Usage Conventions For “Your Network Configuration Files”

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Table of Contents

About This Manual **v**
- Changes Since Last Release v
- Related Documentation v
- Typographic Conventions v
- Developer Support v

“Your Network Configuration Files” **1**
- What Are “Your Network Configuration Files”? 1
- Structure Of “Your Network Configuration Files” 1
- Contents Of “Your Network Configuration Files” 3

Criteria For Creating Network Configuration Applications (Read Processing) **10**
- Displaying And Selecting Combinations 10
- Using A Combination To Make A Connection 10
- Displaying And Selecting Hardware Settings 11
- Using Hardware Settings To Make A Connection 11
- Displaying And Selecting Network Service Provider Settings 11
- Using The Network Service Provider Settings To Make A Connection 12

Criteria For Creating Network Configuration Applications (Write Processing) **13**
- Adding, Editing And Deleting Combinations 13
- Adding, Editing And Deleting Hardware Settings 13
- Adding, Editing And Deleting Network Service Provider Settings 14
- Saving To A PS2 Memory Card 14
- Saving To The Hard Disk Drive 15

Implementation Details **16**
- Redialing While Connecting 16
- Connection Processing When The Hardware Types Are Inconsistent 16
- Character Codes 17

About This Manual

This is the Runtime Library Release 2.4.3 version of the *Usage Conventions For "Your Network Configuration Files"* manual.

This manual describes the contents of "your network configuration files". These are files provided by SCE that are used to save information related to network connections. This manual also describes criteria for creating programs that use these files.

Changes Since Last Release

- New

Related Documentation

Note: the Developer Support Web site posts current developments regarding documentation and also provides notice of future documentation releases and upgrades.

Typographic Conventions

Certain Typographic Conventions are used throughout this manual to clarify the meaning of the text:

Convention	Meaning
`courier`	Indicates literal program code.
italic	Indicates names of arguments and structure members (in structure/function definitions only).
medium bold	Indicates data types and structure/function names (in structure/function definitions only).
blue	Indicates a hyperlink.

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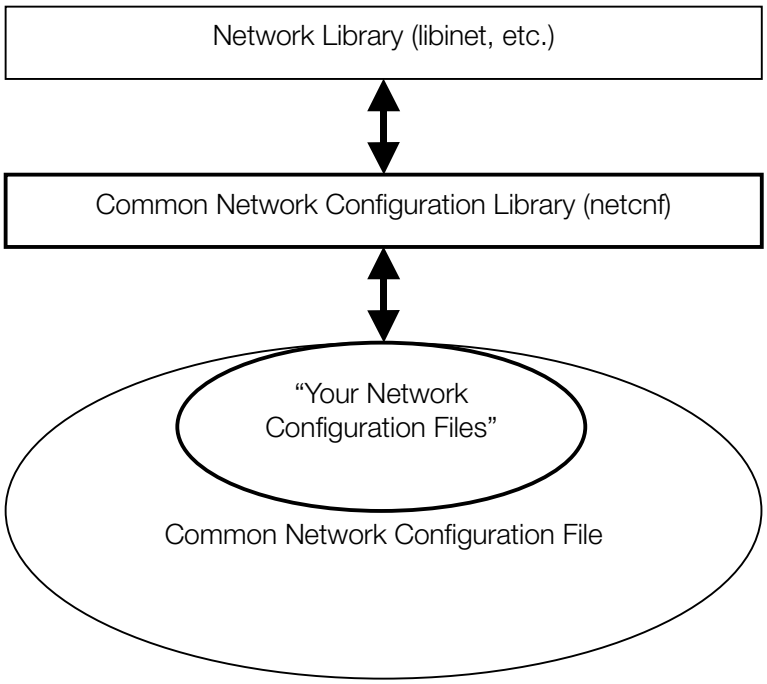
"Your Network Configuration Files"

What Are "Your Network Configuration Files"?

"Your network configuration files" are network configuration files that enable individual information that is entered and set once for each user such as the hardware used for the network connection, access point of the network service provider and user account, to be shared by various applications.

The format of "your network configuration files" is a subset of the common network configuration file as defined by the common network configuration library (netcnf), and covers those settings required by a generic network application. The use of storage locations and other resources is also specified so that settings can be shared more easily among applications.

Figure 1



Operations performed on "your network configuration files" must be via the common network configuration library (netcnf). In addition, since "your network configuration files" are shared resources, an application that uses these files (hereafter referred to as a network configuration application) must follow prescribed standards.

Structure Of "Your Network Configuration Files"

"Your network configuration files" consist of the following files.

- Configuration management file
- Combination file
- Hardware settings file
- Network service provider settings file

In addition to these, device-related files that are required for each storage destination should also be included. These storage devices include the PS2 memory card and hard disk drive. Storage locations and file configurations for each device are shown below.

Table 1: When the storage device is a PS2 memory card

Storage Location
/BWNETCNF

Table 2

File Type	Maximum Size	Maximum No. of Files	Filename
Configuration management file	3K bytes	1	BWNETCNF
Temporary file	3K bytes	1	BWNETCNF.tmp
Combination file	3K bytes	6	net???.cnf
Hardware settings file	3K bytes	4	dev???.dat
Network service provider settings file	3K bytes	4	ifc???.dat
Icon file	34K bytes	1	SYS_NET.ICO
icon.sys	1K bytes	1	icon.sys
File entries	9K bytes ((18+1)/2)		
Directory entries	2K bytes		

- The ??? of net???.cnf, dev???.dat, and ifc???.dat are automatically assigned by the common network configuration library (netcnf).
- The temporary file is temporarily created by the common network configuration library (netcnf) when manipulating “your network configuration files”.
- The file entries and directory entries conform to the memory card library specification.

Table 3: When the storage device is the hard disk drive

Storage Location
/etc/network in __sysconf partition

Table 4

File Type	Maximum Size	Maximum No. of Files	Filename
Configuration management file	17K bytes	1	net.db
Temporary file	17K bytes	1	net.db.tmp
Combination file	3K bytes	10	net???.cnf
Hardware settings file	3K bytes	30	dev???.dat
Network service provider settings file	3K bytes	30	ifc???.dat

- The ??? of net???.cnf, dev???.dat, and ifc???.dat are automatically assigned by the common network configuration library (netcnf).
- The temporary file is temporarily created by the common network configuration library (netcnf) when manipulating “your network configuration files”.

Contents Of "Your Network Configuration Files"

The configuration information that can be saved in each of the "your network configuration files" is fixed and this determines the settings that must be saved. This configuration information and the corresponding settings are shown below.

The entries that appear in the Type column of the tables below have the following meanings.

Table 5

Type	Meaning
Required	A setting that is always entered or selected by the user and must be set
Required/automatic	A setting determined internally which must be set by the network configuration application
Optional	A setting that exists but doesn't get set unless it is entered or selected by the user (it's also not saved if it isn't set)

In addition, the Applicable Keyword column shows the keyword provided by the common network configuration library (netcnf) corresponding to that setting (for a description of keywords, refer to the Common Network Configuration Library (netcnf) Overview).

Contents Of The Configuration Management File

The configuration management file contains information about the combination file, hardware settings file, and network service provider settings file that are located in the directory where the "your network configuration files" are saved together with the setting name of each file. This information is saved as text in the following format.

file-type,1,filename,setting-name\n

(*) \n indicates a new line.

Only ASCII characters (excluding comma ','), hiragana, and katakana can be used in the setting-name. The application must prevent any other characters from being entered. Hiragana and katakana are encoded as UTF-8.

Contents Of The Combination File

The following settings can be saved in the combination file.

Only ASCII characters are allowed.

Table 6: Combination file that contains combinations of hardware settings and network service provider settings files

Type	Setting	Applicable Keyword
Required	Combination of hardware settings and network service provider settings	interface "*ifc???.dat* + *dev???.dat*" "*ifc???.dat*" "*dev???.dat*"

Contents Of The Hardware Settings File

The following settings can be saved in the hardware settings file.

The vendor name and product name are used as the setting name for the file.

Only ASCII characters (excluding comma ',') can be used. The application must prevent any other characters from being entered.

Table 7: Settings when an Ethernet adapter manufactured by SCE is used for the connection hardware

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type nic
Required/automatic	Vendor name	vendor "*vendor*"
Required/automatic	Product name	product "*product*"
Required	Ethernet hardware operating mode Automatic recognition 10Base-T Half-Duplex 10Base-T Full-Duplex 100Base-TX Half-Duplex 100Base-TX Full-Duplex	One of the following phy_config auto phy_config 10 phy_config 10_fd phy_config 100 phy_config 100_fd

Table 8: Settings when a non-SCE Ethernet adapter is used for the connection hardware

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type eth
Required/automatic	Vendor name	vendor "*vendor*"
Required/automatic	Product name	product "*product*"
Required	Ethernet hardware operating mode Automatic recognition 10Base-T Half-Duplex 10Base-T Full-Duplex 100Base-TX Half-Duplex 100Base-TX Full-Duplex	One of the following phy_config auto phy_config 10 phy_config 10_fd phy_config 100 phy_config 100_fd

Table 9: Settings when a modem or TA is used for the connection hardware

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type ppp
Required/automatic	Vendor name	vendor "*vendor*"
Required/automatic	Product name	product "*product*"
Required	Dialing type Tone Pulse	One of the following dialing_type tone dialing_type pulse
Optional	Additional AT command	chat_additional "*chat_script*"
Optional	Outside number	outside_number "*outside_number*" and outside_delay "*outside_delay*"
Required	Line timeout (in minutes)	idle_timeout ?

- Although the line timeout setting is in units of minutes, the keyword that is defined by the common network configuration library (netcnf) uses seconds as the units.
- A value from 0 to 90 minutes can be set for the line timeout. The application must treat any other value as an error. A 0 entry means no timeout. The default value is 10 minutes.

Contents Of The Network Service Provider Settings File

The following settings can be saved in the network service provider settings file.

Only ASCII characters can be used in each entry.

Table 10: Settings when an Ethernet adapter manufactured by SCE is used for the connection hardware and DHCP is not used.

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type nic
Required	Do not use DHCP	-dhcp
Required	IP address	address "*?.?.?.?*"
Required	Netmask	netmask "*?.?.?.?*"
Required	Default router	route add -net 0.0.0.0 gw *?.?.?.?* netmask 0.0.0.0
Optional	Primary DNS	nameserver add *?.?.?.?*
Optional	Secondary DNS	nameserver add *?.?.?.?*

- The IP address, netmask, default router, primary DNS, and secondary DNS are displayed in dot format, which must be specified as follows.

  num8.num8.num8.num8 (*num8* is a decimal number represented as an unsigned 8 bit value)
- Values from 0.0.0.0 to 255.255.255.255 can be set for the IP address, netmask, default router, primary DNS, and secondary DNS. The application must treat any other value as an error.
- For the IP address, netmask, and default router, 0.0.0.0 is also considered to be an error.
- For the primary DNS and secondary DNS, 0.0.0.0 is considered to be either an error, or is treated as a specification for automatic acquisition.

Table 11: Settings when an Ethernet adapter manufactured by SCE is used for the connection hardware and DHCP is used

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type nic
Required	Use DHCP	dhcp
Optional	Primary DNS	nameserver add *?.?.?.?*
Optional	Secondary DNS	nameserver add *?.?.?.?*
Optional	DHCP host name	dhcp_host_name "*host_name*"

- The primary DNS and secondary DNS are displayed in dot format, which must be specified as follows.

  num8.num8.num8.num8 (*num8* is a decimal number represented as an unsigned 8 bit value)
- Values from 0.0.0.0 to 255.255.255.255 can be set for the primary DNS and secondary DNS. The application must treat any other value as an error.
- For the primary DNS and secondary DNS, 0.0.0.0 is considered to be either an error, or is treated as a specification for automatic acquisition.

Table 12: Settings when a non-SCE Ethernet adapter is used for the connection hardware and DHCP is not used

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type eth
Required	Do not use DHCP	-dhcp
Required	IP address	address "*?.?.?.?*"
Required	Netmask	netmask "*?.?.?.?*"
Required	Default router	route add -net 0.0.0.0 gw ?.?.?.? netmask 0.0.0.0
Optional	Primary DNS	nameserver add *?.?.?.?*
Optional	Secondary DNS	nameserver add *?.?.?.?*

- The IP address, netmask, default router, primary DNS, and secondary DNS are displayed in dot format, which must be specified as follows.

  num8.num8.num8.num8 (*num8* is a decimal number represented as an unsigned 8 bit value)
- Values from 0.0.0.0 to 255.255.255.255 can be set for the IP address, netmask, default router, primary DNS, and secondary DNS. The application must treat any other value as an error.
- For the IP address, netmask, and default router, 0.0.0.0 is also considered to be an error.
- For the primary DNS and secondary DNS, 0.0.0.0 is considered to be either an error, or is treated as a specification for automatic acquisition.

Table 13: Settings when a non-SCE Ethernet adapter is used for the connection hardware and DHCP is used.

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type eth
Required	Use DHCP	dhcp
Optional	Primary DNS	nameserver add *?.?.?.?*
Optional	Secondary DNS	nameserver add *?.?.?.?*
Optional	DHCP host name	dhcp_host_name "*host_name*"

- The primary DNS and secondary DNS are displayed in dot format, which must be specified as follows.

  num8.num8.num8.num8 (*num8* is a decimal number represented as an unsigned 8 bit value)
- Values from 0.0.0.0 to 255.255.255.255 can be set for the primary DNS and secondary DNS. The application must treat any other value as an error.
- For the primary DNS and secondary DNS, 0.0.0.0 is considered to be either an error, or is treated as a specification for automatic acquisition.

Table 14: Settings when an Ethernet adapter is used for the connection hardware, PPPoE is used, and the DNS server address is automatically obtained

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type ppp
Required/automatic	Authentication name of connection destination	peer_name "*"
Required/automatic	Authentication method	allow.auth chap/pap
Required/automatic	Do not use DHCP	-dhcp
Required	User ID	auth_name "*user_id*"
Required	Password	auth_key "*password*"
Required	Automatically obtain DNS server address	want.dns1_nego on want.dns2_nego on
Required/automatic	Default router	route add -net 0.0.0.0 netmask 0.0.0.0
Required/automatic	Prohibit PFC negotiation	-want.prc_nego
Required/automatic	Prohibit ACFC negotiation	-want.acc_nego
Required/automatic	Prohibit ACCM negotiation	-want.accm_nego
Required/automatic	MTU and MRU setting (1454 bytes)	mtu 1454
Required	Use PPPoE	pppoe
Required/automatic	Line timeout (minutes)	idle_timeout 0

Table 15: Settings when an Ethernet adapter is used for the connection hardware, PPPoE is used, but the DNS server address is not automatically obtained

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type ppp
Required/automatic	Authentication name of connection destination	peer_name "*"
Required/automatic	Authentication method	allow.auth chap/pap
Required/automatic	Do not use DHCP	-dhcp
Required	User ID	auth_name "*user_id*"
Required	Password	auth_key "*password*"
Required	Primary DNS	nameserver add *?.?.?.?*
Optional	Secondary DNS	nameserver add *?.?.?.?*
Required/automatic	Default router	route add -net 0.0.0.0 netmask 0.0.0.0
Required/automatic	Prohibit PFC negotiation	-want.prc_nego
Required/automatic	Prohibit ACFC negotiation	-want.acc_nego
Required/automatic	Prohibit ACCM negotiation	-want.accm_nego
Required/automatic	MTU and MRU setting (1454 bytes)	mtu 1454
Required	Use PPPoE	pppoe
Required/automatic	Line timeout (minutes)	idle_timeout 0

- The display format for the primary DNS and secondary DNS is dot format, which must be specified as follows.

  num8.num8.num8.num8 (*num8* is a decimal number represented as an unsigned 8 bit value)
- Values from 0.0.0.0 to 255.255.255.255 can be set for the primary DNS and secondary DNS. The application must treat any other value as an error.
- For the primary DNS and secondary DNS, 0.0.0.0 is considered to be either an error, or is treated as a specification for automatic acquisition.

Table 16: Settings when a modem or TA is used for the connection hardware, and the DNS server address is automatically obtained

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type ppp
Required/automatic	Authentication name of connection destination	peer_name "*"
Required/automatic	Authentication method	allow.auth chap/pap
Required/automatic	DHCP is not used	-dhcp
Required	User ID	auth_name "*user_id*"
Required	Password	auth_key "*password*"
Required	Telephone number 1	phone_number0 *??????????*
Optional	Telephone number 2	phone_number1 *??????????*
Optional	Telephone number 3	phone_number2 *??????????*
Required	Automatically acquire DNS server address	want.dns1_nego on want.dns2_nego on
Required/automatic	Default router	route add -net 0.0.0.0 netmask 0.0.0.0

Table 17: Settings when a modem or TA is used for the connection hardware, and the DNS server address is not automatically obtained

Type	Setting	Applicable Keyword
Required/automatic	Device layer type	type ppp
Required/automatic	Authentication name of connection destination	peer_name "*"
Required/automatic	Authentication method	allow.auth chap/pap
Required/automatic	DHCP is not used	-dhcp
Required	User ID	auth_name "*user_id*"
Required	Password	auth_key "*password*"
Required	Telephone number 1	phone_number0 *??????????*
Optional	Telephone number 2	phone_number1 *??????????*
Optional	Telephone number 3	phone_number2 *??????????*
Required	Primary DNS	nameserver add *?.?.?.?*
Optional	Secondary DNS	nameserver add *?.?.?.?*

Type	Setting	Applicable Keyword
Required/automatic	Default router	route add -net 0.0.0.0 netmask 0.0.0.0

- The primary DNS and secondary DNS are displayed in dot format, which must be specified as follows.

  num8.num8.num8.num8 (*num8* is a decimal number represented as an unsigned 8 bit value)
- Values from 0.0.0.0 to 255.255.255.255 can be set for the primary DNS and secondary DNS. The application must treat any other value as an error.
- For the primary DNS and secondary DNS, 0.0.0.0 is considered to be either an error, or is treated as a specification for automatic acquisition.

Criteria For Creating Network Configuration Applications (Read Processing)

The various kinds of processing performed by an application that reads and uses “your network configuration files” must be implemented according to the criteria described below.

Displaying And Selecting Combinations

Please follow the criteria given below when implementing processing for displaying and selecting combinations.

- When the user selects a combination, the hardware settings and network service provider settings that are registered in the selected combination must be displayed. Furthermore, when a combination is selectable in which either one or both of the hardware settings and/or the network service provider settings are not registered (i.e. have been deleted), a message indicating that the applicable settings do not exist must be displayed.
- When a combination that was saved on a PS2 memory card is displayed, the setting name (combination name) must be displayed as "combination 1" to "combination 6."
- When a combination that was saved on a hard disk drive is displayed, the setting name (combination name) must be displayed as "combination 1" to "combination 10."
- When a combination that has been saved in individual data is displayed as the default data, a check must be done to be sure that a combination with the same contents is present in the directory where the original “your network configuration files” are located. At the same time, the presence of the hardware settings and network service provider settings that are registered in the combination as well as their contents must also be confirmed.

Using A Combination To Make A Connection

Please follow the criteria given below when implementing processing that uses a combination to make a connection to the network.

- If the user selects a combination for which either of the following conditions is true, you must ensure that the connection will not be established.
  a. When the equipment that is described in the registered hardware settings is not physically connected
  b. When either or both of the hardware settings and/or network service provider settings that are registered in the combination do not exist
- When a combination that has been saved in individual data is used as the default data for the connection, a check must be done to be sure that a combination with the same contents is present in the directory where the original “your network configuration files” are located. At the same time, the presence of the hardware settings and network service provider settings that are registered in the combination as well as their contents must also be confirmed.
- When telephone numbers 1-3 have been set, there must be a mechanism to redial telephone number 2 when telephone number 1 is busy, and to redial telephone number 3 when telephone number 2 is busy.
- Make sure that the connection can be established even if the network service provider setting is inconsistent for the type of Ethernet adapter as follows.
  a. When a connection is attempted using an Ethernet adapter manufactured by SCE, and the hardware setting is type nic, but the network service provider setting is type eth.

b. When a connection is attempted using a non-SCE Ethernet adapter, and the hardware setting is type eth, but the network service provider setting is type nic.

Displaying And Selecting Hardware Settings

Please follow the criteria given below when implementing processing for displaying and selecting hardware settings.

- When displaying the hardware settings name on the screen, make sure that either the entire name can be displayed or that at least 10 characters of both the vendor name and product name are displayed.
- Predefined names of individual settings must be used for displaying the settings that are saved in the hardware settings file (see "Contents of “your network configuration files” “, above).
- The minimum number of characters shown below must be displayed for the individual settings that are saved in the hardware settings file.

Table 18

Setting	Minimum No. of Characters to Display
Additional AT command	32
Outside number	32

- When hardware settings that have been saved in individual data are displayed as the default data, a check must be done to be sure that a hardware settings file with the same contents is present in the directory where the original “your network configuration files” are located.

Using Hardware Settings To Make A Connection

Please follow the criteria given below when implementing processing that uses hardware settings to make a connection to the network.

- If the user selects hardware settings that describe equipment that is not physically connected, make sure that the connection will not be established.
- When hardware settings that have been saved in individual data are used as the default data for the connection, a check must be done to be sure that a hardware settings file with the same contents is present in the directory where the original “your network configuration files” are located.
- Make sure that the connection can be established even if the network service provider setting is inconsistent for the type of Ethernet adapter as follows.
  a. When an attempt is made to connect with an Ethernet adapter manufactured by SCE, and the hardware setting is type nic, but the network service provider setting is type eth.
  b. When an attempt is made to connect with a non-SCE Ethernet adapter, and the hardware setting is type eth, but the network service provider setting is type nic.

Displaying And Selecting Network Service Provider Settings

Please follow the criteria given below when implementing processing for displaying and selecting network service provider settings.

- When displaying the network service provider settings name on the screen, make sure that either the entire name can be displayed or that at least 20 characters are displayed.
- Predefined names of individual settings must be used for displaying the settings that are saved in the network service provider settings file (see "Contents of “your network configuration files" ”, above).

- The minimum number of characters shown below must be displayed for the individual settings that are saved in the network service provider settings file.

Table 19

Setting	Minimum No. of Characters to Display
IP address	32
Netmask	32
Default router	32
Primary DNS	32
Secondary DNS	32
Telephone number 1	32
Telephone number 2	32
Telephone number 3	32
User ID	32
Password	32
DHCP host name	256

- When network service provider settings that have been saved in individual data are displayed as the default data, a check must be done to be sure that a network service provider settings file with the same contents is present in the directory where the original “your network configuration files” are located.

Using The Network Service Provider Settings To Make A Connection

Please follow the criteria given below when implementing processing that uses network service provider settings to make a connection.

- When network service provider settings that have been saved in individual data are used as the default data for the connection, a check must be done to be sure that a network service provider settings file with the same contents is present in the directory where the original “your network configuration files” are located.
- When telephone numbers 1-3 have been set, there must be a mechanism to redial telephone number 2 when telephone number 1 is busy, and to redial telephone number 3 when telephone number 2 is busy.
- Make sure that the connection can be established even if the network service provider setting is inconsistent for the type of Ethernet adapter as follows.
  a. When an attempt is made to connect with an Ethernet adapter manufactured by SCE, and the hardware setting is type nic, but the network service provider setting is type eth.
  b. When an attempt is made to connect with a non-SCE Ethernet adapter, and the hardware setting is type eth, but the network service provider setting is type nic.

Criteria For Creating Network Configuration Applications (Write Processing)

The various kinds of processing performed by an application that adds, edits and deletes “your network configuration files” must be implemented according to the criteria described below. For read processing, be sure to follow the criteria described in the previous section.

The conventions described in this section do not apply to an application that does not perform the functions discussed in this section, nor do they apply to an application that only uses “your network configuration files” that were created by another application.

Adding, Editing And Deleting Combinations

Follow the criteria given below when implementing processing that adds, edits or deletes combinations.

- The common network configuration library (netcnf) must be used.
- Combinations must be able to be added and deleted (a specification that only allows an existing combination to be edited is not allowed).
- Combinations must be saved in the stipulated directory using valid filenames (see "Structure of “your network configuration files" “, above).
- Make sure that not more than the stipulated number of combination files can be saved (see "Structure of “your network configuration files" “, above).
- All stipulated settings must be supported. Settings other than those which are stipulated must not be saved at the same time (see "Contents of “your network configuration files" “).
- Hardware settings and network service provider settings that exist as files on different devices must not be registered in combinations.
- When saving a combination on a PS2 memory card, the name of the combination must be "Combination1" to "Combination6."
- When saving a combination on the hard disk drive, the name of the combination must be "Combination1" to "Combination10."
- If an unknown setting is encountered during editing, that setting must be saved unchanged.
- The same contents must not be saved within application-specific data for any purpose other than making it the default data.

Adding, Editing And Deleting Hardware Settings

Follow the criteria given below when implementing processing that adds, edits or deletes hardware settings.

- The common network configuration library (netcnf) must be used.
- Hardware settings to be used must be able to be added and deleted.
- Hardware settings must be saved in the stipulated directory using valid filenames (see "Structure of “your network configuration files", above).
- Make sure that not more than the stipulated number of hardware settings files can be saved (see "Structure of “your network configuration files" “, above).
- All stipulated settings must be supported. Settings other than those which are stipulated must not be saved at the same time (see "Contents of “your network configuration files” ").
- The settings name must be saved as follows.

  vendor-name/product-name

- If an unknown setting is encountered during editing, that setting must be saved unchanged.
- A 256-byte internal buffer must be provided for items in which strings are to be set to enable at most 255 characters + "\0" to be read and written correctly. Also, a mechanism must be implemented at the same time for preventing input that would exceed the size of the provided buffer.
- The same contents must not be saved within application-specific data for any purpose other than making it the default data.

Adding, Editing And Deleting Network Service Provider Settings

Follow the criteria given below when implementing processing that adds, edits or deletes network service provider settings.

- The common network configuration library (netcnf) must be used.
- Network service provider settings must be able to be added and deleted (a specification that only allows an existing file to be edited is not allowed).
- Network service provider settings must be saved in the stipulated directory using valid filenames (see "Structure of “your network configuration files” ", above).
- Make sure that not more than the stipulated number of network service provider settings files can be saved (see "Structure of “your network configuration files” ", above).
- All stipulated settings must be supported. Settings other than those which are stipulated must not be saved at the same time (see "Contents of “your network configuration files” "). Furthermore, it is only necessary to be able to display the following settings. It is not necessary to allow them to be added, edited, or deleted.
    a. Telephone number 2
    b. Telephone number 3
- If an unknown setting is encountered during editing, that setting must be saved unchanged.
- A 256-byte internal buffer must be provided for items in which strings are to be set to enable at most 255 characters + "\0" to be read and written correctly. Also, a mechanism must be implemented at the same time for preventing input that would exceed the size of the provided buffer.
- The same contents must not be saved within application-specific data for any purpose other than making it the default data.

Saving To A PS2 Memory Card

Follow the criteria given below when implementing processing that saves “your network configuration files” to a PS2 memory card.

- The common network configuration library (netcnf) must be used.
- “your network configuration files” must be saved in the stipulated directory using valid filenames (see "Structure of “your network configuration files" “, above).
- Make sure that not more than the stipulated number of configuration files can be saved (see "Structure of “your network configuration files" “, above). If an attempt is made to save more than the maximum number, an appropriate message must be output indicating that the maximum number of configuration files has been reached.
- If there is less than 94K bytes of free space, an appropriate message must be output when saving indicating that there is insufficient free space.
- If an sceNETCNF_MAGIC_ERROR is detected, a message should be output indicating that the configuration file was created on another PlayStation 2 and the user should be asked whether or not to delete the configuration file. If the user does not delete the configuration file, the configuration file on that PS2 memory card must be ignored.

- If an unrecoverable error such as an sceNETCNF_SYNTAX_ERROR is detected, a message should be output indicating that the configuration file cannot be corrected and the user should be asked whether or not to delete the configuration file. If the user does not delete the configuration file, the configuration file on that PS2 memory card must be ignored.
- The specified files must be used for the icon file and icon.sys file.
- Other than the above, processing must conform to the TRC related to PS2 memory cards.

Saving To The Hard Disk Drive

Follow the criteria given below when implementing processing that saves “your network configuration files” to the hard disk drive.

- The common network configuration library (netcnf) must be used.
- “your network configuration files” must be saved in the stipulated directory using valid filenames (see "Structure of “your network configuration files" “, above).
- Make sure that not more than the stipulated number of configuration files can be saved (see "Structure of “your network configuration files" “, above). If an attempt is made to save more than the maximum number, an appropriate message must be output indicating that the maximum number of configuration files has been reached.
- If there is less than 244K bytes of free space, an appropriate message must be output when saving indicating that there is insufficient free space.
- If an sceNETCNF_MAGIC_ERROR is detected, a message should be output indicating that the configuration file was created on another PlayStation 2 and the user should be asked whether or not to delete the configuration file. If the user does not delete the configuration file, the configuration file on the hard disk drive must be ignored.
- If an unrecoverable error such as an sceNETCNF_SYNTAX_ERROR is detected, a message should be output indicating that the configuration file cannot be corrected and the user should be asked whether or not to delete the configuration file. If the user does not delete the configuration file, the configuration file on the hard disk drive must be ignored.
- Other than the above, processing must conform to the TRC related to the hard disk drive.

Implementation Details

Redialing While Connecting

When a connection is made by a network configuration application, if telephone numbers 1-3 have been set in a “your network configuration file”, redialing must be attempted to telephone number 2 when telephone number 1 is busy, and redialing must be attempted to telephone number 3 when telephone number 2 is also busy. (Redialing is determined by the redial_string setting, which is defined in the dialing definition file (DIAL_CNF) supplied with the modem driver.) However, just using sceNetCnfLoadEntry() to read the “your network configuration file” is insufficient to set redialing, as the setting described below is also required.

- If while connecting, telephone numbers 1-3 had previously been specified, then the redial_count member of the sceNetCnfInterface structure should be set to the value obtained by subtracting 1 from the total number of specified telephone numbers.

An implementation example is shown below.

```
sceNetCnfEnv_t env;
int i, redial_count;

// Execute sceNetCnfLoadEntry()
sceNetCnfLoadEntry("configuration management file name", type,
"setting name(combination name)", &env);

// Set redial_count
for(i = 0, redial_count = 0; i < sceNetCnf_MAX_PHONE_NUMBERS; i++)
{
     if(NULL == (env.root->pair_head->ifc->phone_numbers[i]))
continue;
     switch(i){
     case 0: redial_count++; break;
     case 1: redial_count++; break;
     case 2: redial_count++; break;
     }
}
env.root->pair_head->ifc->redial_count = redial_count - 1;
```

In addition, the redial_count value that is set by the processing shown above must not be saved as a “your network configuration file”. This should be implemented as processing that is performed only when making a connection.

Connection Processing When The Hardware Types Are Inconsistent

In the following examples, the common network configuration library (netcnf.irx) specification will cause the connection to fail because a valid hardware type is specified in the network service provider settings.

- When making a connection using an Ethernet adapter manufactured by SCE when the network service provider setting is type eth and the hardware setting is type nic.
- When making a connection using a non-SCE Ethernet adapter when the network service provider setting is type nic and the hardware setting is type eth.

To enable the connection to be established by a network configuration application even in the cases described above, the following should be implemented.

- When PPPoE is not used and the type for the network service provider setting is not ppp, overwrite the type for the network service provider setting with the type for the hardware setting.

An implementation example is shown below.

```
sceNetCnfEnv_t env;

// Execute sceNetCnfLoadEntry()
sceNetCnfLoadEntry("configuration management file name", type,
"setting name(combination name)", &env);

// When PPPoE is not used and the network service provider setting
// type is not ppp, combine the types
if(env.root->pair_head->ifc->pppoe != 1 &&
  env.root->pair_head->ifc->type != sceNetCnf_IFC_TYPE_PPP){
      env.root->pair_head->ifc->type = env.root->pair_head->dev-
       >type;
}
```

In addition, the value that is set by the processing shown above must not be saved as a “your network configuration file”. This should be implemented as processing that is performed only when making a connection.

Character Codes

The character set that can be handled in “your network configuration files” is shown below.

Table 20

Hex	Char	Hex	Char	Hex	Char
20	(SPACE)	40	@	60	`
21	!	41	A	61	A
22	"	42	B	62	B
23	#	43	C	63	C
24	$	44	D	64	d
25	%	45	E	65	e
26	&	46	F	66	f
27	'	47	G	67	g
28	(	48	H	68	h
29	)	49	I	69	i
2a	*	4a	J	6a	j
2b	+	4b	K	6b	k
2c	,(cannot be used)	4c	L	6c	l
2d	-	4d	M	6d	m
2e	.	4e	N	6e	n
2f	/	4f	O	6f	o
30	0	50	P	70	p
31	1	51	Q	71	q
32	2	52	R	72	r
33	3	53	S	73	s

Hex	Char	Hex	Char	Hex	Char
34	4	54	T	74	t
35	5	55	U	75	u
36	6	56	V	76	v
37	7	57	W	77	w
38	8	58	X	78	x
39	9	59	Y	79	y
3a	:	5a	Z	7a	z
3b	;	5b	[	7b	{
3c	<	5c	\(half-width)	7c	|
3d	=	5d	]	7d	}
3e	>	5e	^	7e	~
3f	?	5f	_		

The table belows shows the correspondence between JIS, SJIS, Unicode, and UTF-8 for hiragana and katakana characters that can be used in user-specified setting names.

Table 21

Char	JIS	SJIS	Unicode	UTF-8
ぁ	2421	829f	3041	e3 81 81
あ	2422	82a0	3042	e3 81 82
ぃ	2423	82a1	3043	e3 81 83
い	2424	82a2	3044	e3 81 84
ぅ	2425	82a3	3045	e3 81 85
う	2426	82a4	3046	e3 81 86
ぇ	2427	82a5	3047	e3 81 87
え	2428	82a6	3048	e3 81 88
ぉ	2429	82a7	3049	e3 81 89
お	242a	82a8	304a	e3 81 8a
か	242b	82a9	304b	e3 81 8b
が	242c	82aa	304c	e3 81 8c
き	242d	82ab	304d	e3 81 8d
ぎ	242e	82ac	304e	e3 81 8e
く	242f	82ad	304f	e3 81 8f
ぐ	2430	82ae	3050	e3 81 90
け	2431	82af	3051	e3 81 91
げ	2432	82b0	3052	e3 81 92
こ	2433	82b1	3053	e3 81 93
ご	2434	82b2	3054	e3 81 94
さ	2435	82b3	3055	e3 81 95
ざ	2436	82b4	3056	e3 81 96
し	2437	82b5	3057	e3 81 97
じ	2438	82b6	3058	e3 81 98

Char	JIS	SJIS	Unicode	UTF-8
す	2439	82b7	3059	e3 81 99
ず	243a	82b8	305a	e3 81 9a
せ	243b	82b9	305b	e3 81 9b
ぜ	243c	82ba	305c	e3 81 9c
そ	243d	82bb	305d	e3 81 9d
ぞ	243e	82bc	305e	e3 81 9e
た	243f	82bd	305f	e3 81 9f
だ	2440	82be	3060	e3 81 a0
ち	2441	82bf	3061	e3 81 a1
ぢ	2442	82c0	3062	e3 81 a2
っ	2443	82c1	3063	e3 81 a3
つ	2444	82c2	3064	e3 81 a4
づ	2445	82c3	3065	e3 81 a5
て	2446	82c4	3066	e3 81 a6
で	2447	82c5	3067	e3 81 a7
と	2448	82c6	3068	e3 81 a8
ど	2449	82c7	3069	e3 81 a9
な	244a	82c8	306a	e3 81 aa
に	244b	82c9	306b	e3 81 ab
ぬ	244c	82ca	306c	e3 81 ac
ね	244d	82cb	306d	e3 81 ad
の	244e	82cc	306e	e3 81 ae
は	244f	82cd	306f	e3 81 af
ば	2450	82ce	3070	e3 81 b0
ぱ	2451	82cf	3071	e3 81 b1
ひ	2452	82d0	3072	e3 81 b2
び	2453	82d1	3073	e3 81 b3
ぴ	2454	82d2	3074	e3 81 b4
ふ	2455	82d3	3075	e3 81 b5
ぶ	2456	82d4	3076	e3 81 b6
ぷ	2457	82d5	3077	e3 81 b7
へ	2458	82d6	3078	e3 81 b8
べ	2459	82d7	3079	e3 81 b9
ぺ	245a	82d8	307a	e3 81 ba
ほ	245b	82d9	307b	e3 81 bb
ぼ	245c	82da	307c	e3 81 bc
ぽ	245d	82db	307d	e3 81 bd
ま	245e	82dc	307e	e3 81 be
み	245f	82dd	307f	e3 81 bf
む	2460	82de	3080	e3 82 80
め	2461	82df	3081	e3 82 81

Char	JIS	SJIS	Unicode	UTF-8
も	2462	82e0	3082	e3 82 82
ゃ	2463	82e1	3083	e3 82 83
や	2464	82e2	3084	e3 82 84
ゅ	2465	82e3	3085	e3 82 85
ゆ	2466	82e4	3086	e3 82 86
ょ	2467	82e5	3087	e3 82 87
よ	2468	82e6	3088	e3 82 88
ら	2469	82e7	3089	e3 82 89
り	246a	82e8	308a	e3 82 8a
る	246b	82e9	308b	e3 82 8b
れ	246c	82ea	308c	e3 82 8c
ろ	246d	82eb	308d	e3 82 8d
ゎ	246e	82ec	308e	e3 82 8e
わ	246f	82ed	308f	e3 82 8f
ゐ	2470	82ee	3090	e3 82 90
ゑ	2471	82ef	3091	e3 82 91
を	2472	82f0	3092	e3 82 92
ん	2473	82f1	3093	e3 82 93
ァ	2521	8340	30a1	e3 82 a1
ア	2522	8341	30a2	e3 82 a2
ィ	2523	8342	30a3	e3 82 a3
イ	2524	8343	30a4	e3 82 a4
ゥ	2525	8344	30a5	e3 82 a5
ウ	2526	8345	30a6	e3 82 a6
ェ	2527	8346	30a7	e3 82 a7
エ	2528	8347	30a8	e3 82 a8
ォ	2529	8348	30a9	e3 82 a9
オ	252a	8349	30aa	e3 82 aa
カ	252b	834a	30ab	e3 82 ab
ガ	252c	834b	30ac	e3 82 ac
キ	252d	834c	30ad	e3 82 ad
ギ	252e	834d	30ae	e3 82 ae
ク	252f	834e	30af	e3 82 af
グ	2530	834f	30b0	e3 82 b0
ケ	2531	8350	30b1	e3 82 b1
ゲ	2532	8351	30b2	e3 82 b2
コ	2533	8352	30b3	e3 82 b3
ゴ	2534	8353	30b4	e3 82 b4
サ	2535	8354	30b5	e3 82 b5
ザ	2536	8355	30b6	e3 82 b6
シ	2537	8356	30b7	e3 82 b7

Char	JIS	SJIS	Unicode	UTF-8
ジ	2538	8357	30b8	e3 82 b8
ス	2539	8358	30b9	e3 82 b9
ズ	253a	8359	30ba	e3 82 ba
セ	253b	835a	30bb	e3 82 bb
ゼ	253c	835b	30bc	e3 82 bc
ソ	253d	835c	30bd	e3 82 bd
ゾ	253e	835d	30be	e3 82 be
タ	253f	835e	30bf	e3 82 bf
ダ	2540	835f	30c0	e3 83 80
チ	2541	8360	30c1	e3 83 81
ヂ	2542	8361	30c2	e3 83 82
ッ	2543	8362	30c3	e3 83 83
ツ	2544	8363	30c4	e3 83 84
ヅ	2545	8364	30c5	e3 83 85
テ	2546	8365	30c6	e3 83 86
デ	2547	8366	30c7	e3 83 87
ト	2548	8367	30c8	e3 83 88
ド	2549	8368	30c9	e3 83 89
ナ	254a	8369	30ca	e3 83 8a
ニ	254b	836a	30cb	e3 83 8b
ヌ	254c	836b	30cc	e3 83 8c
ネ	254d	836c	30cd	e3 83 8d
ノ	254e	836d	30ce	e3 83 8e
ハ	254f	836e	30cf	e3 83 8f
バ	2550	836f	30d0	e3 83 90
パ	2551	8370	30d1	e3 83 91
ヒ	2552	8371	30d2	e3 83 92
ビ	2553	8372	30d3	e3 83 93
ピ	2554	8373	30d4	e3 83 94
フ	2555	8374	30d5	e3 83 95
ブ	2556	8375	30d6	e3 83 96
プ	2557	8376	30d7	e3 83 97
ヘ	2558	8377	30d8	e3 83 98
ベ	2559	8378	30d9	e3 83 99
ペ	255a	8379	30da	e3 83 9a
ホ	255b	837a	30db	e3 83 9b
ボ	255c	837b	30dc	e3 83 9c
ポ	255d	837c	30dd	e3 83 9d
マ	255e	837d	30de	e3 83 9e
ミ	255f	837e	30df	e3 83 9f
ム	2560	8380	30e0	e3 83 a0

Char	JIS	SJIS	Unicode	UTF-8
メ	2561	8381	30e1	e3 83 a1
モ	2562	8382	30e2	e3 83 a2
ヤ	2563	8383	30e3	e3 83 a3
ヤ	2564	8384	30e4	e3 83 a4
ュ	2565	8385	30e5	e3 83 a5
ユ	2566	8386	30e6	e3 83 a6
ョ	2567	8387	30e7	e3 83 a7
ヨ	2568	8388	30e8	e3 83 a8
ラ	2569	8389	30e9	e3 83 a9
リ	256a	838a	30ea	e3 83 aa
ル	256b	838b	30eb	e3 83 ab
レ	256c	838c	30ec	e3 83 ac
ロ	256d	838d	30ed	e3 83 ad
ヮ	256e	838e	30ee	e3 83 ae
ワ	256f	838f	30ef	e3 83 af
ヰ	2570	8390	30f0	e3 83 b0
ヱ	2571	8391	30f1	e3 83 b1
ヲ	2572	8392	30f2	e3 83 b2
ン	2573	8393	30f3	e3 83 b3
ヴ	2574	8394	30f4	e3 83 b4
ヵ	2575	8395	30f5	e3 83 b5
ヶ	2576	8396	30f6	e3 83 b6