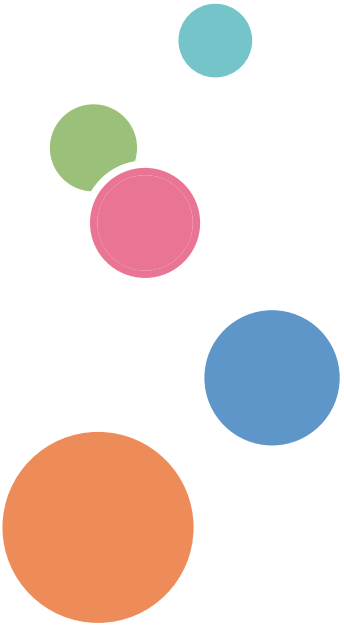
Operating Instructions

DHCP Option 204



For safe and correct use, be sure to read Safety Information before using the machine.

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1. What Is DHCP Option 204?

This chapter explains what you can do with DHCP Option 204 and also explains the flow of necessary settings.

What You Can Do with DHCP Option 204

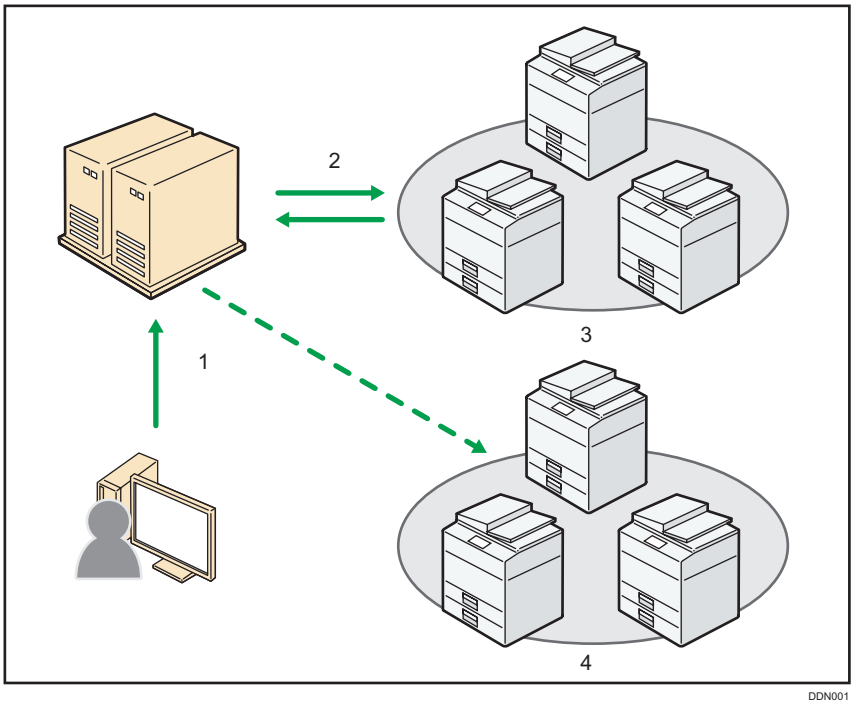
You can simultaneously specify a number of the machine's network settings and printer settings by using DHCP Option 204. This is useful to synchronize the settings for multiple machines.

To change the settings, prepare two files: a network settings file and printer settings file.

In the network settings file, you can specify the machine's transmission speed and other network settings. In the printer settings file, you can specify various settings, such as resolution. For details about the settings files, see page 11 "Configuring a Network Settings File" or page 32 "Configuring a Printer Settings File".

Important

- **DHCP Option 204 synchronizes settings for all machines. Machine-specific settings cannot be specified.**
- **When the DHCP Option 204 setting is enabled, the server settings are applied to the machines regardless of changes you specify using the control panel or Web Image Monitor.**



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1. **The network administrator changes the settings in the server.**

2. **The server sends the settings to the machines using the DHCP and TFTP functions, and then the settings are applied to the machines.**
3. **Machines where the DHCP Option 204 setting is enabled**
4. **Machines where the DHCP Option 204 setting is disabled. DHCP Option 204 is not enabled on this machine, so settings cannot be updated from the server.**

Necessary Server Environment

Using DHCP Option 204 requires both the DHCP server and TFTP server. In a UNIX environment, configure settings for the DHCP server and TFTP server on a machine. The following servers are supported:

DHCP server

ISC DHCP server 3.0 or later

TFTP server

UNIX built-in TFTP server

Note

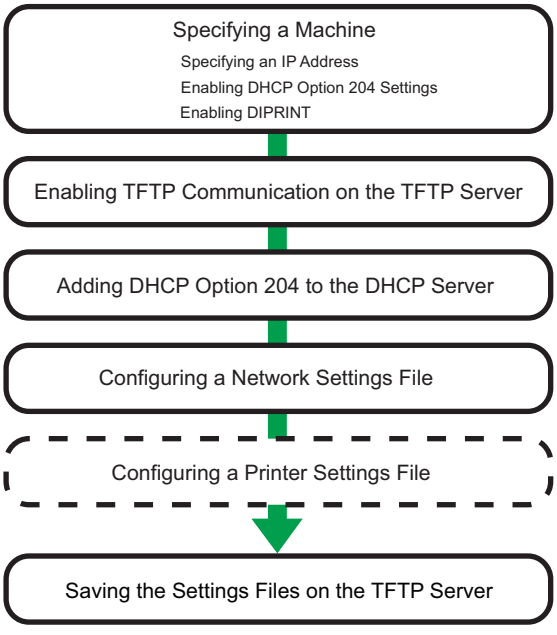
- Do not use a Windows Server.

Flow of Settings

First, prepare necessary settings files. Next, a network administrator saves the settings files on the server, then the settings are sent to each machine using a DHCP server and TFTP server. The settings are enabled on the machines the DHCP Option 204 setting can be applied to.

Important

- **For details about the printer settings for machines, contact your service representative.**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2. Preparing Machines and Servers

This chapter explains the necessary settings to send the settings files from a server to machines.

Specifying a Machine

Multifunctional peripherals and printers are generally referred to as machines in this manual when discussing the use of DHCP Option 204 to change settings.

Using DHCP Option 204 requires the following settings for the machine you want to use.

- IP addresses
- DHCP Option 204
- DIPRINT (to install a printer settings file)

Specifying an IP Address

On the control panel, specify settings for machines so that IP addresses are automatically allocated from the DHCP server.

1. **Display the initial settings screen.**
2. **Press [System Settings].**
3. **Press [Interface Settings].**
4. **Press [Network].**
5. **Press [Machine IPv4 Address].**
6. **Press [Auto-Obtain (DHCP)].**
7. **Press [OK].**
8. **Close the initial settings screen.**

Note

- Procedures may differ between machines. If this is the case, use the manuals that were provided with your machine.

Enabling DHCP Option 204 Settings

Access the machine using telnet and enable the DHCP Option 204 settings.

1. **Start telnet, and then log in to the machine as a network administrator.**
2. **Enable the DHCP Option 204 settings.**

   msh> dhcp 204 on

3. **Quit telnet.**

   msh> logout

4. **A message asking you to confirm saving the changes appears, and then enter "yes".**
5. **Press the [Enter] key.**

Note

- To check the present settings, enter "msh> dhcp".

Enabling DIPRINT

DIPRINT is a protocol for direct printing from a computer. Enable DIPRINT using Web Image Monitor or telnet.

This setting is needed to use a printer settings file. Otherwise, you do not need to specify this setting. For details about the printer settings file, see page 32 "Configuring a Printer Settings File".

When using Web Image Monitor

1. **Start Web Image Monitor.**
2. **Click [Login], and then log in as a network administrator.**
3. **In the menu area, click [Configuration] on the [Device Management] menu.**
4. **Under "Network", click [IPv4].**
5. **Select [Active] for "DIPRINT" in "Details".**
6. **Click [OK].**
7. **Click [Logout], and then quit Web Image Monitor.**

When using telnet

1. **Start telnet, and then log in to the machine as a network administrator.**
2. **Enable DIPRINT.**

   msh> set diprint up

3. **Quit telnet.**

   msh> logout

4. **A message asking you to confirm saving the changes appears, and then enter "yes".**
5. **Press the [Enter] key.**

Note

- For details about how to start Web Image Monitor, see the manuals that were provided with your machine.

Enabling TFTP Communication on the TFTP Server

Enable TFTP communication to send the settings files from the server to machines.

1. **Log in to the server as a network administrator.**
2. **Display the "/etc/inetd.conf" file.**
3. **Delete "#" from "#tftp dgram udp wait nobody /usr/libexec/tftpd tftpd /tftpboot" of the "inetd.conf" file.**
4. **Save the changed settings, and then log out of the server.**

Adding DHCP Option 204 to the DHCP Server

Add DHCP Option 204 and the name of the network settings file in the settings file of the DHCP server.

1. **Log in to the server as a network administrator.**
2. **Display the "/etc/dhcpd.conf" file.**
3. **Add DHCP Option 204 to the "dhcpd.conf" file.**

   When the name of the network settings file is "opt204.cfg", add the following text to the file:

   - option opt204 code 204 = string;
   - option opt204 "opt204.cfg";

   An example of the "dhcpd.conf" file

```
option opt204 code 204 = string;
 subnet XXX.XXX.XXX.XXX netmask XXX.XXX.XXX.XXX {

# ---  default gateway
        option routers                                  XXX.XXX.XXX.XXX;
        option subnet-mask                              XXX.XXX.XXX.XXX;

#       option broadcast-address        XXX.XXX.XXX.XXX;
#       option netbios-name-servers     XXX.XXX.XXX.XXX;
#       option netbios-scope                            "test.scope";
#       option domain-name                              "test.domain";
        option domain-name-servers      XXX.XXX.XXX.XXX;

        option opt204                                   "opt204.cfg";

        range dynamic-bootp XXX.XXX.XXX.XXX XXX.XXX.XXX.XXX;
        default-lease-time 12000;
        max-lease-time 60000;
```

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4. **Save the changed settings, and then log out of the server.**

3. Configuring and Saving Settings Files

This chapter explains how to configure and save settings files.

Configuring a Network Settings File

The network settings file is used to automatically apply the network settings specified in the file to machines. To specify the printer settings at the same time, add the name of the printer settings file below the last line of the network settings file.

An example of the network settings file

In this example, the name of the network settings file is "opt204.cfg" and the name of the printer settings file is "print-setting.pjl".

```
###opt204.cfg
set.netware     = 0
set.bonjour     = 1
snmp.ipv4       = 1
bonjour.ipp     = 30
ssdp.ttl        = 4
PJL-file        = print-setting.pjl
```

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File Format of the Network Settings File

File name

- Alphanumeric characters
- Symbols (/-_.)
- 64 bytes or fewer including a path

File size

51200 bytes or fewer

Rules

- Create as a cfg file.
- Describe in UTF-8 format only.
- Consider "=" as a delimiter.
- Consider CR (0x0d) + LF (0x0a) or LF as a line feed code.

- If you specify multiple settings for a parameter, the first one is enabled.
- The following items do not change the machine's settings even if they are included in the network settings file.
  - Tab character (0x09)
  - Space (0x20)
  - Lines that start from "#"
  - Blank lines

Parameters That Can Be Specified

Important

- **Settings are reflected on all the machines whose DHCP Option 204 settings are enabled. However, settings are not reflected if machines do not support the specified settings.**

Common

This section describes the common network settings.

Settings	Descriptions
devicename.name = <text>	Specify the name of the machine using up to 31 characters.
smb.comment = <text>	Specify a comment using up to 31 characters.
set.ipv6 = {1|0}	Enable or disable IPv6. • 1: Enable • 0: Disable
set.netware = {1|0}	Enable or disable NetWare. • 1: Enable • 0: Disable
set.smb = {1|0}	Enable or disable SMB. • 1: Enable • 0: Disable

Settings	Descriptions
set.diprint = {1|0}	Enable or disable DIPRINT. • 1: Enable • 0: Disable
etherconfig.speed = {AutoNego|10full|10half|100full|100half}	Specify an Ethernet speed from the following: • AutoNego: Automated negotiation • 10full: 10 Mbps full duplex • 10half: 10 Mbps half duplex • 100full: 100 Mbps full duplex • 100half: 100 Mbps half duplex
spoolsw.spool = {1|0}	Enable or disable the Job Spool settings. • 1: Enable • 0: Disable
spoolsw.clearjob = {1|0}	Specify whether or not to reset spooled jobs when you turn off the machine while printing a spooled job and turn it on again. • 1: Reset • 0: Do not reset
spoolsw.lpr = {1|0}	Enable or disable the Job Spool settings when using LPR. • 1: Enable • 0: Disable
spoolsw.ftp = {1|0}	Enable or disable the Job Spool settings when using FTP. • 1: Enable • 0: Disable
spoolsw.ipp = {1|0}	Enable or disable the Job Spool settings when using IPP. • 1: Enable • 0: Disable
spoolsw.smb = {1|0}	Enable or disable the Job Spool settings when using SMB. • 1: Enable • 0: Disable

Settings	Descriptions
spoolsw.diprint = {1|0}	Enable or disable the Job Spool settings when using DIPRINT. • 1: Enable • 0: Disable
spoolsw.sftp = {1|0}	Enable or disable the Job Spool settings when using SFTP. • 1: Enable • 0: Disable
spoolsw.wsprn = {1|0}	Enable or disable the Job Spool settings when using WSD (Printer). • 1: Enable • 0: Disable
authfree.<registry number>.range.from = {0.0.0.0–255.255.255.255}	Specify the starting IPv4 address such as 0.0.0.0, 0.0.0.200, etc. You can specify up to five IPv4 address ranges for the registry number by using numerals from 1 to 5.
authfree.<registry number>.range.to = {0.0.0.0–255.255.255.255}	Specify an ending IPv4 address that is compatible with the starting IPv4 address. You can specify up to five IPv4 address ranges for the registry number by using numerals from 1 to 5.

TCP/IP

Settings	Descriptions
ipp.timeout = {30–65535}	Specify the time interval (seconds) to cancel the print job when using WSD (Printer) or IPP.
slp.ttl = {1–255}	Specify the number of routers that SLP packets can pass through.
set.ftp = {1|0}	Enable or disable FTP. • 1: Enable • 0: Disable

Settings	Descriptions
set.lpr = {1|0}	Enable or disable LPR. • 1: Enable • 0: Disable
set.rsh = {1|0}	Enable or disable RSH. • 1: Enable • 0: Disable
set.telnet = {1|0}	Enable or disable Telnet. • 1: Enable • 0: Disable
set.web = {1|0}	Enable or disable the web protocol. • 1: Enable • 0: Disable
set.snmp = {1|0}	Enable or disable SNMP. • 1: Enable • 0: Disable
set.ipp = {1|0}	Enable or disable IPP. • 1: Enable • 0: Disable
set.http = {1|0}	Enable or disable HTTP. • 1: Enable • 0: Disable
set.bonjour = {1|0}	Enable or disable the Bonjour protocol. • 1: Enable • 0: Disable
set.ssl = {1|0}	Enable or disable SSL. • 1: Enable • 0: Disable

Settings	Descriptions
set.nrs = {1|0}	Enable or disable NRS. • 1: Enable • 0: Disable
set.rfu = {1|0}	Enable or disable RFU. • 1: Enable • 0: Disable
set.nbt = {1|0}	Enable or disable NBT. • 1: Enable • 0: Disable
set.ssdp = {1|0}	Enable or disable SSDP. • 1: Enable • 0: Disable
set.ssh = {1|0}	Enable or disable SSH. • 1: Enable • 0: Disable
set.sftp = {1|0}	Enable or disable SFTP. • 1: Enable • 0: Disable
set.wsdev = {1|0}	Enable or disable WSD (Device). • 1: Enable • 0: Disable
set.wsprn = {1|0}	Enable or disable WSD (Printer). • 1: Enable • 0: Disable
set.wsscn = {1|0}	Enable or disable WSD (Scanner). • 1: Enable • 0: Disable

Settings	Descriptions
set.ipds = {1|0}	Enable or disable IPDS. • 1: Enable • 0: Disable
set.rhpp = {1|0}	Enable or disable RHPP. • 1: Enable • 0: Disable
set.llmnr = {1|0}	Enable or disable LLMNR. • 1: Enable • 0: Disable
set.llmnrc = {1|0}	Enable or disable LLMNRC. • 1: Enable • 0: Disable
set.lltd = {1|0}	Enable or disable LLTD. • 1: Enable • 0: Disable
wins = {1|0}	Enable or disable the WINS server settings. • 1: Enable • 0: Disable
autonet = {1|0}	Enable or disable the AutoNet settings. • 1: Enable • 0: Disable
sntp.interval = {0, 15–10080}	Specify the time interval (minutes) to synchronize with the specified NTP server when using SNTP.
diprint.bidirect = {1|0}	Enable or disable bidirectional communication settings when using RAW in DIPRINT. • 1: Enable • 0: Disable

Settings	Descriptions
dns.ddns = {1|0}	Enable or disable the dynamic DNS function. • 1: Enable • 0: Disable
dns.overlap = {1|0}	Specify the behavior when DNS records are overlapped. • 1: Overwrite • 0: Add a new record
dns.arecord = {1|0}	Specify whether or not to register an A record of the DHCP server when using the dynamic DNS function. • 1: Register • 0: Do not register
dns.cname = {1|0}	Specify whether or not to register CNAME of the machine when using the dynamic DNS function. • 1: Register • 0: Do not register
dns.interval = {1–255}	Specify the time interval (hours) to update the registered records when using the dynamic DNS function.
diprint.conn = {1|0}	Specify the number of concurrent connections using DIPRINT. • 1: Multiple • 0: Single
ssh.compression = {1|0}	Specify whether or not to compress data when sending it in the SSH/SFTP communication. • 1: Compress • 0: Do not compress
ssh.port = {22, 1024–65535}	Specify the port number in the SSH/SFTP communication.
ssh.timeout = {0–65535}	Specify the time interval (seconds) to cancel the SSH/SFTP communication.
ssh.logintimeout = {0–65535}	Specify the time interval (seconds) to stop logging in with the SSH/SFTP communication.

Settings	Descriptions
access.<registry number>.range.from = {0.0.0.0–255.255.255.255}	Specify the starting IPv4 address such as 0.0.0.0, 0.0.0.200, etc. You can specify up to five IPv4 address ranges for the registry number by using numerals from 1 to 5.
access.<registry number>.range.to = {0.0.0.0–255.255.255.255}	Specify an ending IPv4 address that is compatible with the starting IPv4 address. You can specify up to five IPv4 address ranges for the registry number by using numerals from 1 to 5.
web.<registry number>.url = <text>	Specify a URL to be displayed as a link on Web Image Monitor using up to 127 bytes. You can specify up to two links for the registry number by using numerals 1 and 2. You can only use ASCII (0x21-0x7e) characters. Do not use spaces.
web.<registry number>.name = <text>	Specify the name of a URL to be displayed as a link on Web Image Monitor using up to 31 bytes. You can specify up to two names for the registry number by using numerals 1 and 2.
web.help = <text>	Specify a URL to be displayed as help on Web Image Monitor using up to 127 bytes. You can only use ASCII (0x21-0x7e) characters. Do not use spaces.
lpr.chkhost = {1|0}	To determine that the IP address that sent a print job and the IP address that requests deletion of the job are the same, specify either of the following by using LPR. • 1: Judge • 0: Do not judge
pathmtu = {1|0}	Enable or disable the PathMTU Discovery service function. • 1: Enable • 0: Disable

Settings	Descriptions
lpr.prnerrchk = {1|0}	Enable or disable the function to detect an error that occurs in the printer when LRP is used. • 1: Enable • 0: Disable
ipds.port = {1024–65535}	Specify the port number in the IPDS communication. You cannot specify 2501, 2601, or 9100.
ipds.timeout = {0, 30–65535}	Specify the time interval (seconds) to cancel the IPDS communication.
rhpp.port = {1024–65535}	Specify the port number in the RHPP communication.
rhpp.timeout = {30–65535}	Specify the time interval (seconds) to cancel the RHPP communication.
http.keepalive = {1|0}	Enable or disable the Keep-Alive configuration in HTTP communication. • 1: Enable • 0: Disable
http.keepalive_timeout = {1–255}	Specify the time interval (seconds) to cancel the Keep-Alive configuration in the HTTP communication.
diprint.timeout = {30–65535}	Specify the time interval (seconds) to cancel the DIPRINT communication.

SNMP

Settings	Descriptions
snmp.ipv4 = {1|0}	Enable or disable IPv4. • 1: Enable • 0: Disable
snmp.ipv6 = {1|0}	Enable or disable IPv6. • 1: Enable • 0: Disable

Settings	Descriptions
snmp.ipx = {1|0}	Enable or disable IPX. • 1: Enable • 0: Disable
snmp.<registry number>.name = <text>	Specify a community name using up to 15 characters. You can specify up to 10 community names for the registry number by using numerals from 1 to 10.
snmp.<registry number>.type = {no|read|write|trap}	Specify a community access permission from the following: • no: Cannot access • read: Read only • write: Read and write • trap: Notice errors You can specify up to 10 permissions for the registry number by using numerals from 1 to 10.
snmp.<registry number>.active.ipv4 = {1|0}	Enable or disable the community's IPv4. • 1: Enable • 0: Disable You can specify up to 10 IPv4 protocols for the registry number by using numerals from 1 to 10.
snmp.<registry number>.active.ipv6 = {1|0}	Enable or disable the community's IPv6. • 1: Enable • 0: Disable You can specify up to 10 IPv6 protocols for the registry number by using numerals from 1 to 10.
snmp.<registry number>.active.ipx = {1|0}	Enable or disable the community's IPX. • 1: Enable • 0: Disable You can specify up to 10 IPX protocols for the registry number by using numerals from 1 to 10.

Settings	Descriptions
snmp.<registry number>.ipv4 = {0.0.0.0–255.255.255.255}	Specify IPv4 addresses for the community host. You can specify 10 IPv4 addresses for the registry number by using numerals from 1 to 10.

snmp.<registry number>.ipv6 = <IPv6 address>	Specify IPv6 addresses for the community host.
	You can specify up to 10 IPv6 addresses for the registry number by using numerals from 1 to 10.
	You can register the following IPv6 addresses:
	• [: :]
	• Addresses that begin with "fe80"–"febf" or "fec0"–"feff"
	• Addresses other than the following:
	  • Addresses that begin with "ff"
	  • : : 1
	  • : :<IPv4 address>
	  • : :ffff:<IPv4 address>

snmp.<registry number>.ipx = {00000000000000000000–FFFFFFFFFFFFFFFFFFFF}	Specify IPX addresses for the community host. You can specify up to 10 IPX addresses for the registry number by using numerals from 1 to 10.
snmp.v1v2 = {1|0}	Enable or disable the SNMP v1 or v2 function. • 1: Enable • 0: Disable
snmp.trap.v1 = {1|0}	Enable or disable the SNMP v1 TRAP configuration. • 1: Enable • 0: Disable
snmp.trap.v2 = {1|0}	Enable or disable the SNMP v2 TRAP configuration. • 1: Enable • 0: Disable
snmp.v3 = {1|0}	Enable or disable the SNMP v3 function. • 1: Enable • 0: Disable

Settings	Descriptions
snmp.trap.v3 = {1|0}	Enable or disable the SNMP v3 TRAP configuration. • 1: Enable • 0: Disable
snmp.v3trap.<registry number>.ipv4 = {0.0.0.0–255.255.255.255}	Specify IPv4 delivery addresses for the SNMP v3 TRAP configuration. You can specify up to five IPv4 delivery addresses for the registry number by using numerals from 1 to 5.

snmp.v3trap.<registry number>.ipv6 = <IPv6 address>	Specify IPv6 delivery addresses for the SNMP v3 TRAP configuration.
	You can specify up to five IPv6 delivery addresses for the registry number by using numerals from 1 to 5.
	You can register the following IPv6 addresses:
	• [: :]
	• Addresses that begin with "fe80"–"febf" or "fec0"–"feff"
	• Addresses other than the following:
	  • Addresses that begin with "ff"
	  • : : 1
	  • : :<IPv4 address>
	  • : :ffff:<IPv4 address>

snmp.v3trap.<registry number>.ipx = {00000000000000000000–FFFFFFFFFFFFFFFFFFFF}	Specify IPX delivery addresses for the SNMP v3 TRAP configuration. You can specify up to five IPX delivery addresses for the registry number by using numerals from 1 to 5.
snmp.v3trap.<registry number>.active.ipv4 = {1|0}	Specify whether or not to use IPv4 for the SNMP v3 TRAP configuration. • 1: Enable • 0: Disable You can specify up to five IPv4 protocols for the registry number by using numerals from 1 to 5.

Settings	Descriptions
snmp.v3trap.<registry number>.active.ipv6 = {1|0}	Specify whether or not to use IPv6 for the SNMP v3 TRAP configuration. • 1: Enable • 0: Disable You can specify up to five IPv6 protocols for the registry number by using numerals from 1 to 5.
snmp.v3trap.<registry number>.active.ipx = {1|0}	Specify whether or not to use IPX for the SNMP v3 TRAP configuration. • 1: Enable • 0: Disable You can specify up to five IPX protocols for the registry number by using numerals from 1 to 5.

NetWare

Settings	Descriptions
netware.encap = {Auto|802.2|802.3|Ether2|Snap}	Specify an Ethernet frame type from the following: • Auto: Select automatically • 802.2: Ethernet 802.2 • 802.3: Ethernet 802.3 • Ether2: Ethernet II • Snap: Ethernet SNAP
netware.mode = {1|0}	Specify a mode for NetWare printing. • 1: Print server • 0: Remote printer
netware.login = {1|0}	Specify where to log in. • 1: NDS tree • 0: File server
netware.fname = <text>	Specify the NetWare file server name using up to 47 characters.

Settings	Descriptions
netware.context = <text>	Specify the NDS context name using up to 127 characters.
netware.pname = <text>	Specify the NetWare print server name using up to 47 characters.
netware.rnum = {0–254}	Specify the number of the remote printer.
netware.timeout = {3–255}	Specify the time interval (seconds) to cancel the printing job.
netware.sap_interval = {0–3600}	Specify the time interval (seconds) to send SAP packets.
netware.tree = <text>	Specify the NDS tree name using up to 32 characters. You can only use alphanumeric characters, -, and _.
netware.trans = {IPv4pri|IPXpri|IPv4|IPX}	Specify a protocol to transfer a file from the following: • IPv4pri: IPv4+IPX (IPv4 has priority.) • IPXpri: IPv4+IPX (IPX has priority.) • IPv4: IPv4 • IPX: IPX

Windows network

Settings	Descriptions
smb.comp = <text>	Specify the computer name using up to 15 characters. You cannot use the following symbols: "*+/;:>=<?[\]|, and spaces
smb.group = <text>	Specify the name of the computer workgroup using up to 15 characters. You cannot use the following symbols: "*+/;:>=<?[\]|, and spaces
smb.notif = {1|0}	Specify whether or not to send a message to the client when the print job is complete. • 1: Send • 0: Do not send

Settings	Descriptions
smb.client.port = {1|0}	Specify either of the following as the priority port for SMB client communication. • 1: 445 • 0: 139
smb.client.wsd = {1|0}	Specify whether or not clients use WSD (Device) as a browser. • 1: Use • 0: Do not use
smb.client.write = {1|0}	Specify the mode for clients to write a file. • 1: Synchronize • 0: Do not synchronize

Bonjour

Settings	Descriptions
bonjour.diprint = {0–99}	Specify the DIPRINT priority. The priority increases as the number decreases.
bonjour.lpr = {0–99}	Specify the LPR priority. The priority increases as the number decreases.
bonjour.ipp = {0–99}	Specify the IPP priority. The priority increases as the number decreases.
bonjour.ipttl = {1–255}	Specify the number of routers that IPv4 packets can pass through.
bonjour.location = <text>	Specify the installation location of the machine using up to 31 characters.

UPnP

This section explains universal plug and play settings.

Settings	Descriptions
upnp.url = <text>	Specify a URL to be displayed using up to 127 bytes. You can only use ASCII (0x21-0x7e) characters. Do not use spaces.

SSDP

Settings	Descriptions
ssdp.ttl = {1–255}	Specify the number of routers that SSDP packets can pass through.
ssdp.profile = {1801–86400}	Specify the time interval (seconds) when profile information is valid.

IPv6

Settings	Descriptions
ipv6.stateless = {1|0}	Enable or disable IPv6 stateless addresses. • 1: Enable • 0: Disable
set.ftp6 = {1|0}	Enable or disable FTP. • 1: Enable • 0: Disable
set.lpr6 = {1|0}	Enable or disable LPR. • 1: Enable • 0: Disable
set.rsh6 = {1|0}	Enable or disable RSH. • 1: Enable • 0: Disable
set.telnet6 = {1|0}	Enable or disable Telnet. • 1: Enable • 0: Disable

Settings	Descriptions
set.diprint6 = {1|0}	Enable or disable DIPRINT. • 1: Enable • 0: Disable
set.ipp6 = {1|0}	Enable or disable IPP. • 1: Enable • 0: Disable
set.http6 = {1|0}	Enable or disable HTTP. • 1: Enable • 0: Disable
set.bonjour6 = {1|0}	Enable or disable the Bonjour protocol. • 1: Enable • 0: Disable
set.ssl6 = {1|0}	Enable or disable SSL. • 1: Enable • 0: Disable
set.rfu6 = {1|0}	Enable or disable RFU. • 1: Enable • 0: Disable
set.sftp6 = {1|0}	Enable or disable SFTP. • 1: Enable • 0: Disable
set.wsdev6 = {1|0}	Enable or disable WSD (Device). • 1: Enable • 0: Disable
set.rhpp6 = {1|0}	Enable or disable RHPP. • 1: Enable • 0: Disable

Settings	Descriptions

dns.<registry number>.server6 = <IPv6 address>	Specify IPv6 addresses for the DNS server.
	You can specify up to three IPv6 addresses for the registry number by using numerals 1, 2, and 3.
	You can register the following IPv6 addresses:
	• [: :]
	• Addresses that begin with "fe80"–"febf" or "fec0"–"feff"
	• Addresses other than the following:
	  • Addresses that begin with "ff"
	  • : : 1
	  • : :<IPv4 address>
	  • : :ffff:<IPv4 address>

route.add6.default.gateway = <IPv6 address>	Specify an IPv6 address for the default gateway. You can register the following IPv6 addresses: • [: :] • Addresses that begin with "fe80"–"febf"
dhcpv6.dnsaddr = {static|dhcp}	To allocate an address for the DNS server when using the DHCPv6 server, specify either of the following: • static: Users specify. • dhcp: Get from the DHCPv6 server.
dhcpv6.iaid = {0–4294967295}	Specify the ID for the IPv6 address.
dhcpv6.mode = {Router|DHCPv6|DHCPv6lite}	When the DHCPv6 server obtains a parameter, specify either of the following: • Router: Obey the router. • DHCPv6: Get an IP address. • DHCPv6lite: Do not get an IP address.
dhcpv6.encord.rfc = {1|0}	Specify the encoding method for the DHCPv6 server's domain name. • 1: Conform to RFC • 0: Do not conform to RFC

Settings	Descriptions
dhcpv6.client.fqdn = {1|0}	Enable or disable the function that requests the DHCP server to register a record for a DNS server using the client FQDN option. • 1: Enable • 0: Disable

ifconfig.inet6.address = <IPv6 address>	Specify IPv6 addresses when using an Ethernet or wireless LAN.
	You can register the following IPv6 addresses:
	• [: :]
	• Addresses that begin with "fec0"–"feff"
	• Addresses other than the following:
	  • Addresses that begin with "fe80"–"febf "
	  • Addresses that begin with "ff"
	  • : : 1
	  • : :<IPv4 address>
	  • : :ffff:<IPv4 address>

ifconfig.inet6.prefixlen = {1–128}	Specify the prefix length of the IPv6 address when using an Ethernet or wireless LAN.
dhcpv6 = {1|0}	Enable or disable the DHCPv6 configuration. • 1: Enable • 0: Disable
dns.aaaarecord = {1|0}	Specify whether or not to register an AAAA record when the dynamic DNS function and DHCPv6 are enabled. • 1: Register • 0: Do not register

Device

This section explains machine settings.

Settings	Descriptions
set.pictbridge = {1|0}	Enable or disable the PictBridge function. • 1: Enable • 0: Disable
set.usb = {1|0}	Enable or disable the USB connection. • 1: Enable • 0: Disable
set.bluetooth = {1|0}	Enable or disable the Bluetooth function. • 1: Enable • 0: Disable

IPsec

Settings	Descriptions
set.ipsec = {1|0}	Enable or disable the IPsec. • 1: Enable • 0: Disable
ipsec.exclude.https = {1|0}	Specify whether or not to ignore HTTPS. • 1: Ignore the protocol • 0: Do not ignore the protocol
ipsec.exclude.dns = {1|0}	Specify whether or not to ignore DNS. • 1: Ignore the protocol • 0: Do not ignore the protocol
ipsec.exclude.dhcp = {1|0}	Specify whether or not to ignore DHCP. • 1: Ignore the protocol • 0: Do not ignore the protocol
ipsec.exclude.wins = {1|0}	Specify whether or not to ignore WINS. • 1: Ignore the protocol • 0: Do not ignore the protocol

Configuring a Printer Settings File

The printer settings file is used to apply the printer settings specified in the file to machines automatically. For details about the printer settings for machines, contact your service representative.

An example of the printer settings file

```
%-12345X@PJL
@PJL DMINFO ASCIIHEX = "040006010401030105040103"
@PJL COMMENT Tray 1 mode set to first
@PJL DMINFO ASCIIHEX = "040007010401080301040801 01"
@PJL COMMENT Configure fuser mode Plain to Normal
%-12345X
```

DDN005

File Format of the Printer Settings File

File name

- Alphanumeric characters
- Symbol (/-_.)
- 64 bytes or fewer including a path

File size

4096 bytes or fewer

Rules

- Create as a PJL file.
- Described in PJL format.

Saving the Settings Files on the TFTP Server

Save the network settings file and the printer settings file on the TFTP server.

1. **Log in to the server as a network administrator.**
2. **Save the network settings file and the printer settings file below "/tftproot".**

   When the file name is "opt204.cfg"

   /tftproot/opt204.cfg
3. **Reboot the DHCP server.**
4. **Log out of the server.**

Note

- For details about settings files, see page 11 "Configuring a Network Settings File" or page 32 "Configuring a Printer Settings File".

4. Appendix

This chapter explains system log information and trademarks.

Checking System Log Information

System log information can be used to check the condition of the machines connected via a network. To check system log information, use the relevant UNIX or telnet commands.

System Log Information

Use the following commands to display the system log information:

- UNIX: Use the "syslog" parameter and the "rsh", "rcp", "ftp", and "sftp" commands. "rsh" and "rcp" cannot be used in a Windows environment.
- telnet: Enter the following command:

  msh> syslog

Messages	Causes and solutions
Auto-configuration process internal ERROR.	An internal error occurred while setting updates were performed by the DHCP or TFTP function.
Auto-configuration process is started.	Setting updates are being performed by the DHCP or TFTP function.
Config-file is downloaded from <an IP address or file name>	The network settings file was downloaded.
Failed to change network settings: <parameter>	The setting displayed in <parameter> was not specified. Check the network settings file configuration. For details about the items and values you can specify, see page 11 "File Format of the Network Settings File".
Failed to download config-file: <an IP address or file name>	The network settings file was not downloaded. Check if TFTP is enabled on the DHCP server. Check if the name and size of the file is correct. For details about the file format, see page 11 "File Format of the Network Settings File".

Messages	Causes and solutions
Failed to download PJL-file from TFTP server.	The printer settings file was not downloaded. Check if TFTP is enabled on the DHCP server. Check if the name and size of the file is correct. For details about the file format, see page 32 "File Format of the Printer Settings File".
Failed to transfer PJL-file to printer.	The printer settings file was not sent. Check if DIPRINT is enabled.
Fileformat is unmatched.<cause>	The file format is not correct. The following items are displayed in <cause>. Check the displayed message and the file format. • CharCode: Character codes other than ASCII or UTF-8 were used. Use ASCII or UTF-8 only. • CR: Only CR was used as a line feed code. Use CR + LF or LF.
Network settings are changed.	The network settings were changed.
Network settings are not changed.	No changes to the network settings were required.
PJL-file is downloaded from TFTP server.	The printer settings file was downloaded.
PJL-file is transferred to printer.	The printer settings file was sent.
PJL-filename is not specified.	The name of the printer settings file is not specified in the network settings file. Check if the name of the printer settings file is specified in the network settings file.
rconfig process is canceled.	rconfig is a remote setting process. The download of settings files or network setting in rconfig were canceled. Check if the settings were changed by something other than DHCP Option 204 while rconfig was running.

Trademarks

IPDS is a trademark of Ricoh Co., Ltd.

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