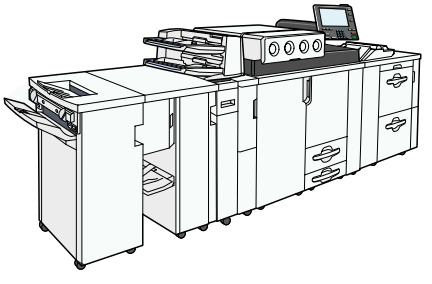
Pro C900

Operating Instructions

Network Guide



Read this manual carefully before you use this machine and keep it handy for future reference. For safe and correct use, be sure to read the Safety Information in "About This Machine" before using the machine.

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.

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.

Note:

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, certain units may be optional. For details, please contact your local dealer.

Caution:

Use of controls or adjustments or performance of procedures other than those specified in this manual might result in hazardous radiation exposure.

Note:

Two kinds of size notation are employed in this manual. With this machine refer to the inch version.

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.**

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, staples, and other consumables.

Network Guide

Explains how to configure and operate the machine in a network environment.

General Settings Guide

Explains User Tools settings, and Address Book procedures such as registering 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.

Information

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

Note

- In addition to the above, manuals are also provided for the Printer function.

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2. 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. Monitoring and Configuring the Machine

This chapter describes how to monitoring and configuring the machine.

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
- 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 2003/2003 R2 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".**

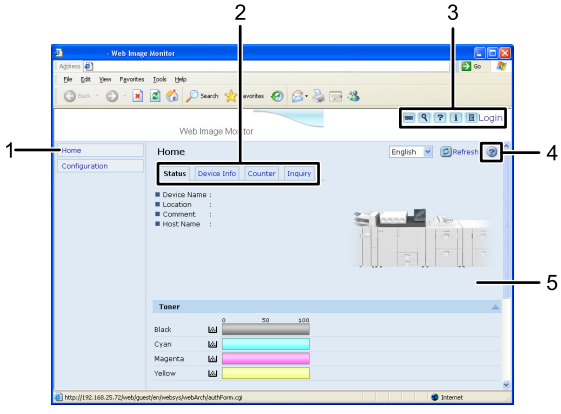
1. **Start your Web browser.**
2. **Enter "http://(machine's IP address or host name)/" in your Web browser's URL bar.**

   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:



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 2003/2003 R2 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].

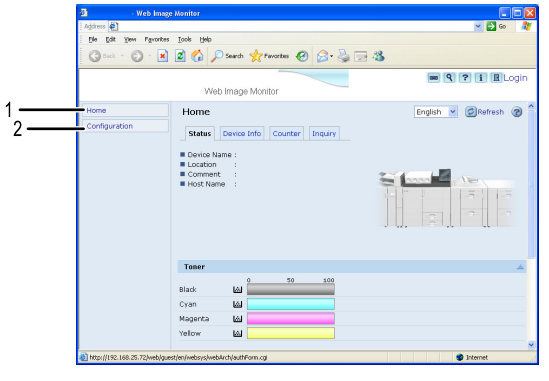
About Menu and Mode

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

Displayed Items may differ depending on the machine type.

Guest Mode

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



BJP002S

1. **Home**

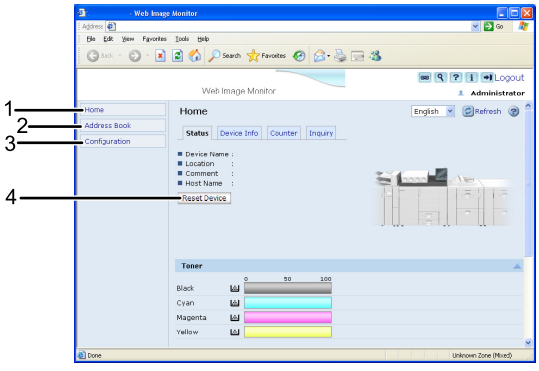
   The [Status], [Device Info], [Counter], and [Inquiry] tab are displayed. Details of the tab menu are displayed on the work area.

2. **Configuration**

   Display current machine and network settings.

Administrator Mode

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



BJP004S

1. **Home**

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

2. **Address Book**

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

3. **Configuration**

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

4. **Reset Device**

   To restart the machine, click the [Reset Device] button on the 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
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

Counter

Menu	Guest mode	Administrator mode
Printer	Read	Read
Other Function(s)	Read	Read

Inquiry

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

Address Book

Menu	Guest mode	Administrator mode
Address List	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
E-mail	Read	Read/Modify
Auto E-mail Notification	None	Read/Modify
On-demand E-mail Notification	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

Interface

Menu	Guest mode	Administrator mode
Interface Settings	Read	Read

Network

Menu	Guest mode	Administrator mode
IPv4	Read	Read/Modify
IPv6	Read	Read/Modify
SMB	Read	Read/Modify
SNMP	None	Read/Modify

Menu	Guest mode	Administrator mode
SNMPv3	None	Read/Modify
SSDP	None	Read/Modify
System Log	Read	Read

Security

Menu	Guest mode	Administrator mode
Network Security	None	Read/Modify
Access Control	None	Read/Modify
SSL/TLS	None	Read/Modify
ssh	None	Read/Modify
Site Certificate	None	Read/Modify
Device Certificate	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	None	Read

Menu	Guest mode	Administrator mode
Install	None	Read/Modify
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 ( ).

Machine 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 machine 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:

- Call Service
- Out of Toner
- Paper Misfeed
- Cover Open
- Out of Paper
- Almost Out of Paper
- Paper Tray Error
- Output Tray Full
- Unit Connection Error
- Replacement Required: PCU
- Waste Toner Bottle is Full
- Waste Toner Bottle is Almost Full
- Add Staples
- Supply Required: Fusing Oil
- Supply Required Soon: Fusing Oil
- Replacement Required: Fusing Unit
- Replacement Required: Transfer Unit
- Replacement Required Soon: Fusing Unit
- Replacement Required Soon: PCU
- Hole Punch Receptacle is Full
- File Storage Memory Full Soon
- Waste Staple Receptacle is Full

- Replacement Required Soon: Transfer Unit
- Replacement Required: Charger
- Replacement Required Soon: Charger
- Replacement Required: Cleaning Unit for Photoconductor Unit
- Replacement Required Soon: Cleaning Unit for Photoconductor Unit
- Replacement Required: Cleaning Unit for Intermediate Transfer Belt
- Replacement Required Soon: Cleaning Unit for Intermediate Transfer Belt
- No Developer
- Almost Out of Developer

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.
    - Items in the E-mail Notification Account column: Specify these items if you want to use e-mail notification.
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.7 "Using Web Image Monitor"

Setting the Account for E-mail Notification

Before you use Auto E-mail Notification or On-demand E-mail notification, setup an e-mail account to be used for the function. Perform the following configuration task 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 in E-mail Notification Account:**
    - 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.**

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] 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.

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.7 "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.
   - 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.7 "Using 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:

Format of on-demand e-mail messages

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

- 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 configuration information will be sent in an English text format.
devicestatus?request=sysconfig	The device's system configuration information 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

Parameter	Meaning	Default
format	Mail format	Mail will be sent in the format preset for each mail address.
lang	Language for mail body	Mail will be sent in the language preset 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 selected for subject field, but output is text only.

Parameters that specify the language for mail bodies

Language	Parameter
English	en

Language in which Web Image Monitor items are displayed	Parameter
French	fr

Language in which Web Image Monitor items are displayed	Parameter
German	de
Italian	it
Spanish	es
Dutch	nl
Danish	da
Finnish	fi
Norwegian	no
Portuguese	pt
Swedish	sv
Czech	cs
Hungarian	hu
Polish	pl
Russian	ru
Turkish	tr
Catalan	ca

Note

- For the language used in the body of the mail, you can select either English or the language in which the Web Image Monitor items are displayed. For example: if the Web Image Monitor items are displayed in German, you can select either German or English.

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.

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 configuration 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".
- 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 access Web Image Monitor from a restricted IP address.

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.

Interface	Interface configured
ether	Ethernet interface

Note

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

devicename

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

View settings

```
msh> devicename
```

Machine name configuration

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

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

Machine name initialization

```
msh> devicename clear name
```

- Reset the machine 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}.

Interface name	Interface configured
ether	Ethernet 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 DHCP 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.57 "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 {dhcp|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.

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 3 ID.
- You cannot use "255.255.255.255" as the DNS server address.

IPv6 DNS server configuration

The following command enables or disables the IPv6 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".

Interface name	Interface configured
ether	Ethernet 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 machine 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.

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.

Interface	Interface set
ether	Ethernet 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 display and change the host 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).
- If you did not enter an interface name, it is automatically set to the Ethernet interface.

Interface name	Interface configured
ether	Ethernet interface

Initializing the host 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 machine.

View settings

```
msh> ifconfig
```

IPv4 configuration

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

- If you did not enter an interface name, it is automatically set to the Ethernet interface.

Interface name	Interface configured
ether	Ethernet 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 "interface_name" inet6 "address" "prefixlen"
```

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
```

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.
- TCP/IP configuration is the same for both Ethernet interface. If interfaces are changed, the new interface inherits the configuration.
- Use "0x" as the initial two letters of a hexadecimal address.

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 machine 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.

logout

Use the "logout" command to close telnet.

Closing telnet

```
msh> logout
```

A confirmation message appears.

```
{yes|no|return}
```

Enter [yes], [no], or [return] as required, and then press the [Enter] key.

To save the changes and then close telnet, enter [yes].

To close telnet without saving any changes, enter [no].

To continue making changes, enter [return].

passwd

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

Changing the password

```
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. Passwords 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".

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.

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 smb
msh> set protocol
```

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

```
msh> set ftp
msh> set ftp6
msh> set rsh
msh> set rsh6
msh> set web
msh> set snmp
msh> set ssl
msh> set ssl6
msh> set nrs
msh> set rfu
msh> set rfu6
msh> set http
msh> set http6
msh> set nbt
msh> set ssdp
msh> set ssh
msh> set sftp
msh> set sftp6
```

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 ftp, rsh, web, snmp, ssl, http, 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 ftp6, rsh6, ssl6, http6, and sftp6.

```
msh> set smb {up|down}
msh> set ftp {up|down}
msh> set ftp6 {up|down}
msh> set rsh {up|down}
msh> set rsh6 {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 machine, 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 http {up|down}
msh> set http6 {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}
```

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.

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.

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:::

  Access type:read-only

  Effective Protocol:IPv4/IPv6

- Default access settings 2 is as follows:

Community name:admin

IPv4 address:0.0.0.0

IPv6 address:::

Access type:read-write

Effective Protocol:IPv4/IPv6

- 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 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
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} {on|off}
```

- Specify "ipv4" for IPv4, or "ipv6" for IPv6.
- {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} {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} "address"
```

- You can configure a host address according to the protocol used.
- The network interface board accepts requests only from hosts that have IPv4 and IPv6 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.

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} "address"
```

Configuring a sending protocol for SNMP v3 TRAP

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

Deleting NTP server configuration

```
msh> sntp server clear
```

Interval configuration

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

- You can specify the interval at which the machine 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 machine synchronizes with the NTP server only when you turn the machine on. After that, the machine does not synchronize with the NTP server.

Time-zone configuration

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

- You can specify the time difference between the machine 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.

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.

syslog

Use the "syslog" command to display the information stored in the machine'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 "character 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
```

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.

Interface name	Interface configured
ether	Ethernet interface

Address configuration

Use the following command to configure a WINS server IPv4 address:

```
wins "interface_name" {primary|secondary} "IPv4 address"
```

- Use the "primary" command to configure a primary WINS server IPv4 address.
- Use the "secondary" command to configure a secondary WINS server IPv4 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.

Interface name	Interface configured
ether	Ethernet interface

Understanding the Displayed Information

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

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
IPv4	
IPv6	
SMB	
Ethernet interface	
Syslog priority	
NVRAM version	
Device name	
Comment	
Location	
Contact	
Soft switch	
TCP/IP	TCP/IP settings
Mode(IPv4)	
Mode(IPv6)	
ftp	

Item	Description
rsh	
web	
http	
ftpc	
snmp	
autonet	
ssl	
nrs	
rfu	
nbt	
ssdp	
ssh	
sftp	
IPv4	
DHCP	
Address	
Netmask	
Broadcast	
Gateway	
IPv6	
Stateless	
Manual	
Gateway	
DHCPv6-lite	
DUID	

Item	Description
DHCPv6 option lifetime	
EncapType	
Host name	
DNS Domain	
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.
Time Server	Time settings
Time Zone	
Time Server polling time	
SYSLOG server	Websys settings
Home page URL1	
Home page link name1	
Home page URL2	
Home page link name2	
Help page URL	
SMB	SMB settings
Switch	
Mode	
Direct print	
Notification	
Workgroup name	
Computer name	

Item	Description
Comment	
Share name[1]	
Protocol	
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	
Resolver Protocol	
Domain name	
ether	
DDNS	
ether	
WINS	WINS settings
ether	
Primary WINS	
Secondary WINS	
SSDP	SSDP settings
UUID	
Profile	
TTL	
UPnP	UPnP settings
URL	

Item		Description
SNMP		SNMP settings
	SNMPv1v2	
	SNMPv3	
	protocol	
	v1Trap	
	v2Trap	
	v3Trap	
	SNMPv1v2 Remote Setting	
	SNMPv3 Privacy	
ssh		ssh settings
	Compression	
	Port	
	TimeOut	
	LoginTimeOut	
Certificate		
	Verification	
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 addr: <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 addr: <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.
connected DHCPv6 server <IPv6 address>	The IP address was successfully received from the DHCPv6 server.

Message	Problem and solutions
connection from <IP address>	A user logged in from the host <IP address>.
Current Interface Speed: xxxMbps	Speed of the network (10 Mbps, or 100 Mbps).
DHCPv6 server not found.	The DHCPv6 server was not found. Make sure that the DHCPv6 is on the network.
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].
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.
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.
shutdown signal received. network service rebooting...	The smbd service has started.
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.

Message	Problem and solutions
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.
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.

Message	Problem and solutions
Snmp over IPv4 is ready	Communication over IPv4 with snmp is available.
Snmp over IPv6 is ready.	Communication over IPv6 with snmp is available.
Snmpd Start.	The snmpd service has started.
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 machine.
Updated (option name)(value) via DHCPv6 Server	The parameter obtained from the DHCP server has been updated.
WINS name registration: No response to server (WINS server address)	There was no response from the WINS server. Check that the correct WINS server address is entered. Also, check that the WINS server is functioning properly.
WINS wrong scope ID=<scope ID>	The scope ID is invalid. Use a valid scope ID.

2. Appendix

Using DHCP

You can use the machine in a DHCP environment. You can also register the machine NetBIOS name on a WINS server when it is running.

- Supported DHCP servers are Microsoft DHCP Server included with Windows 2000 Server, and Windows Server 2003/2003 R2, and the DHCP server included with UNIX.
- If you do not use the WINS server, reserve the machine'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.
- 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 machine.
- 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 machine 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 machine.

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 machine can be configured to register its NetBIOS name with a WINS server when the power is turned on.

This section explains configuring the WINS server.

2

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 machine 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] in [Network].**
6. **Click [IPv4].**
7. **Check that Active is selected for [WINS] in the [Ethernet] column, and then enter the WINS server IPv4 address in [Primary WINS Server] and [Secondary WINS Server].**
8. **Click [OK].**
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 machine, a DNS client, is connected, records can be dynamically updated using this function.

Updating

Updating procedure varies depending on whether the machine 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

  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 machine, the DHCP server updates the record, and one of the following occurs:

- When the machine acquires the IP address from the DHCP server, the DHCP server updates the A and PTR records.
- When the machine acquires the IP address from the DHCP server, the machine 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

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 machine's IP address is changed.
- To update the record using the machine, the DNS server has to have one of the following:

- No security settings made.
- If security settings are made, an IP-specified client (this machine) permits updating.

DNS servers targeted for operation

For static IP setting

- Microsoft DNS servers with standard Windows 2000 Server/Windows Server 2003/2003 R2 features
- BIND 8.2.3 or higher

For DHCP setup, when the machine updates the A record

- Microsoft DNS servers with standard Windows 2000 Server/Windows Server 2003/2003 R2 features
- BIND 8.2.3 or higher

For DHCP setup, when the DHCP server updates records

- Microsoft DNS servers with standard Windows 2000 Server/Windows Server 2003/2003 R2 features
- BIND 8.2.3 or higher

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 machine, 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)/ Windows Server 2003/2003 R2 features
- ISC DHCP 3.0 or higher

Setting the dynamic DNS function

Make settings with telnet using the “dns” command.

Note

- For details, see “Remote Maintenance by telnet”.

Reference

- p.25 "Remote Maintenance by telnet"

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.
Domain Name	Specifies the domain name.
WINS Configuration	Specifies the WINS server settings.
Effective Protocol	Select the protocol to use in the network.
SMB Computer Name	Specify the SMB computer name.
SMB Work Group	Specify the SMB work group.
Ethernet Speed	Set the access speed for networks.
Ping Command	Check the network connection with ping command using given IP address.
Permit SNMPv3 Communication	Set the encrypted communication of SNMP v3.

Menu	Description
Permit SSL / TLS Communication	Set the encrypted communication of SSL/TLS.
Host Name	Specify the host name.
Machine Name	Specify the machine name.

File Transfer Settings

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 e-mail.
POP3 / IMAP4 Settings	Specify the POP3/IMAP4 server name for receiving e-mail.
Administrator's E-mail Address	Specify the Administrator's E-mail Address.
E-mail Communication Port	Specify the port numbers for receiving e-mail. The specified POP3 port number is used for POP before SMTP.
E-mail Reception Interval	Specify, in minutes, the time interval for receiving e-mail via POP3 or IMAP4 server.
Max. Reception E-mail Size	Specify the maximum reception e-mail size for receiving e-mail.
E-mail Storage in Server	Specify whether or not to store received e-mails on the POP3 or IMAP4 server.

Initial Settings

E-mail

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
		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
		E-mail Reception Interval
		E-mail Storage in Server

Note

- For the Effective Protocol setting, check that the protocol you want to use is set to [Active].
- 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	100BASE-TX, 10BASE-T	
Frame type	EthernetII, IEEE 802.2, IEEE 802.3, SNAP	
Management Function	TCP/IP (IPv4/IPv6)	
		RSH
		RCP
		FTP
		FTP-C
		SNMP
		SNMP-C
		HTTP
		HTTPS
		TELNET (mshell)
		NBT
		DHCP
		DNS
		DNS-C
		LDAP

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