be configured for the WINS server.
- Supported DHCP servers are Microsoft DHCP Server included with Windows 2000 Server, and Windows Server 2003/2003 R2, and the DHCP server included with NetWare and UNIX.
- If you do not use the WINS server, reserve the printer's IP address in the DHCP server so the same IP address is assigned every time.
- To use the WINS server, change the WINS server setting to "active" using the control panel.
- Using the WINS server, you can configure the host name via the remote network printer port.
- DHCP relay-agent is not supported. If you use DHCP relay-agent on a network via ISDN, it will result in increased line charges. This is because your computer connects to the ISDN line whenever a packet is transferred from the printer.
- If there is more than one DHCP server, use the same setting for all servers. The machine operates using data from the DHCP server that responds first.
- DHCP servers can operate in an IPv6 environment, but they cannot be configured to allocate IPv6 addresses or obtain host names.

Using AutoNet

If the printer IPv4 address is not automatically assigned by the DHCP server, a temporary IP address starting with 169.254 and not used on the network can be automatically selected by the printer.

Note

- The IP address assigned by the DHCP server is given priority over that selected by AutoNet.
- You can confirm the current IPv4 address on the configuration page. For more information about the configuration page, see General Settings Guide.
- When AutoNet is running, the NetBIOS name is not registered on the WINS server.
- The machine cannot communicate with devices that do not have the AutoNet function. However, this machine can communicate with Macintosh computers running Mac OS X 10.2.3. or higher.

Configuring the WINS Server

The printer can be configured to register its NetBIOS name with a WINS server when the power is turned on. This enables the NetBIOS name of the printer to be specified from SmartDeviceMonitor for Admin even in a DHCP environment.

This section explains configuring the WINS server.

Note

- The WINS server is supported with Windows 2000 Servers WINS Manager.
- For details about the WINS server settings, see Windows Help.
- If there is no reply from the WINS server, the NetBIOS name is registered by broadcast.
- The NetBIOS name can be entered using up to 13 alphanumeric characters.

Using Web Image Monitor

1. **Start a Web browser.**
2. **Enter "http://(machine's IP address or host name) /" in the address bar to access the printer whose settings you want to change.**

   Top Page of Web Image Monitor appears.
3. **Click [Login].**

   The dialog box for entering the user name and password appears.
4. **Enter the user name and password, and then click [Login].**

   Contact your administrator for information about the settings.
5. **In the left area, click [Configuration], and then click [Network].**
6. **Click [TCP/IP].**
7. **Check that [Enable] is selected for [WINS] in the [Ethernet + Wireless LAN] column, and then enter the WINS server IPv4 address in [Primary WINS Server] and [Secondary WINS Server].**
8. **Click [Apply].**
9. **Quit Web Image Monitor.**

Using telnet

You can also use telnet to configure WINS.

Using the Dynamic DNS Function

Dynamic DNS is a function which dynamically updates (registers and deletes) records (A record, AAAA record, CNAME, and PTR record) managed by the DNS server. When a DNS server is part of the network environment to which this printer, a DNS client, is connected, records can be dynamically updated using this function.

Updating

Updating procedure varies depending on whether the printer IP address is static or acquired by DHCP.

Important

- **Dynamic update using message authentication (TSIG, SIG(0)) is not supported.**

For a static IPv4 setting

If the IP address or host name is changed, the A and PTR records are updated. If the A record is registered, CNAME is also registered. CNAMEs that can be registered are as follows:

- Ethernet and IEEE 802.11

  RNPXXXXXX (XXXXXX represents the last 3 hexadecimal bytes of the MAC address)

  However, if CNAME (PRNXXXXXX) overlaps with the host name, CNAME will not be registered.

For DHCPv4 settings

As a substitute for the printer, the DHCP server updates the record, and one of the following occurs:

- When the printer acquires the IP address from the DHCP server, the DHCP server updates the A and PTR records.
- When the printer acquires the IP address from the DHCP server, the printer updates the A record, and the DHCP server updates the PTR record.

If the A record is registered, CNAME is also registered. CNAMEs that can be registered are as follows:

- Ethernet and IEEE 802.11

RNPXXXXXX (XXXXXX represents the last 3 hexadecimal bytes of the MAC address)

For IPv6 settings

This machine updates the AAAA record and PTR record.

It also updates CNAME when the AAAA record is updated.

When a stateless address is newly set, it is automatically registered on the DNS server also.

Note

- When the dynamic DNS function is not used, records managed by the DNS server must be updated manually, if the printer's IP address is changed.
- To update the record using the printer, the DNS server has to have one of the following:
  - No security settings made.
  - If security settings are made, an IP-specified client (this printer) permits updating.

DNS servers targeted for operation

For static IP setting

- Microsoft DNS servers with standard Windows 2000 Server, and Windows Server 2003/2003 R2 features
- BIND 8.2.3 or higher

For DHCP setup, when the printer updates the A record

- Microsoft DNS servers with standard Windows 2000 Server, and Windows Server 2003/2003 R2 features
- Microsoft DNS servers with standard Windows 2000 Server, and Windows Server 2003/2003 R2 features

For DHCP setup, when the DHCP server updates records

- Microsoft DNS servers with standard Windows 2000 Server, and Windows Server 2003/2003 R2 features
- BIND 8.2.3 or higher
- DNS servers with standard NetWare 5 (or a higher version) features

For IPv6 setting

- Microsoft DNS servers with standard Windows Server 2003/2003 R2 features
- BIND 9.2.3 or higher

DHCP servers targeted for operation

As a substitute for the printer, DHCP servers capable of updating the A record and PTR record are as follows:

- Microsoft DHCP servers with standard Windows 2000 Server (Service Pack 3 or higher versions), or Windows Server 2003/2003 R2 features
- ISC DHCP 3.0 or higher
- DHCP server with standard NetWare 5 features

Setting the dynamic DNS function

Make settings with telnet using the “dns” command.

Note

- For details, see “Remote Maintenance by telnet”.

Reference

- p.59 "Remote Maintenance by telnet"

Precautions

Please pay attention to the following when using the network interface board. When configuration is necessary, follow the appropriate procedures below.

Connecting a Dial-Up Router to a Network

When using NetWare (file server)

If the NetWare file server and printer are on opposite sides of a router, packets are sent back and forth continuously, possibly incurring communications charges. Because packet transmission is a feature of NetWare, you need to change the configuration of the router. If the network you are using does not allow you to configure the router, configure the machine instead.

Configuring the router

Filter packets so they do not pass over the dial-up router.

Note

- The MAC address of the filtering printer is printed on the printer configuration page. For more information about printing a configuration page, see "Printing the Configuration Page", General Settings Guide.
- For more information about configuring the printer if the router cannot be configured, see the following instructions.

Configuring the printer with NetWare

1. **Following the setup method described earlier in this manual, configure the file server.**
2. **Set the frame type for NetWare environment.**

Note

- For more information about selecting a frame type, see "Interface Settings", General Settings Guide.

Configuring the printer without NetWare

1. **When not printing, the network interface board sends packets over the network. Set NetWare to "inactive".**

Note

- For more information about selecting a protocol, see "Interface Settings", General Settings Guide.

When Using Network Utility

If the machine is connected to a network, observe the following points when setting up the machine or changing settings:

For more details, see the operating instructions and Help for the ScanRouter delivery software and DeskTopBinder.

When a dial-up router is connected in a network environment

The settings for the delivery server to be connected must be made appropriately for the machine with the ScanRouter delivery software, Auto Document Link, or DeskTopBinder. In addition, set up connected devices using the I/O settings of the ScanRouter delivery software administration utility.

If the network environment changes, make the necessary changes for the delivery server using the machine, the administration utility of client computers, Auto Document Link, and DeskTopBinder. Also, set the correct information for the connected devices using the I/O settings of the ScanRouter delivery software administration utility.

Important

- **If the machine is set up to connect to the delivery server via a dial-up router, the router will dial and go online whenever a connection to the delivery server is made. Telephone charges may be incurred.**

When connected to a computer that uses dial-up access

- Do not install the ScanRouter delivery software on a computer which uses dial-up access.
- When using the ScanRouter delivery software, DeskTopBinder, Auto Document Link, or a TWAIN driver on a computer with dial-up access, a dial-up connection may be performed when connecting to the delivery server and other equipment, depending on the setup. If the computer is set up to connect to the Internet automatically, the confirmation dialog box will not appear, and telephone charges may be incurred without your being aware of it. To prevent unnecessary connections, the computer should be set up so the confirmation dialog box always appears before establishing a connection. Do not make unnecessary connections when using the above listed software.

NetWare Printing

Important

- **IPv6 cannot be used on this function.**

Form feed

You should not configure form feed on NetWare. Form feed is controlled by the printer driver on Windows. If NetWare form feed is configured, the printer might not work properly. If you want to change form feed settings, always configure them using Windows.

- Under Windows 2000/XP and Windows Server 2003/2003 R2, clear the [Form feed] check box on the [NetWare Settings] tab in the printer properties dialog box.

Banner page

You should not configure a banner page on NetWare. If you want to change the banner page setting, always configure it using Windows.

- Under Windows 2000/XP and Windows Server 2003/2003 R2, clear the [Enable banner] check box on the [NetWare Settings] tab in the printer properties dialog box.

Printing after resetting the machine

After resetting the remote printer, the connection from the print server will be cut off for about 30-40 seconds before re-connecting. Depending on the NetWare specification, print jobs may be accepted, but they will not be printed during this interval.

When using the machine as a remote printer, wait about two minutes after resetting before attempting to print.

When the IEEE 802.11 interface unit is installed

When using the wireless LAN interface on the network, note the following:

If the network area provides poor radio environment

Where radio wave conditions are bad, the network may not function due to interrupted or failed connections. When checking the wireless LAN signal and the access point, follow the procedure below to improve the situation:

- Position the access point nearer to the machine.
- Clear the space between access point and machine of obstructions.
- Move radio wave generating appliances, such as microwaves, away from the machine and access point.

Note

- For information about how to check radio wave status, see "Checking the Signal", General Settings Guide.
- For more information about access point radio wave conditions, refer to the access point manual.

Configuring WPA/WPA2

WPA/WPA2 uses an authentication server to provide greatly enhanced security compared to WPA-PSK/WPA2-PSK.

WPA/WPA2 can be configured using Web Image Monitor's administrator mode. You can select four types of EAP authentication method: EAP-TLS, LEAP, EAPTTLS and PEAP. Note that each EAP authentication method has different configuration settings and authentication procedures.

Types and requirements of certificates are as follows:

If a certificate is required, configure all settings after installing the certificate.

EAP Types Requiring a "Site Certificate"

EAP-TLS, EAP-TTLS, PEAP (Necessary except LEAP)

EAP Types Requiring a "Site Certificate" and a "Device Certificate"

EAP-TLS, PEAP (Phase 2 is for TLS only)

Important

- **To set WPA/WPA2, you must enable SSL. If you do not use SSL, security problems may occur. For details about setting SSL configuration, see "Protection Using Encryption", Security Reference.**
- **To set WPA/WPA2, you must use Web Image Monitor.**

Installing a Site Certificate

1. **Access the authentication server and obtain the CA certificate.**

   Methods of obtaining certificates differ according to the operating system you are using.
2. **Log on to Web Image Monitor in the administrator mode.**
3. **Click [Configuration].**
4. **[Site Certificate] in the "Security" area.**
5. **Click [Browse] on the "Site Certificate to Import" window, and then select the CA certificate you obtained.**
6. **Click [Import].**
7. **Check that the imported certificate's [Status] shows "Trustworthy".**

   If [Site Certificate Check] shows "Active", and the [Status] of the certificate shows "Untrustworthy", communication might not be possible.
8. **Click [OK].**
9. **Click [Logout].**
10. **Quit the Web Image Monitor.**

Installing Device Certificate

1. **Log on to Web Image Monitor in the administrator mode.**
2. **Click [Configuration].**

3. **Click [Device Certificate] in "Security" area.**
4. **Click [Certificate 2] on the "Device Certificate" window, and then click [Request].**
5. **Enter appropriate "Common Name" and "Country Code" on "Certificate Information" page, and then click [OK].**
6. **"Updating..." appears. Wait for about 2 minutes, and then click [OK].**
7. **Click [Details], shown in the "Device Certificate" window as the memo pad icon for "Requesting".**
8. **Select all, and then copy the entire "Text for Requested Certificate" text that is displayed in the "Certificate Status" window.**
9. **Access the certificate authority server, and then obtain the CA signified certificate using the text copied into "Text for Requested Certificate" windows.**

   Obtaining the certificate differs depending on the environment you want to use.
10. **Click [Certificate 2] on "Device Certificate" window, and then click [Install].**
11. **Using a text editor, open the CA signified certificate downloaded in step 11, and then copy over all the text.**
12. **In the [Install Certificate] window, paste all the text copied into the CA signified certificate.**
13. **Click [OK].**
14. **"Updating..." appears. Wait for about one or two minutes, and then click [OK].**
15. **Check that the "Device Certificate" shows "Installed".**
16. **Click [Certificate 2] on "Certification", and then click [OK].**
17. **Click [Logout].**
18. **Quit Web Image Monitor.**

Note

- you request two certificates simultaneously, the certificate authority might not display either certificate. Click [Cancel Request] to cancel the request.
- You can select [Certificate 1] and [Certificate 2] in the "Device Certificate" window. Note that if you select [Certificate 1] in the "Device Certificate" window, you must select [Certificate 1] in the "IEEE 802.11a" drop down menu in the "Certification" window.
- Click [Cancel Request] to cancel the request for the server certificate.
- If "Not found" appears after clicking [OK] in steps 8 and 16, wait one or two minutes, and then click [Refresh].

Setting Items of WPA/WPA2

1. **Log on to Web Image Monitor in the administrator mode.**
2. **Click [Configuration], and then click [Wireless LAN Settings] in the "Interface" area.**

3. **Select [Infrastructure Mode] in "Communication Mode".**
4. **Enter the alphanumeric characters (a-z, A-Z, or 0-9) in [SSID] according to the access point you want to use.**
5. **Select [WPA] in "Security Method".**
6. **Select [TKIP] or [CCMP (AES)] in "WPA Encryption Method" according to the access point you want to use.**
7. **Select [WPA] or [WPA2] in "WPA Authentication Method".**
8. **In "User Name", enter the user name set in the RADIUS server.**
9. **Enter the domain name in "Domain Name".**
10. **Select "EAP Type". Configurations differ according to the EAP Type.**

    EAP-TLS

    - Make the following settings according to the operating system you are using:
        - Select [On] or [Off] in "Authenticate Server Certificate".
        - Select [On] or [Off] in "Trust Intermediate Certificate Authority".
        - Enter the host name of the RADIUS server on "Server ID".

    LEAP

    - Click [Change] in "Password", and then enter the password set in the RADIUS server.

    EAP-TTLS

    - Click [Change] in "Password", and then enter the password set in the RADIUS server.
    - Click [Change] in "Phase 2 User Name", and then enter the user name set in the RADIUS server.
    - Select [CHAP], [MSCHAP], [MSCHAPv2], [PAP], or [MD5] in "Phase 2 Method".
    - Certain methods might not be available, depending on the RADIUS server you want to use.
    - Make the following settings according to the operating system you are using:
        - Select [On] or [Off] in "Authenticate Server Certificate".
        - Select [On] or [Off] in "Trust Intermediate Certificate Authority".
        - Enter the host name of the RADIUS server in "Server ID".

    PEAP

    - Click [Change] in "Password", and then enter the password set in the RADIUS server.
    - Click [Change] on "Phase 2 User Name", and then enter the user name set in the RADIUS server.
    - Select [MSCHAPv2] or [TLS] in "Phase 2 Method".
    - When you select [TLS], select the client certificate you want to use in "WPA Client Certificate".
    - Make the following settings according to the operating system you are using:

- Select [On] or [Off] in "Authenticate Server Certificate".
- Select [On] or [Off] in "Trust Intermediate Certificate Authority".
- Enter the host name of the RADIUS server on "Server ID".

11. **Click [OK].**
12. **Click [Logout].**
13. **Quit the Web Image Monitor.**

Note

- If there is a problem with settings, you might not be able to communicate with the printer. To identify the problem, print a network summary.
- If you cannot identify the problem, reset the printer interface to normal, and then repeat the procedure from the beginning.

Setting Up the Machine on a Network

This section describes the network settings you can change with User Tools (System Settings). Make settings according to functions you want to use and the interface to be connected.

Important

- **These settings should be made by the systems administrator, or after consulting with the systems administrator.**

Initial Settings Overview

Interface Settings

Menu	Description
Machine IPv4 Address	Specify the machine's IPv4 network address.
IPv4 Gateway Address	Specify the gateway address for the router or host computer used as a gateway.
Machine IPv6 Address	Displays the machine's IPv6 network address.
IPv6 Gateway Address	Displays the machine's IPv6 gateway address.
IPv6 Stateless Address Autoconfiguration	Specify IPv6 Stateless Address Autoconfiguration.
DNS Configuration	Make settings for the DNS server.
DDNS Configuration	Specifies the DDNS settings.
IPSec	Specify the machine's IPSec function Active/ Inactive.
Domain Name	Specifies the domain name.
WINS Configuration	Specifies the WINS server settings.
Effective Protocol	Select the protocol to use in the network.
NCP Delivery Protocol	Select the protocol for NCP delivery:
NW Frame Type	Select the frame type when you use NetWare.
SMB Computer Name	Specify the SMB computer name.
SMB Work Group	Specify the SMB work group.

Menu	Description
Ethernet Speed	Set the access speed for networks.
LAN Type	When you have installed the IEEE 802.11a/g interface unit, select the method of connection.
Ping Command	Check the network connection with ping command using given IP address.
Permit SNMPv3 Communication	Set the encrypted communication of SNMP v3.
Permit SSL / TLS Communication	Set the encrypted communication of SSL/TLS.
Host Name	Specify the host name.
Machine Name	Specify the machine name.
Communication Mode	Specifies the communication mode of the wireless LAN.
SSID Setting	Specifies SSID to distinguish the access point in infrastructure mode or 802.11 ad hoc mode.
Ad-hoc Channel	Specify the channel to use when [802.11 Ad-hoc Mode] has been selected. Set the channel that matches the type of wireless LAN being used.
Security Method	Specifies the encryption of the IEEE 802.11a/g (wireless LAN).
Wireless LAN Signal	When using in infrastructure mode, you can check the machine's radio wave status using the control panel.
Restore Factory Defaults	You can return the wireless LAN settings to their defaults.

File Transfer Settings

Menu	Description
Delivery Option	Enables or disables sending stored or scanned documents to the ScanRouter delivery server.
Capture Server IPv4 Address	Specify the capture server IPv4 address.

Menu	Description
SMTP Server	Specifies the SMTP server name.
SMTP Authentication	Specify SMTP authentication (PLAIN, LOGIN, CRAMMD5, DIGEST-MD5).
POP before SMTP	Specify POP authentication (POP before SMTP).
Reception Protocol	Specify Reception Protocol for receiving Internet Fax.
POP3 / IMAP4 Settings	Specify the POP3/IMAP4 server name for receiving Internet faxes.
Administrator's E-mail Address	Specify the Administrator's E-mail Address.
E-mail Communication Port	Specify the port numbers for receiving Internet faxes. The specified POP3 port number is used for [POP before SMTP].
E-mail Reception Interval	Specify, in minutes, the time interval for receiving Internet faxes via POP3 or IMAP4 server.
Max. Reception E-mail Size	Specify the maximum reception e-mail size for receiving Internet faxes.
E-mail Storage in Server	Specify whether or not to store received Internet fax e-mails on the POP3 or IMAP4 server.
Default User Name / Password (Send)	Specify the user name and password required when sending scan files directly to a shared folder on a computer running Windows, to an FTP server, or to a NetWare server.
Program / Change / Delete E-mail Message	You can program, change, or delete the e-mail message used when sending an Internet fax or scan file as an attachment.
Auto Specify Sender Name	Set whether or not to specify the name of the sender when sending e-mail.

Menu	Description
Scanner Resend Interval Time	Specifies the interval the machine waits before resending a scan file, if it cannot be sent to the delivery server or mail server.
Number of Scanner Resends	Sets a maximum number of times a scan file is resent to the delivery server or mail server.

Initial Settings

Printer

Interface	Settings	
Ethernet	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		Machine IPv6 Address
		IPv6 Gateway Address
		IPv6 Stateless Address Autoconfiguration
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		NCP Delivery Protocol
		NW Frame Type
		SMB Computer Name
		SMB Work Group
		Ethernet Speed
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
		Machine Name

Interface	Settings	
Wireless LAN	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		Machine IPv6 Address
		IPv6 Gateway Address
		IPv6 Stateless Address Autoconfiguration
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		NCP Delivery Protocol
		NW Frame Type
		SMB Computer Name
		SMB Work Group
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
		Machine Name
	Interface Settings/ Wireless LAN	Communication Mode
		SSID Setting
		Channel
		Security Method

E-mail

Interface	Settings	
Ethernet	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		Ethernet Speed
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
	File Transfer	SMTP Server
		SMTP Authentication
		POP before SMTP
		Reception Protocol
		POP3 / IMAP4 Settings
		Administrator's E-mail Address
		E-mail Communication Port
		Program / Change / Delete E-mail Message
		Scanner Resend Interval Time
		Number of Scanner Resends

Interface	Settings	
Wireless LAN	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
	Interface Settings/ Wireless LAN	Communication Mode
		SSID Setting
		Channel
		Security Method
	File Transfer	SMTP Server
		SMTP Authentication
		POP before SMTP
		Reception Protocol
		POP3 / IMAP4 Settings
		Administrator's E-mail Address
		E-mail Communication Port
		Program / Change / Delete E-mail Message
		Scanner Resend Interval Time
		Number of Scanner Resends

Scan to Folder

Interface	Settings	
Ethernet	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		Ethernet Speed
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
	File Transfer	Scanner Resend Interval Time
		Number of Scanner Resends

Interface	Settings	
Wireless LAN	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
	Interface Settings/ Wireless LAN	Communication Mode
		SSID Setting
		Channel
		Security Method
	File Transfer	Scanner Resend Interval Time
		Number of Scanner Resends

Network Delivery Scanner

Interface	Settings	
Ethernet	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		Ethernet Speed
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
	File Transfer	Delivery Option
		Scanner Resend Interval Time
		Number of Scanner Resends

Interface	Settings	
Wireless LAN	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
	Interface Settings/ Wireless LAN	Communication Mode
		SSID Setting
		Channel
		Security Method
	File Transfer	Delivery Option
		Scanner Resend Interval Time
		Number of Scanner Resends

Network TWAIN Scanner

Interface	Settings	
Ethernet	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		Ethernet Speed
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name

Interface	Settings	
Wireless LAN	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
	Interface Settings/ Wireless LAN	Communication Mode
		SSID Setting
		Channel
		Security Method

Document Server

Interface	Settings	
Ethernet	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		Machine IPv6 Address
		IPv6 Gateway Address
		IPv6 Stateless Address Autoconfiguration
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		Ethernet Speed
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name

Interface	Settings	
Wireless LAN	Interface Settings/Network	Machine IPv4 Address
		IPv4 Gateway Address
		Machine IPv6 Address
		IPv6 Gateway Address
		IPv6 Stateless Autocofiguration
		DNS Configuration
		DDNS Configuration
		Domain Name
		WINS Configuration
		Effective Protocol
		LAN Type
		Permit SNMPv3 Communication
		Permit SSL/TLS Communication
		Host Name
	Interface Settings/ Wireless LAN	Communication Mode
		SSID Setting
		Channel
		Security Method
		Transmission Speed

Note

- For the Effective Protocol setting, check that the protocol you want to use is set to [Active].
- [Wireless LAN] and [LAN Type] are displayed when the wireless LAN interface board is installed.
- When both Ethernet and wireless LAN are connected, the selected interface takes precedence.

- SMTP Server and Fax E-mail Account must be specified in order to send Internet Fax.
- When [POP before SMTP] is set to [On], you must also make settings for [Reception Protocol] and [POP3 / IMAP4 Settings].
- When [SMTP Authentication] is set to [On], you must also make settings for [Administrator's E-mail Address].
- When setting [POP before SMTP] to [On], check POP3 port number in [E-mail Communication Port].
- If [Delivery Option] is set to [On], check that IPv4 Address is specified.

Specifications

Interface	1000BASE-T, 100BASE-TX, 10BASE-T, IEEE 802.11a/b/g	
Frame type	EthernetII, IEEE 802.2, IEEE 802.3, SNAP	
Printer	IPv4/IPv6	
		LPR
		RSH
		RCP
		DIPRINT
		FTP
		IPP
		IPP-SSL
	IPX/SPX (NetWare)	
	AppleTalk	
	SMB	
	WS-Printer	
Network Scanner	IPv4/IPv6	
		RSH
		FTP
		FTP-C
		SMTP
		SMTP-C
		POP3
	SMB	
	NCP	

Document Server	IPv4/IPv6	
		FTP
		FTP-C
		HTTP
		HTTPS
Management Function	IPv4/IPv6	
		RSH
		RCP
		FTP
		FTP-C
		SNMP
		SNMP-C
		HTTP
		HTTPS
		TELNET (mshell)
		NBT
		DHCP
		DNS
		DNS-C
		LDAP
SNMP v1/v2	MIB-II, PrinterMIB, HostResourceMIB, IPv6-TCP-MIB, IPv6-UDP-MIB, IPv6-MIB, IPv6-ICMP-MIB, RicohPrivateMIB	

SNMP v3	MIB-II, PrinterMIB, HostResourceMIB, RicohPrivateMIB, SNMP-FRAMEWORK-MIB, SNMP-TARGET-MIB, SNMP-NOTIFICATION-MIB, SNMP-USER-BASED-SM-MIB, SNMP-VIEW-BASED-ACM-MIB, IPv6-TCP-MIB, IPv6-UDP-MIB, IPv6-MIB, IPv6-ICMP-MIB

To use IPP and SMB, use the SmartDeviceMonitor for Client port.

To use IPP under Windows XP, Windows Server 2003, use the Standard IPP port. To use IPP under Windows 98, Windows 2000, Windows NT, use SmartDeviceMonitor for Client.

AppleTalk can be used when the PostScript 3 module is installed.

Under Window Vista, WS-Printer uses the WSD Port.

Functions

The following functions are available with the machine:

- Copy
- Printer
- Scanner
- Document Server

Note

- The machine must be equipped with the Printer/Scanner Unit in order to use the printer or scanner function.

INDEX

M

N

O

P

R

MEMO

Software Version Conventions Used in This Manual

* NetWare 3.x means NetWare 3.12 and 3.2.
* NetWare 4.x means NetWare 4.1, 4.11, 4.2 and IntranetWare.

Trademarks

Microsoft®, Windows®, Windows Server®, Windows Vista®, and Internet Explorer® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Adobe, Acrobat, PostScript are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Apple, AppleTalk, Bonjour, Macintosh, and Mac OS are registered trademarks of Apple Inc, registered in the United States and other countries.

UNIX is a registered trademark of The Open Group.

Netware,IPX,IPX/SPX are either registered trademarks or trademarks of Novell, Inc.

Other product names used herein are for identification purposes only and might be trademarks of their respective companies. We disclaim any and all rights to those marks.

The proper names of Internet Explorer 5.5 and 6 are as follows:

* Microsoft® Internet Explorer® 5.5
* Microsoft® Internet Explorer® 6

The proper names of the Windows operating systems are as follows:

* The product names of Windows 2000 are as follows:
  Microsoft® Windows® 2000 Professional
  Microsoft® Windows® 2000 Server
  Microsoft® Windows® 2000 Advanced Server
* The product names of Windows XP are as follows:
  Microsoft® Windows® XP Professional
  Microsoft® Windows® XP Home Edition
  Microsoft® Windows® XP Media Center Edition
  Microsoft® Windows® XP Tablet PC Edition
* The product names of Windows Vista are as follows:
  Microsoft® Windows Vista® Ultimate
  Microsoft® Windows Vista® Business
  Microsoft® Windows Vista® Home Premium
  Microsoft® Windows Vista® Home Basic
  Microsoft® Windows Vista® Enterprise
* The product names of Windows Server 2003 are as follows:
  Microsoft® Windows Server® 2003 Standard Edition
  Microsoft® Windows Server® 2003 Enterprise Edition
  Microsoft® Windows Server® 2003 Web Edition
  Microsoft® Windows Server® 2003 Datacenter Edition
* The product names of Windows Server 2003 R2 are as follows:
  Microsoft® Windows Server® 2003 R2 Standard Edition
  Microsoft® Windows Server® 2003 R2 Enterprise Edition
  Microsoft® Windows Server® 2003 R2 Datacenter Edition

Network Guide