



Hitachi Compute Rack Series Remote Console Application User's Guide (Java application)

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Preface

This document provides information of the Remote Console Application function and how to use the Remote Console Application of the Compute Rack 210H/220H/220SM (CR 210H/CR 220H/CR 220S).

This preface includes the following information:

- ☐ [Intended Audience](#)
- ☐ [Product Version](#)
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- ☐ [Document Organization](#)
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Intended Audience

This document is intended for the personnel who are involved in managing, configuring and operating the Compute Rack.

Product Version

This document revision applies to Compute Rack Series CR 210H/220H/220S.

Release Notes

Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document.

Document Organization

The table below provides an overview of the contents and organization of this document. Click the chapter title in the left column to go to that chapter. The first page of each chapter provides links to the sections in that chapter.

Chapter	Description
Chapter 1, Before you use this product	Describes the overview of the system unit and what you need to know before using the remote console option.
Chapter 2, Overview of the remote console	Describes the overview of the remote console.
Chapter 3, Setting up the remote console	Describes how to set up the IP address of the management interface connector on the system unit and explains the remote console security on the system unit.
Chapter 4, Using the remote console	Describes how to use the remote console.
Chapter 5, Precautions	Describes what you need to be aware of when you use the remote console.
Chapter 6, Q&A	Explains how to handle minor problems. When the following instructions cannot resolve the problem, contact the dealer or talk to the maintenance personnel.

Referenced Documents

Compute Rack 210H/220H/220SM (CR 210H/220H/220SM) documents:





- Hitachi Compute Rack 210H/220H Remote Management User's Guide, MK-90CRH006
- Hitachi Compute Rack 220S Remote Management User's Guide, MK-90CRS004

Document Conventions

This document uses the following typographic conventions:

Convention	Description
Regular text bold	In text: keyboard key, parameter name, property name, hardware labels, hardware button, hardware switch. In a procedure: user interface item
<i>Italic</i>	Variable, emphasis, reference to document title, called-out term
Screen text	Command name and option, drive name, file name, folder name, directory name, code, file content, system and application output, user input
< > (angled brackets)	Variable (used when italic is not enough to identify variable).
[] (square bracket)	Optional values
{ } braces	Required or expected value
vertical bar	Choice between two or more options or arguments
_ (underline)	Default value, for example, [<u>a</u>] b

This document uses the following icons to draw attention to information:

Icon	Meaning	Description
	WARNING	This indicates the presence of a potential risk that might cause death or severe injury.
	CAUTION	This indicates the presence of a potential risk that might cause relatively mild or moderate injury.
NOTICE	NOTICE	This indicates the presence of a potential risk that might cause severe damage to the equipment and/or damage to surrounding properties.
	Note	This indicates notes not directly related to injury or severe damage to equipment.
	Tip	This indicates advice on how to make the best use of the equipment.

Convention for storage capacity values

Physical storage capacity values (for example, disk drive capacity) are calculated based on the following values:

Physical capacity unit	Value
1 kilobyte (KB)	1,000 (10^3) bytes
1 megabyte (MB)	1,000 KB or $1,000^2$ bytes
1 gigabyte (GB)	1,000 MB or $1,000^3$ bytes
1 terabyte (TB)	1,000 GB or $1,000^4$ bytes
1 petabyte (PB)	1,000 TB or $1,000^5$ bytes
1 exabyte (EB)	1,000 PB or $1,000^6$ bytes

Logical storage capacity values (for example, logical device capacity) are calculated based on the following values:

Logical capacity unit	Value
1 block	512 bytes
1 KB	1,024 (2^{10}) bytes
1 MB	1,024 KB or $1,024^2$ bytes
1 GB	1,024 MB or $1,024^3$ bytes
1 TB	1,024 GB or $1,024^4$ bytes
1 PB	1,024 TB or $1,024^5$ bytes
1 EB	1,024 PB or $1,024^6$ bytes

Getting Help

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Portal for contact information: <https://portal.hds.com>

Comments

Please send us your comments on this document: doc.comments@hds.com. Include the document title and number including the revision level (for example, -07), and refer to specific sections and paragraphs whenever possible. All comments become the property of Hitachi Data Systems Corporation.

Thank you!

Before you use this product

This chapter describes the overview of the system unit and what you need to know before using the remote console option.

- [Prerequisites](#)
- [Connecting the system unit](#)

Prerequisites



For information about the recommended environment for the console terminal and the requirement for the LAN cable, see [Operational environment/Restriction](#).

Use a cross-over cable if you directly connect the console terminal to the system unit with the built-in remote console function without going through network equipment and if the port at the console terminal is not a GigaLAN port.

Before using the remote console, you need to prepare the following peripherals or items:

- A console terminal (a PC used as a console terminal)
- A LAN cable (straight or cross-over)
- A HUB or LAN switch

Connecting the system unit

Connect the console terminal you have prepared and the management network port on the rear side of the system unit using a LAN connection. For details, see *User's Guide* "Remote management function".

Overview of the remote console

This chapter describes the overview of the remote console.

- [Features](#)
- [Operational environment/Restriction](#)

Features

Remote console application

Use the remote console application on the system unit by connecting to the console terminal. The remote console application has the following functions.

Major functions of the remote console application

Remote keyboard, video, and mouse (KVM) function

The BIOS and OS screens are redirected through the LAN to the console terminal at the remote location and displayed. You can control the system unit remotely using the mouse and keyboard.

Remote power operations

You can remotely turn on, turn off, and reset the system unit and can also trigger a Non Maskable Interrupt (NMI) on the system unit.

Remote floppy disk (FD) function, remote CD/DVD function

The remote FD function allows the system unit to recognize and use an external FD drive on the console terminal. The system unit can also have an access to an FD image on the console terminal. The remote CD/DVD function allows the system unit to access a built-in or external CD/DVD drive on the console terminal. The system unit can also have an access to a CD/DVD image on the console terminal. You can also boot an OS on the system unit using the remote FD function and the remote CD function.

LID on the system unit

You can turn on the LID (SERVICE LED switch) on the system unit connected to the console terminal.

You cannot use this function if the system unit does not have an LID (SERVICE LED switch).

Operational environment/Restriction

Operational environment for the console terminal



When you select the console terminal, you need to take into account that the movement of the mouse cursor on the console terminal could be extremely slow if the performance of the graphics board in the console terminal is low.

Note that the graphics performance of some PC server products is not as good as the graphics performance of the average general-purpose PCs. If you use a PC server product with low graphics performance as a console terminal, the movement of the mouse cursor may be slow.



We recommend using a console terminal that satisfies at least the following operational environment in order to use the console terminal without stress.

The following list shows each item of the operational environment the console terminal needs to satisfy.

Table 2-1

Console terminal	Operational environment
OS	Windows Server 2012 R2 Standard Windows Server 2012 R2 Datacenter Windows Server 2012 Standard Windows Server 2012 Datacenter Windows Server 2008 R2 Standard Windows Server 2008 R2 Enterprise Windows Server 2008 R2 Datacenter Windows Server 2008 Standard *2 Windows Server 2008 Enterprise *2 Windows Server 2008 Datacenter *2 Windows Server 2008 Standard without Hyper-V *2 Windows Server 2008 Enterprise without Hyper-V *2 Windows Server 2008 Datacenter without Hyper-V *2 Windows Server 2008 Standard 32bit Windows Server 2008 Enterprise 32bit Windows Server 2008 Datacenter 32bit Windows Server 2008 Standard without Hyper-V 32bit Windows Server 2008 Enterprise without Hyper-V 32bit Windows Server 2008 Datacenter without Hyper-V 32bit Windows Server 2003 R2, Standard Edition Windows Server 2003 R2, Enterprise Edition Windows Server 2003 R2, Standard x64 Edition Windows Server 2003 R2, Enterprise x64 Edition

Console terminal	Operational environment
	Windows Server 2003, Standard Edition Windows Server 2003, Enterprise Edition Windows Server 2003, Standard x64 Edition Windows Server 2003, Enterprise x64 Edition Windows 8 Pro Windows 7 Professional Windows Vista Business Windows XP Professional Windows XP Professional x64 Edition
Web Browser	Internet Explorer7 or later *1 *2
Java VM	ORACLE Java Runtime Environment 6 or higher ORACLE Java Runtime Environment 7 Update2 or higher *2 *3 *4
CPU	CPU clock: 1 GHz or higher
Memory	256 MB or more
Graphics resolution	1024 x 768 or higher
LAN	100Base-TX or better
CD/DVD drive	CD/DVD drives that are built in the console terminal or CD/DVD drives with USB connection If you use CD/DVD drives with USB connection, we recommend the ones with USB 2.0.
FD drive	FD drives that are built in the console terminal or FD drives with USB connection
Keyboard	Japanese 106/109 keyboard or English 101/104 keyboard

*1 : It is recommended to use default web browser, if the OS's default web browser is Internet Explorer7 or later.

*2 : 64 bit application is not supported. Even if the OS on the system unit is x64, please use 32 bit application.

*3 : If you use SSL/TLS function, you need to use ORACLE Java Runtime Environment 7 Update2 or higher. For details, see User's Guide Remote management function.

*4 : Please download and install the latest ORACLE Java Runtime Environment from following URL.

<http://java.com/en/download/>

Requirements for the LAN cable

Use a LAN cable (category 5 or better).

Restrictions when using the remote console application

If you use other remote function programs in combination with the remote console application, malfunction may occur.

Do not use the remote console application in combination with other remote function programs.

Installing an OS on the system unit while the remote console is connected

(1) The following operating systems can be installed from the remote console:

- Windows Server 2008, Windows Server 2008 R2

When you install other operating systems, test whether the installation is possible beforehand at your discretion.

(2) Installing a guest OS under the Hyper-V environment using the remote console is not supported.

Booting the system unit while the remote console is connected

While the system unit is being booted, do not disconnect or connect a USB keyboard or USB mouse. If you do, the remote KVM function may not work properly.

Recovering the system unit while the remote console is connected

When you recover the system unit such as you repair the system unit, do not use the remote FD or the remote CD/DVD. If a remote FD drive or a remote CD/DVD drive is recognized by the system unit, drive assignment can be messed up and the system may not be able to recover.

Graphics resolution of the remote console

If you set the resolution of the system unit screen larger than the window size on the console terminal side, only part of the screen that fits the window size on the console terminal side is displayed. Use the scroll bars at the bottom and at the right of the window to scroll the system unit screen.

Connecting from multiple console terminals (N:1 communication)

You cannot log in to the same system unit from multiple console terminals at the same time.

Keyboard and mouse

While you are using the remote KVM, do not use the keyboard and mouse on the system unit side. If you do, the system unit may not work properly.

Numeric keypad

The numeric keypad connected to the console terminal is affected by the [NUMLOCK] status of the keyboard on the system unit and not by the [NUMLOCK] status of the console terminal.

Mouse modes

The remote console supports two mouse modes: ABSOLUTE mode and RELATIVE mode. You need to configure the mouse mode and start remote console application, depending on the OS of the system unit. If the system unit OS is Windows, specify ABSOLUTE mode.

- If the system unit OS(Windows or RHEL) is starting, specify ABSOLUTE mode.
- If the system unit OS is not the above OS, or before the OS starts (Web BIOS etc), specify RELATIVE mode.

Otherwise, the mouse may not work properly. For information about how to setup the mouse mode, see [Setting up the mouse mode](#).

Settings of the console terminal when the remote CD/DVD function is used

When you use the remote CD/DVD, disable the CD/DVD Auto Run function of Windows on the console terminal side.

Follow the steps below to disable the CD/DVD Auto Run function.

Steps to disable the CD/DVD Auto Run function

When using Windows XP, Windows Server 2003, or Windows Server 2003 R2 in a console terminal,

- (1) Select **Start Menu > Run** and run gpedit.msc.
- (2) Click **Computer Configuration > Administrative Templates > System**, and open a property of **Turn off AutoPlay**.
- (3) Set **Turn off AutoPlay** to **Enabled** on an upper side in the Setting tab, and set **Turn off AutoPlay on** to **All drives** on a bottom side.
- (4) Restart the console terminal.

When using Windows other than above in a console terminal

- (1) Select **Start Menu > Run** and run gpedit.msc.
- (2) Click **Computer Configuration > Administrative Templates > Windows Components > AutoPlay Policies**, and open a property of **Turn off AutoPlay**.

- (3) Set **Turn off AutoPlay** to **Enabled** on an upper side in the Setting tab, and set **Turn off AutoPlay on** to **All drives** on a bottom side.

About connecting under Network Address Translation(NAT) environment

In the environment that the IP address of the management interface connector is performed Network Address Translated(NAT), the remote console function is not supported.

Setting up the remote console

This chapter describes how to set up the IP address of the management interface connector on the system unit and explains the remote console security on the system unit.

- [Remote console settings](#)

Remote console settings

The remote console uses the following security measures in order to prevent access from illegal users.

- Authentication using user IDs and passwords at login
- Restriction of connectable console terminals by checking the IP address of the console terminal

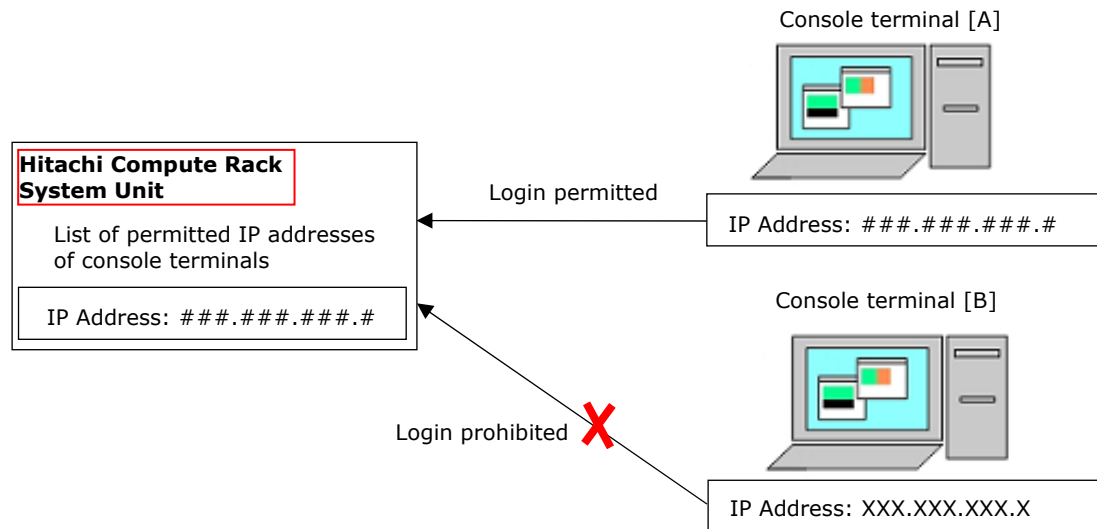


Figure 3-1

For information about user IDs, passwords, and restriction of connectable console terminals, see *Hitachi Compute Rack Remote Management User's Guide*.

Using the remote console

This chapter describes how to use the remote console.

- ☐ [Starting the remote console](#)
- ☐ [Functions in depth](#)
- ☐ [Setting up display settings of the system unit](#)
- ☐ [Using the remote FD](#)
- ☐ [Using the remote CD/DVD function](#)
- ☐ [Using the LID on the system unit](#)
- ☐ [Setting up the mouse mode](#)
- ☐ [Scrolling the screen](#)

Starting the remote console

Start the Web console, see *Hitachi Compute Rack Remote Management User's Guide*.

Click **Launch Remote Console** on the login dialog box of the Web console or the button displayed after login.



Please do not use 64bit Internet Explorer. Even if the OS on the system unit is x64, please use 32 bit Internet Explorer.

If the OS on the system unit is x64, please use following file to start 32 bit Internet Explorer.

C:\Program Files (x86)\Internet Explorer\iexplore.exe

In default setting of 64bit OS, 64bit Internet Explorer may start. Please use 32 bit Internet Explorer.

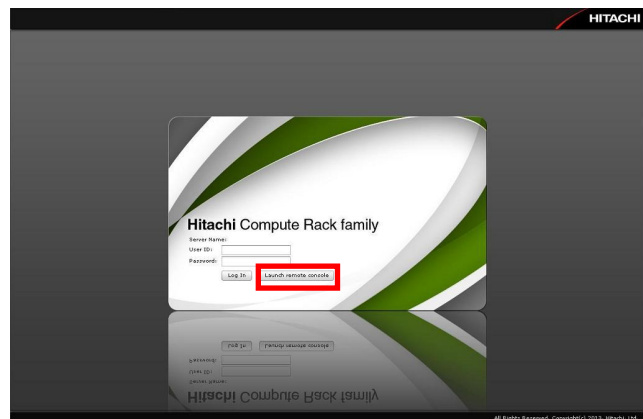


Depending on the version or the setting of Java, the security alert may display. Depending on user's environment, update Java, or change the setting of Java.

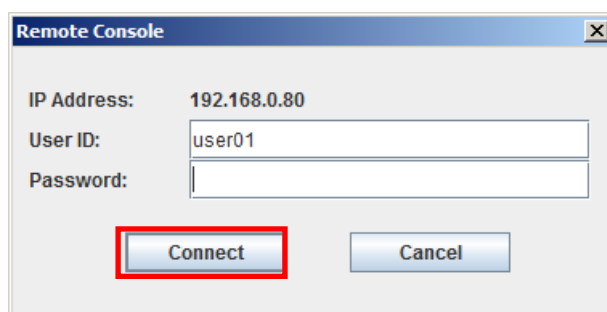
In Case BMC Version is 09.79 or lower.



In Case BMC Version is 09.80 or higher.

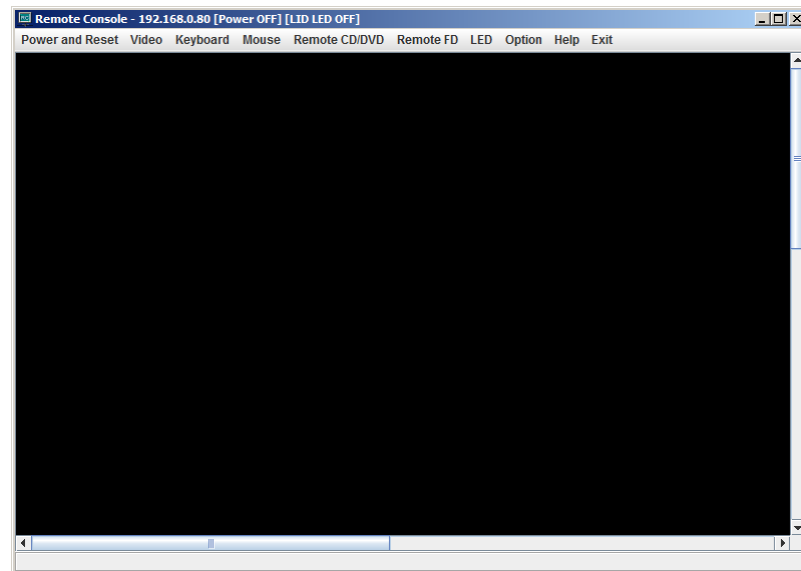


The login dialog box will be displayed. Enter the user ID and password and click **Connect**.



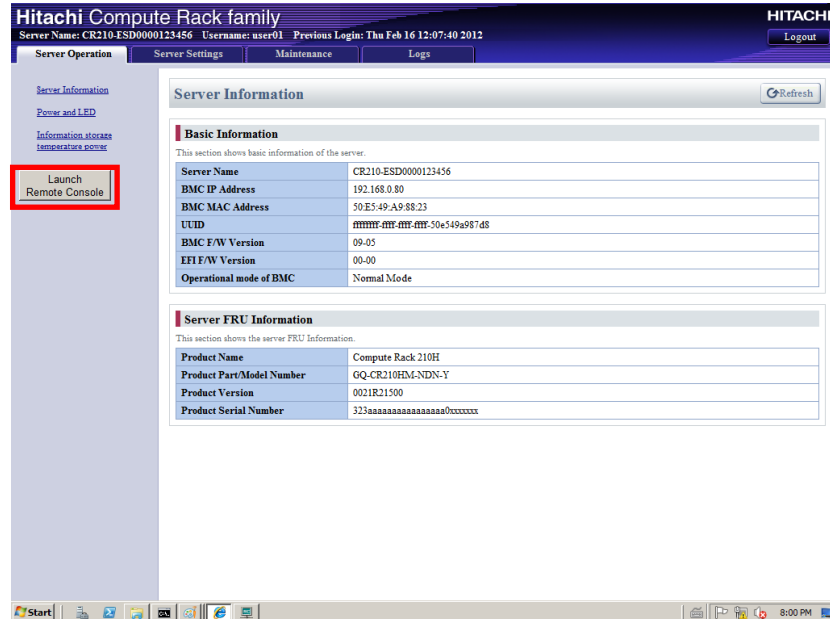
Depending on the security setting of Internet browser, you may need to save (download) boot-up file(launchrkvm.jnlp) before displaying the login dialog box. A login dialog box is displayed due to executing a boot-up file after saving the boot-up file.

If the user authentication is successful, a window is created and the graphics screen (VGA) of the system unit is displayed.



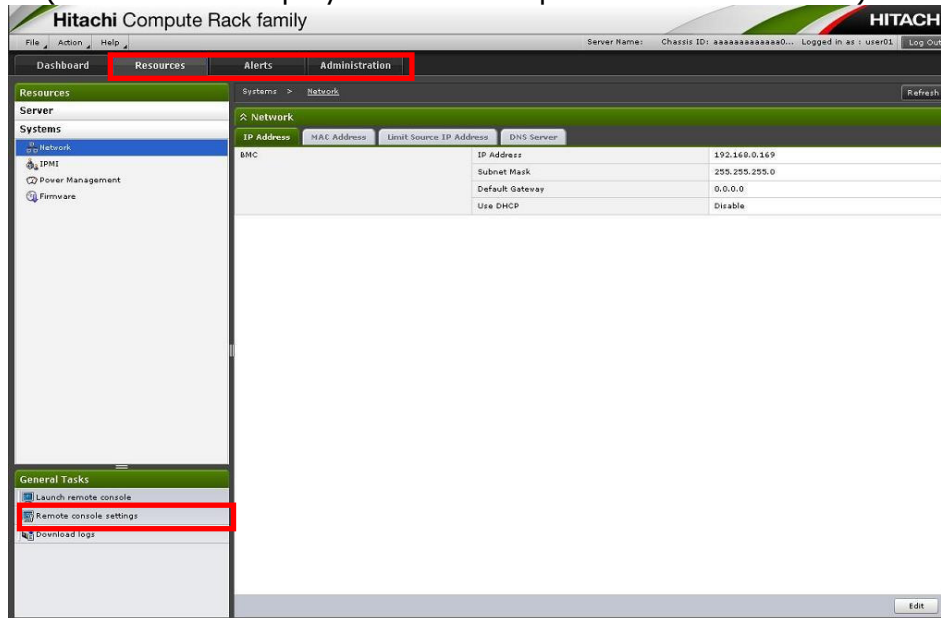
If you have already logged in to the Web console, click **Launch Remote Console** at the left side of the window in order for the login dialog box to open.

In Case BMC Version is 09.79 or lower.



In Case BMC Version is 09.80 or higher.

(This Menu is displayed in tab except the Dashboard Tab.)



Exiting from the remote console application

In order to exit from the remote console application, click **Exit** > **Exit** on the menu.



If you want to terminate the remote console application, all each function listed in the next section must be disabled, before terminate the remote console application.

Don't terminate the remote console application with pressing the key of keyboard or the button of mouse that is connected to console terminal.

The keyboard or the mouse of the system may not work properly.

Functions in depth



When you use the remote console, keyboard input from the console terminal has some restrictions. For details, see [Precautions](#).



When you turn on or off the LID (SERVICE LED switch), the display mode of the SERVICE LED switch changes in the same way as you turn on or off the SERVICE LED switch on the system unit.

Elements of the window and their functions

This part describes elements of the window of the remote console application and their functions.

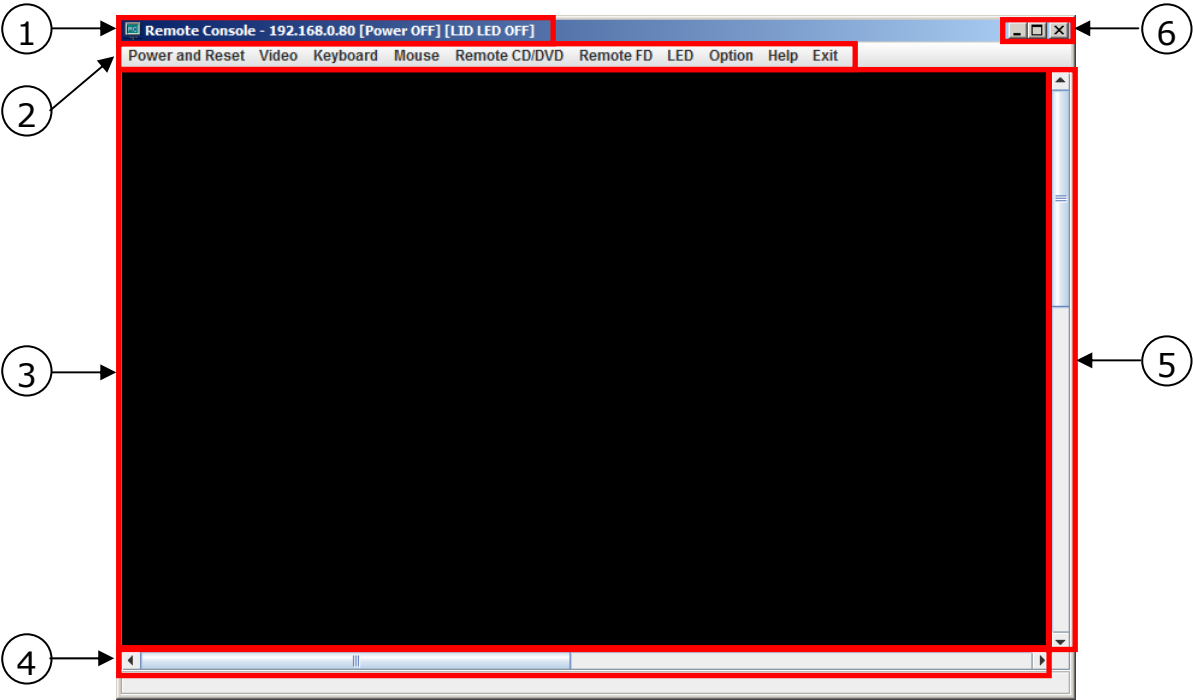


Table 4-1

Item	Element	Function
1	Title bar	The IP address, the power state, and the LID state of the system unit are displayed here.
2	Menu	The menu is used to perform various functions of the remote console application. If you select a menu item using the mouse cursor, the corresponding function is executed. For information about the function of each menu item, see "Menu items and functions" below.
3	Remote screen	On the remote screen, the graphics screen of the system unit is displayed.

Item	Element	Function
4,5	Scroll bars	The scroll bars are used to scroll the graphics screen of the system unit.
6	Window control buttons	Those buttons are used to minimize, maximize, and close the window.

In the full screen mode, use the bar at the top of the screen to control the remote console application. The bar appears when the mouse cursor is moved to the top part of the screen.

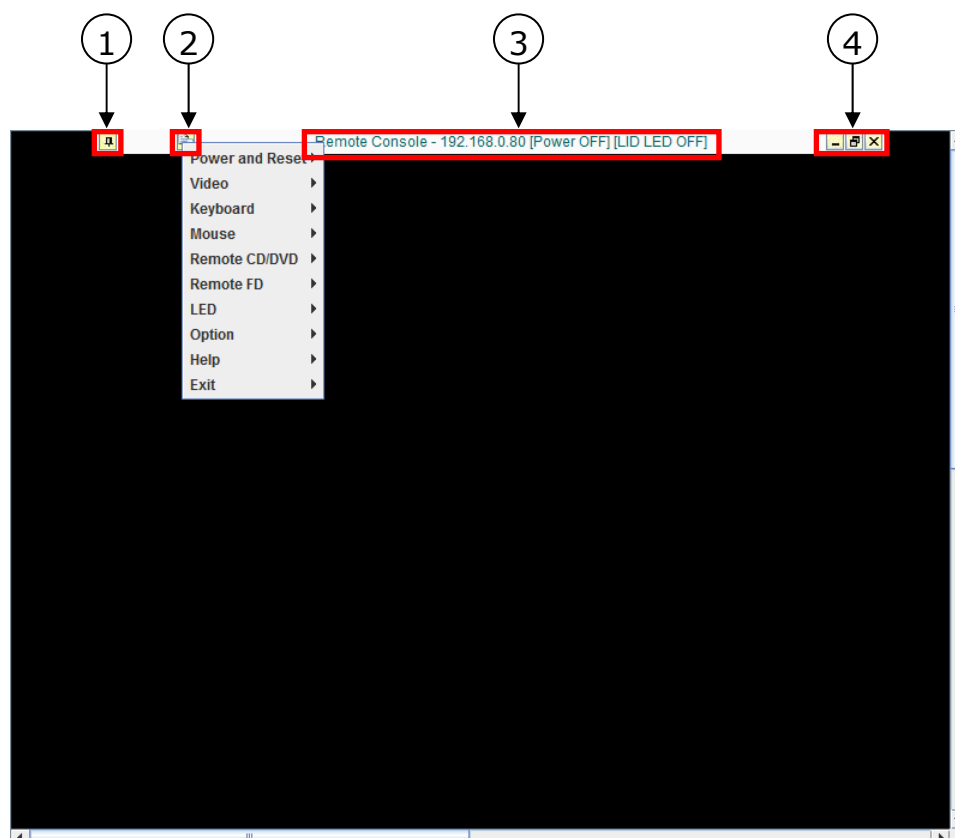


Table 4-2

Number	Element	Function
1	Pin button	This button is used to display the bar all the time.
2	Menu button	Use this button to display the menu that is used to perform various functions of the remote console application. For information about the function of each menu item, see "Menu items and functions" below.
3	Title	The IP address, the power state, and the LID state of the server blade are displayed here.
4	Window control buttons	Those buttons are used to minimize, maximize, and close the window.

Table 4-3 Menu items and functions

Menu item		Function
[Power and Reset]	[Power on]	Select this item to turn on the power for the system unit.
	[Forced Power OFF]	Select this item to forcibly shut off the power for the system unit.
	[Reset]	Select this item to reset the system unit.
	[NMI]	Select this item to trigger the NMI on the system unit.
[Graphics]	[Refresh Screen]	Select this item to refresh the screen to the latest graphics screen of the system unit.
	[Full Screen]	Select this item to switch between the full screen mode and the window display mode.
[Keyboard]	[Hold Left Alt key]	Select this item to press the Left Alt key. When this item is selected, the key is held until this item is selected again.
	[Hold Right Alt key]	Select this item to press the Right Alt key. When this item is selected, the key is held until this item is selected again.
	[Hold Left Windows key]	Select this item to press the left Windows logo key. When this item is selected, the key is held until this item is selected again.
	[Hold Right Windows key]	Select this item to press the right Windows log key. When this item is selected, the key is held until this item is selected again.
	[Ctrl+Alt+Del]	Those keys are used to press the CTRL+Alt+DEL keys.
[Mouse]	[Hide Cursor]	Select this item to hide the mouse cursor of the console terminal. Press the Alt+G keys to show the cursor.
[Remote CD/DVD]	[Redirect CD/DVD Drive]	Select this item to show the dialog box to select the CD/DVD drive. When the CD/DVD drive is selected, the remote CD/DVD starts. If this item is selected again while the remote CD/DVD is being used, the remote CD/DVD is terminated.
	[Redirect CD/DVD Image]	Select this item to show the dialog box to select the CD/DVD image file. When the CD/DVD image file is selected, the remote CD/DVD starts. If this item is selected again while the remote CD/DVD is being used, the remote CD/DVD is terminated.
	[Change CD/DVD Image]	Select this item to change the CD/DVD image files used for the remote CD/DVD function. This item is enabled when the remote CD/DVD starts using a CD/DVD image file. When this item is selected, the medium in the virtual CD/DVD drive is replaced to another.
[Remote FD]	[Redirect FD Drive]	Select this item to show the dialog box to select the FD drive. When the FD drive is selected, the remote FD starts. If this item is selected again while the remote FD is being used, the remote FD is terminated.
	[Redirect FD Image]	Select this item to show the dialog box to select the FD image file. When the FD image file is selected, the remote FD starts.

Menu item		Function
		If this item is selected again while the remote FD is being used, the remote FD is terminated.
[LED]	[Turn on LID LED]	Select this item to turn on the LID on the system unit. You cannot use this item if the system unit does not have an LID (SERVICE LED switch).
	[Turn off LID LED]	Select this item to turn off the LID on the system unit. You cannot use this item if the system unit does not have an LID (SERVICE LED switch).
[Options]	[Disable Auto Logout]	Select this item to disable the automatic logout function. When this item is selected again, the automatic logout function is enabled.
	[Use Japanese keyboard]	Select this item to switch to the input mode suitable for a Japanese keyboard. If you use a Japanese keyboard, select this menu item.
[Help]	[Shortcut Keys]	Select this item to display the list of shortcut keys.
	[Version information]	Select this item to display the version information of the remote console application.
[Exit]	[Exit]	Select this item to exit from the remote console application.

Setting up display settings of the system unit

When you start using the remote console, you need to change the display settings at the system unit side. This section describes how to set up display settings for each OS.



If you use 1024 x 768 or higher resolution (1152 x 864, 1280 x 1024, and so on), the available color depth is 16-bit color or less.



If you install the dedicated VGA driver, specify ABSOLUTE for the mouse mode. If the mouse mode is RELATIVE, the mouse cursor may not be displayed.



When you use the dedicated VGA driver, you cannot select "High (24 bit)" for the colors.

Setting up graphics settings for Windows

If the OS on the system unit side is Windows, we recommend using the dedicated VGA driver.

For instructions, see [Installing the dedicated VGA driver](#).

We also recommend specifying 60 Hz for refresh rate and 16 bit for colors when you configure the display settings.

For instructions, see [Setting up the refresh rate in the display settings](#).

Table 4-4

Server OS	Resolution	Color depth
Windows	640 x 480	8 bit
	800 x 600	16 bit
		32 bit
	1024 x 768 (recommended)	16 bit (recommended)
		32 bit
	1280 x 1024	16 bit
Linux	640 x 480	16 bit
		24 bit
	800 x 600	16 bit
		24 bit
	1024 x 768 (recommended)	16 bit (recommended)
		24 bit
	1280 x 1024	16 bit

Combinations of resolution and color depth other than listed above are not supported. If you use such a combination, the screen may not be displayed at all or the screen may not be displayed properly.

If response of the remote KVM is slow, please set the resolution of the system unit screen lower, change color of the Desktop Background Wallpaper to simple. Reducing data traffic will make response better.



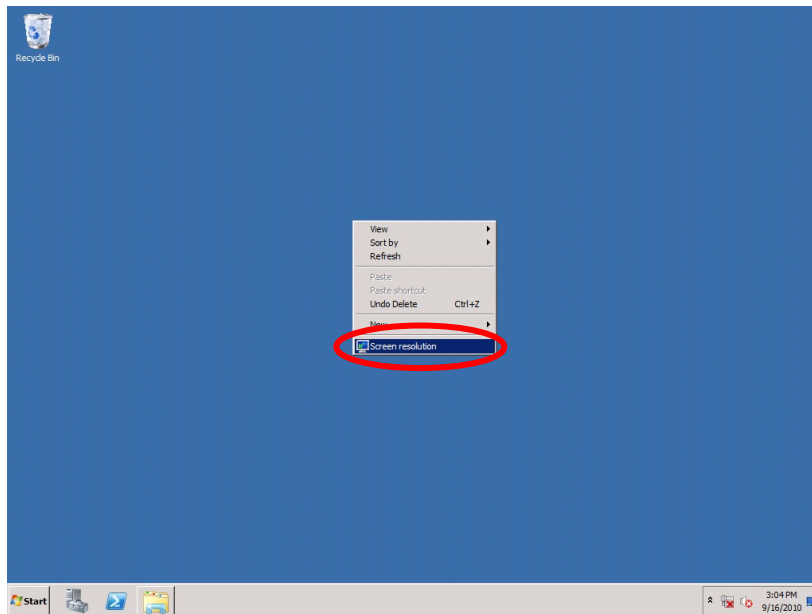
In Windows Server 2012, the available color depth is only 32-bit color, response of the remote KVM may become slow.

Installing the dedicated VGA driver

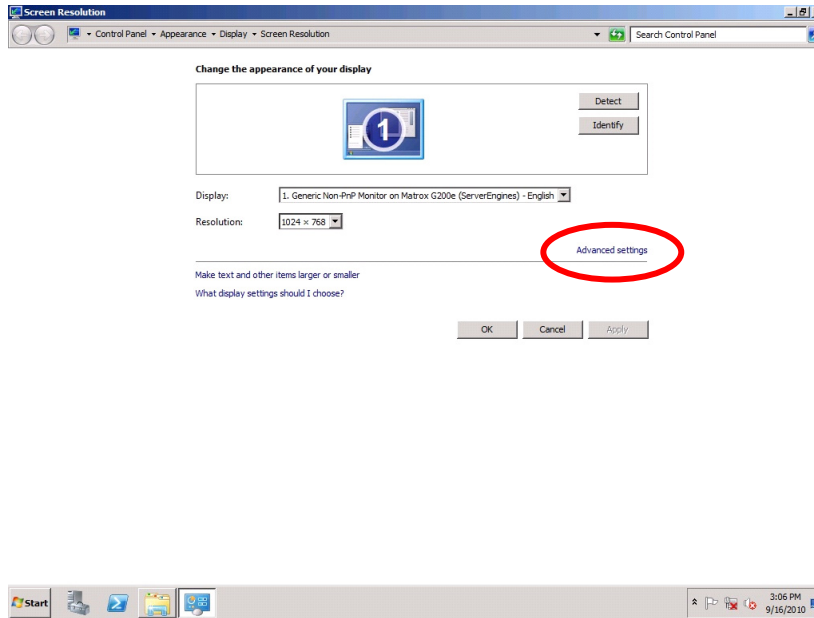
This part describes how to install the dedicated VGA driver.

If the OS on the system unit is Windows Server 2008 R2 or Windows Server 2012 or Windows Server 2012 R2

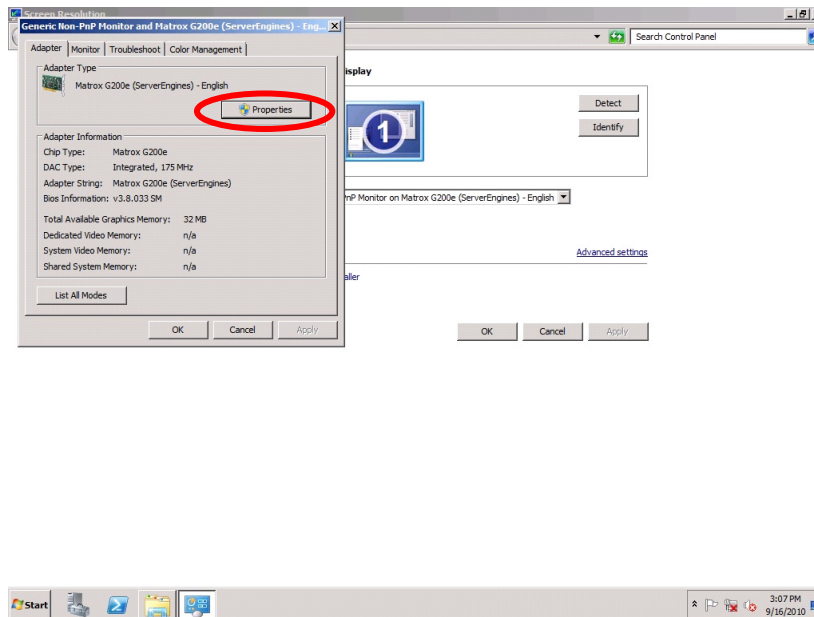
Right-click the screen and select **Screen resolution**.



Click **Advanced Settings**.

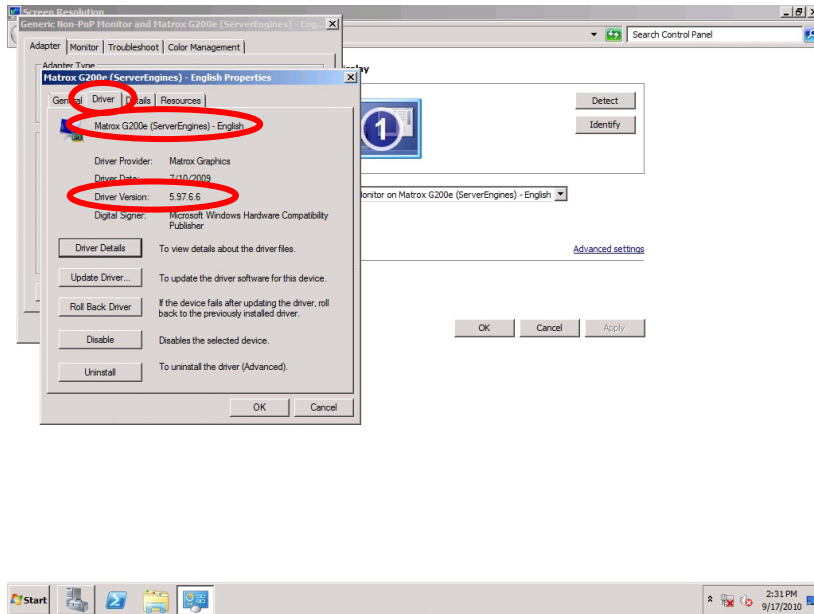


Click the **Adapter** tab > **Properties** in the just opened dialog box.



Click the **Driver** tab on the just opened dialog box.

If you see "Matrox G200e (ServerEngines)" in the dialog box, the dedicated driver has already been installed. You can also check the driver version in this dialog box.



If the dedicated driver has not been installed, follow the steps below to install the driver.

The dedicated driver is stored in the folder "**Driver & Utility for Windows Ver.xx-xx**".

If the system OS is Windows Server 2012 R2, open the folder **\WinSrv2012R2\Drivers\SVGA\Matrox_04\Filesx64** and then Click **install.bat** and run the batch file.

If the system OS is Windows Server 2012, open the folder **\WinSrv2012\Drivers\SVGA\Matrox_04\Filesx64** and then Click **install.bat** and run the batch file.

If the system OS is Windows Server 2008 R2, open the folder **\WinSrv2008R2\Drivers\SVGA\Matrox_01\Filesx64** and then Click **install.bat** and run the batch file.

After you install the driver, restart Windows Server to activate the driver.

Setting up the refresh rate in the display settings

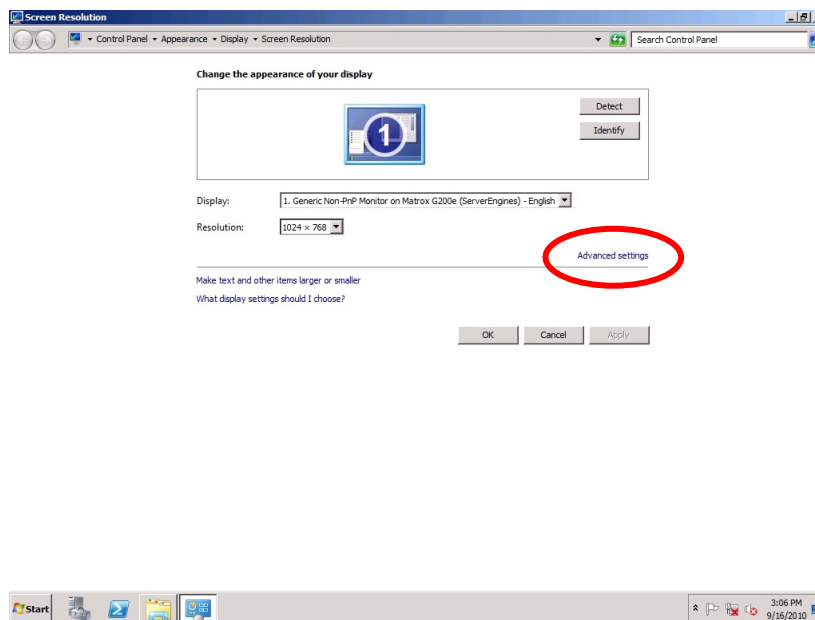
This part describes how to set up the refresh rate in the display settings.

We recommend specifying 60 Hz for refresh rate in the display settings.

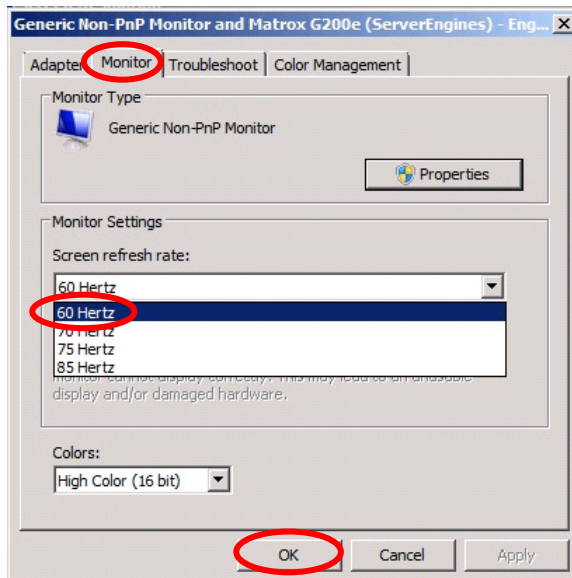
If the OS on the system unit is Windows Server 2008 R2 or Windows Server 2012 or Windows Server 2012 R2

Right-click the screen and select **Screen resolution**.

Click **Advanced Settings** in the Screen resolution window.



Select [**60 Hz**] for **Screen Refresh Rate** in Monitor tab of the just opened dialog box and click **OK**. If you see a confirmation message for the setting change, click **Yes**.

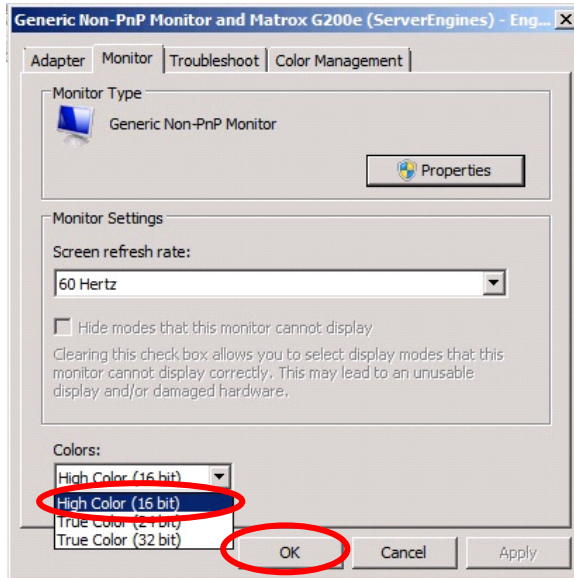


We recommend specifying 16 bit for the color depth. Follow the procedure below to configure the setting.

Select [**Medium (16 bit)**] for **Colors** in the **Display Settings** dialog box and click **OK**. If you see a confirmation dialog box, click **Yes**.



In Windows Server 2012 or Windows Server 2012 R2, the available color depth is only 32-bit color. (Menu of changing is not displayed).



This is the end of the procedure to set up the refresh rate in the display settings.

When the OS is Linux in the system unit

If the OS on the system unit is Linux, you need to set video card type and the resolution of the system unit screen. The following part describes how to set video card type and the resolution of the system unit screen in RHEL.

When the OS is RHEL in the system unit



If you click **System > administration > display** or **System > Preferences > Screen Resolution**, and change the setting of the resolution or the color depth, the setting of the resolution or the color depth may not be affected properly, the system unit screen may not be displayed properly. In order to change the setting of the resolution or the color depth, change `"/etc/X11/xorg.conf"`.



Depending on the VGA driver of Linux, remote console may not be displayed.

Reflect the following setting in `"/etc/X11/xorg.conf"` with using text editor.

If system OS does not have `"/etc/X11/xorg.conf"`, please make `"/etc/X11/xorg.conf"`.

Please check that the value of "Driver" item of "Device" Menu of "/etc/X11/xorg.conf Section" file is "vesa".

If the value is not "vesa", change the value to "vesa".

Please set top value of "Section Screen - SubSection Display - Modes" menu item of "/etc/X11/xorg.conf"file, to "1024x768".

If "Modes" line is not in the file, please make the line.

We recommend to set the value of "Section Screen - DefaultDepth - Section Screen - SubSection Display - Depth" menu item to "16".

"/etc/X11/xorg.conf"'s setting example

```
Section "Device"
Identifier "Videocard0"
Driver "vesa"
EndSection
```

```
Section "Screen"
Identifier "Screen0"
Device "Videocard0"
DefaultDepth 16
SubSection "Display"
Viewport 0 0
Depth 16
Modes "1024x768" "800x600" "640x480"
EndSubSection
EndSection
```

The display setting for Linux is completed.

Restart X Window to reflect the resolution settings.

Using the remote FD

The remote FD function allows the system unit to use an FD drive or FD image on the console terminal. This section describes how to use the remote FD.



You can connect only one FD drive or one FD image to a system unit. If multiple system units use the same FD drive on the console terminal as a remote FD, you need to specify "Read only" for the FD medium or the FD image file.



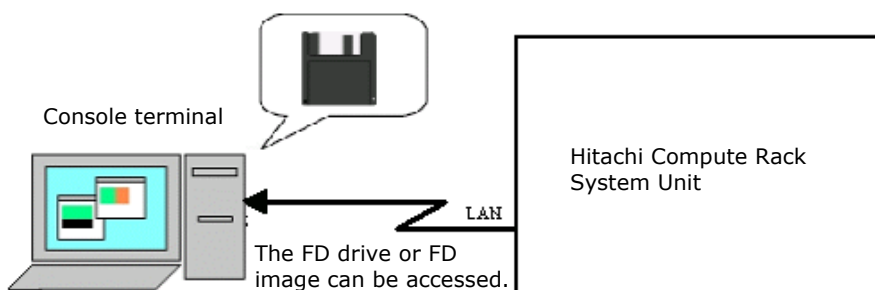
The remote FD is recognized as a USB device by the server. When you use the remote FD, a remote FD drive, a remote CD/DVD drive, and a removable disk are mounted on the system unit as one USB device. When you start using the remote FD or remote CD/DVD, the USB device is mounted to the server. When you finish, the USB device is unmounted. If you access to the removable disk added when you start using the remote FD, you may be prompted to insert a disk but you cannot actually use this removable disk.



You cannot format an FD medium or an FD image file using the remote FD. Use the FD drive on the console terminal when you format an FD medium.



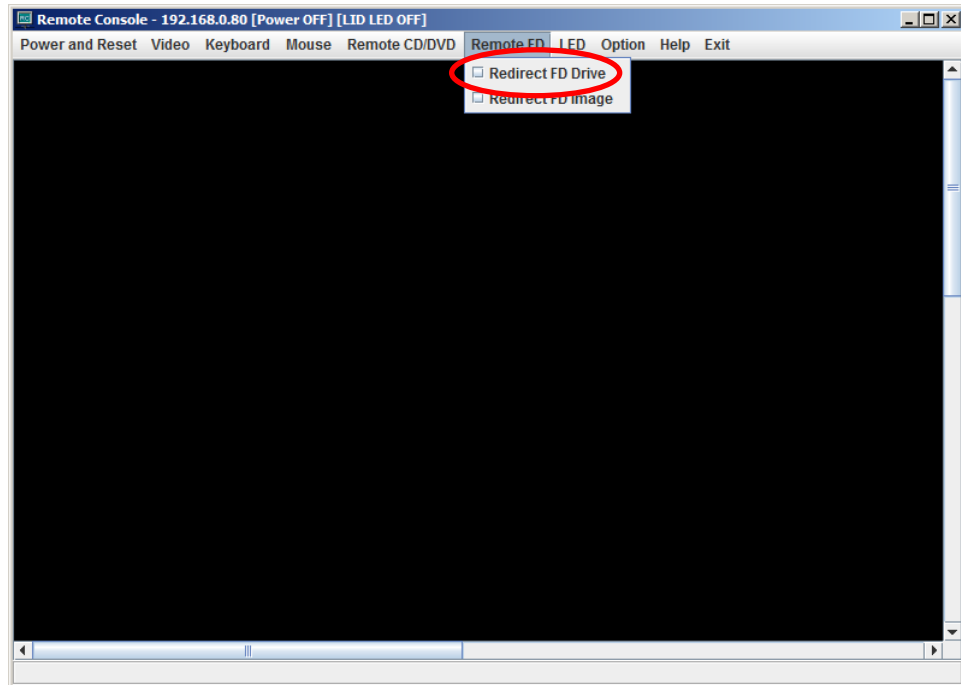
If you boot the system unit from the remote FD drive, specify the remote FD drive at the top of the boot device order by using the BIOS setup menu on the system unit.



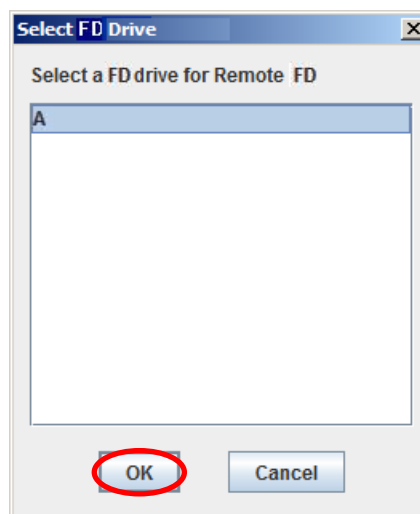
The following part describes how to use an FD drive on the console terminal by using the remote FD function and then describes how to use an FD image on the console terminal.

Using the remote FD drive in Windows

Select [**Remote FD**] > [**Redirect FD Drive**] on the menu.



The **Select the FD drive** dialog box is displayed. Select the FD drive the console terminal is using and click **OK**.



The FD drive on the console terminal has just been connected to the system unit as a remote FD drive. Insert a medium into the drive and use.

In order to finish the remote FD function, select [**Remote FD**] > [**Redirect FD Drive**] on the menu again.

Using the remote FD image in Windows

The following part describes how to use an FD image on the console terminal using the remote FD function.

Creating an FD image

An FD image used by the remote FD function has to be converted from the data in an FD beforehand.

Use the FD image makeup tool to create an FD image.

You can find the FD image makeup tool (**FDDUMP.exe**) under the folder **\WinSrv2008\Utility\Remote** in "**Driver & Utility for Windows Ver.xx-xx**".



Always use an FD image created by the FD image makeup tool. If you use an FD image created by other programs, the remote FD function may not work properly.

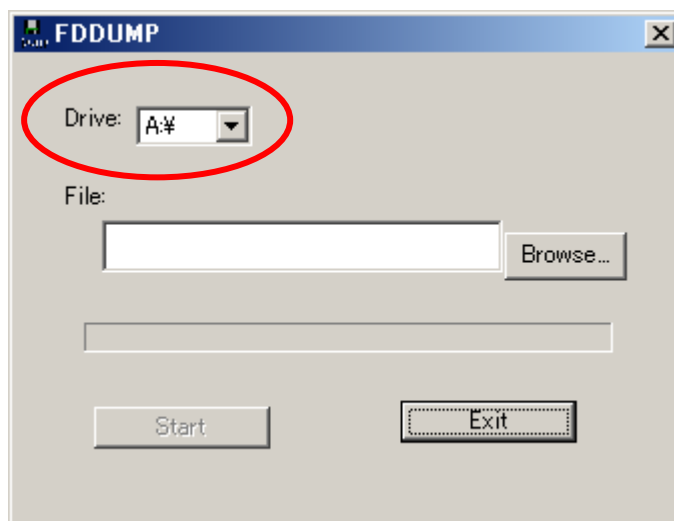


You can use the tool just by copying the FD image makeup tool (FDDUMP.exe) to the console terminal. You do not need other preparations such as installing or setting up the tool.

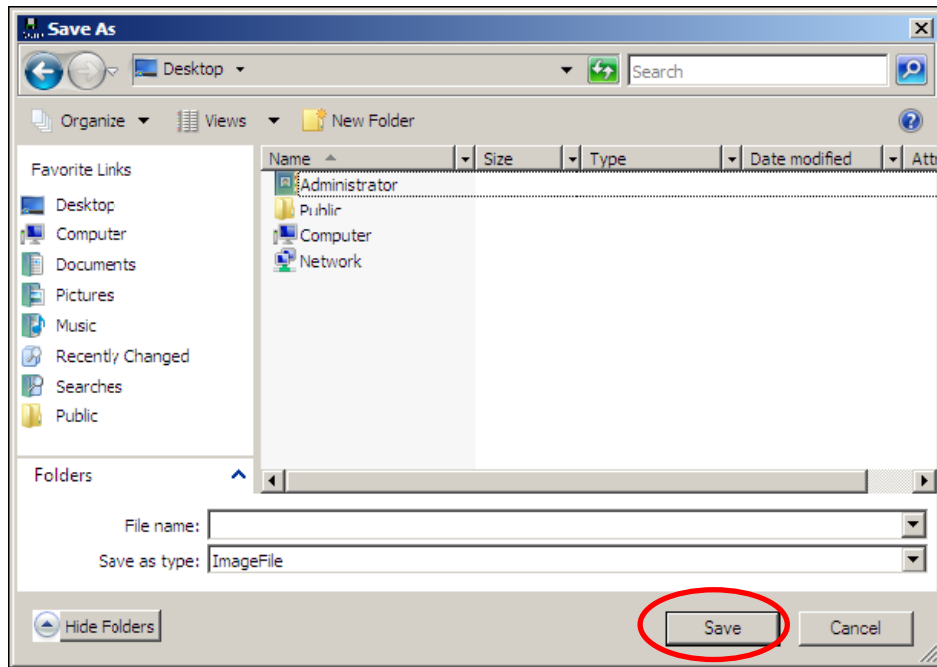
The following part describes how to create an FD image from the data in the FD.

When you run the FD image makeup tool on the console terminal, the following dialog box is displayed.

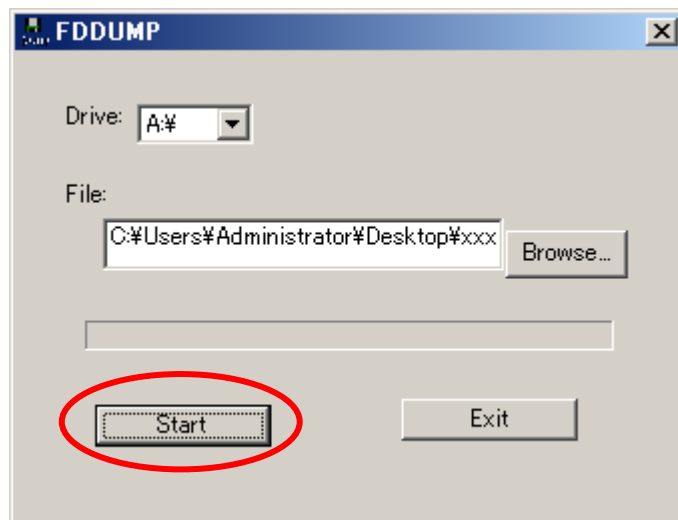
Insert the FD you want to create an FD image for into the FD drive on the console terminal and select the drive in the dialog box.



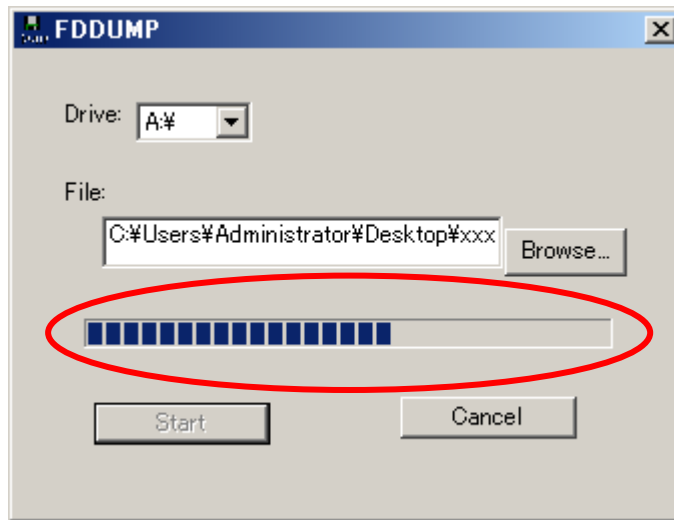
Then click **Browse**. The following dialog box is displayed. Select the location where you want to save the image file and type the file name. After you enter the file name, click **Save**.



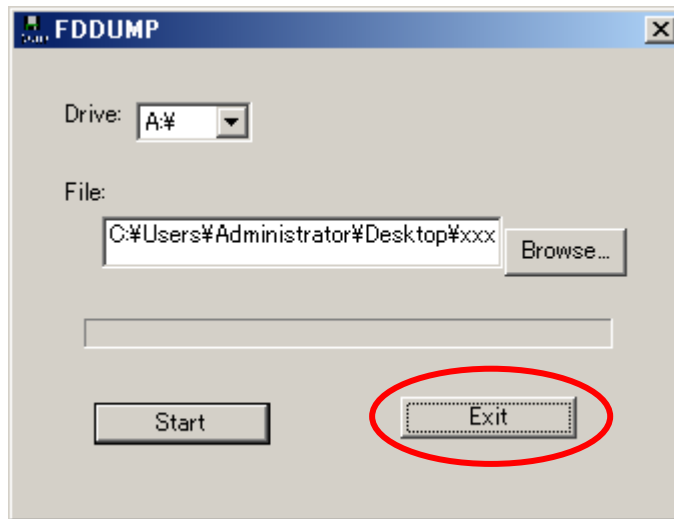
Now that the saving location is specified, click **Start** to start the conversion to the FD image.



As shown below, the progress bar indicates how much of the FD image conversion is finished so far. When the progress bar reaches to the end, conversion to the FD image completes. The image file is created in the specified saving location.



When you finish, click **Exit** to quit FDDUMP.



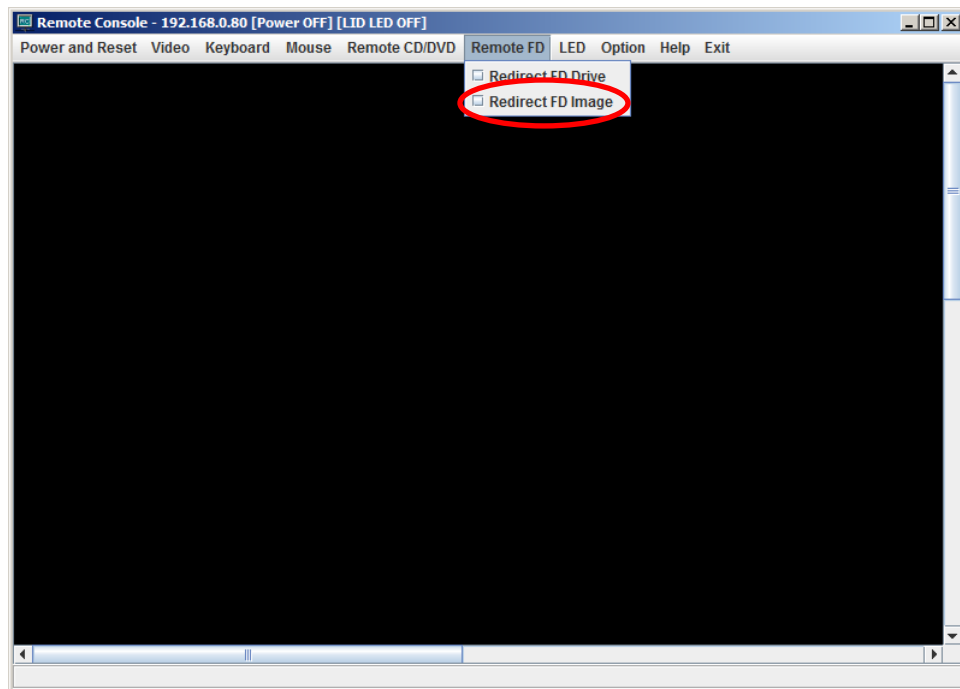
Notes on FD image files

Be cautious about the following notes when you use FD image files.

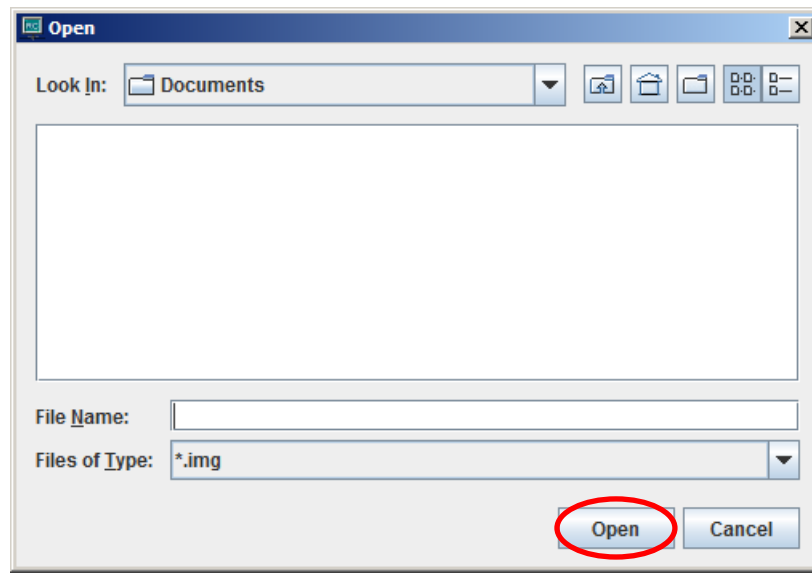
- For an image file of the medium with a license agreement, such as the OS install medium, the same license agreement applies. Make sure you do not breach the license agreement when using the image file.
- Image files created by **FDDUMP.exe** can only be used by the remote FD function of the remote console application. If you use those images for other purposes, Hitachi has no obligation or liability for the caused damages.

The following part describes how to use an FD image using the remote console application.

Select [**Remote FD**] > [**Redirect FD image**] on the menu.



The **Open** file dialog box is displayed. Select the image file and click [**Open**].



The FD image on the console terminal has just been connected to the system unit as a remote FD.

To finish the remote FD function, select [**Remote FD**] > [**Redirect FD image**] on the menu again.

Using the remote CD/DVD function

The remote CD/DVD function allows the system unit to use a CD/DVD drive or CD/DVD image on the console terminal. This section describes how to use the remote CD/DVD.



You can connect only one CD/DVD drive or one CD/DVD image to a system unit.



The remote CD/DVD is recognized as a USB device by the server. When you use the remote CD/DVD, a remote FD drive, a remote CD/DVD drive, and a removable disk are mounted on the system unit as one USB device. When you start using the remote FD or remote CD/DVD, the USB device is mounted to the server. When you finish, the USB device is unmounted. If you access to the removable disk added when you start using the remote CD/DVD, you may be prompted to insert a disk but you cannot actually use this removable disk.



When you use the remote CD/DVD, you need to set up the registry. After you set up the registry, you need to restart the console terminal.

For information about how to set up the registry, see [Operational environment/Restriction](#), Settings of the console terminal when the remote CD/DVD function is used.



If you boot the system unit from the remote CD/DVD drive, specify the remote CD/DVD drive at the top of the boot device order using the BIOS setup menu on the system unit.



When you are prompted to change the medium in the remote CD/DVD drive, for example, during installation, make sure the new medium is ready to be read before pressing **Enter** or other keys. For example, you can check if the access LED on the CD/DVD drive is flashing to see whether the new medium is ready.

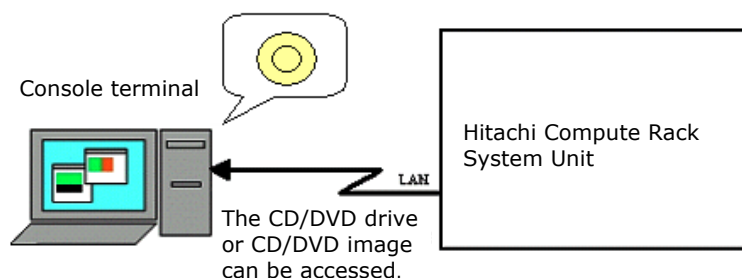


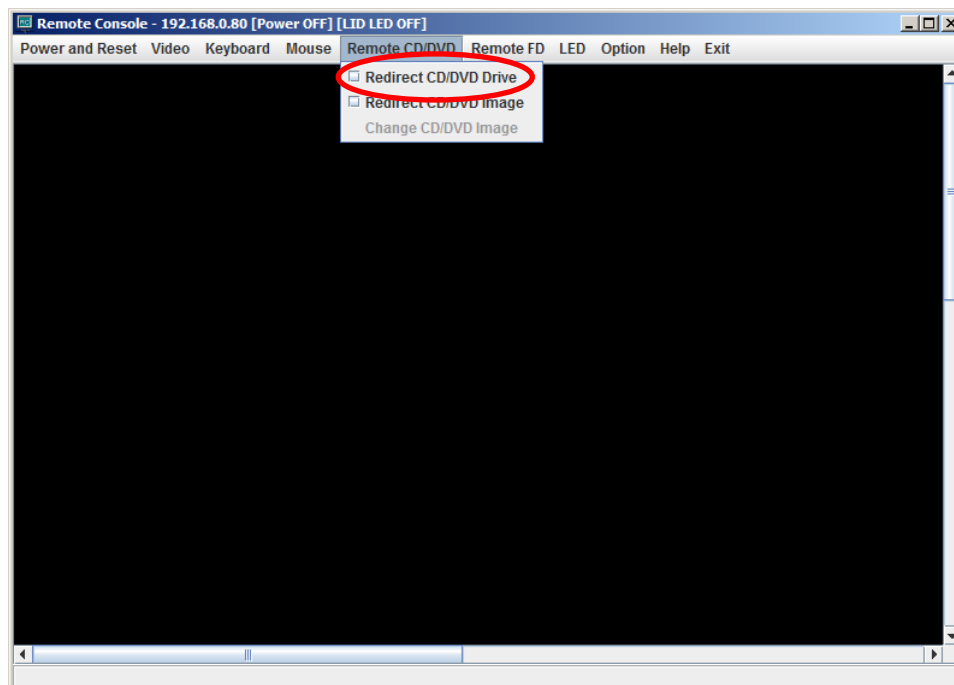
Figure 4-2

The following part describes how to use a CD/DVD drive on the console terminal using the remote CD/DVD function and then describes how to use a CD/DVD image on the console terminal.

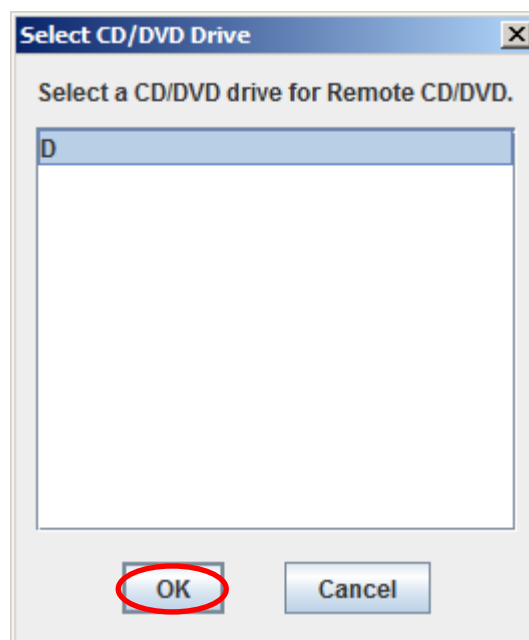
If the CD/DVD drive on the console terminal is used

The following part describes how to use a CD/DVD drive on the console terminal by using the remote CD/DVD function.

Select [**Remote CD/DVD**] > [**Redirect CD/DVD drive**] on the menu.



The [**Select the CD/DVD drive**] dialog box is displayed. Select the CD/DVD drive the console terminal is using and click **OK**.



The CD/DVD drive on the console terminal has just been connected to the system unit as a remote CD/DVD drive. Insert a medium into the drive and use.

To finish the remote CD/DVD function, select [**Remote CD/DVD**] > [**Redirect CD/DVD drive**] on the menu again.

If a CD/DVD image is used

The following part describes how to use a CD/DVD image on the console terminal by using the remote CD/DVD function.



If you select another CD/DVD image file while accessing an image file using the remote CD/DVD function, the remote CD/DVD function works as if the medium is replaced.

Creating a CD/DVD image

A CD/DVD image used by the remote CD/DVD function has to be converted from the data in a CD/DVD beforehand.

Use the CD/DVD image makeup tool to create a CD/DVD image.

You can find the CD/DVD image makeup tool (**MakeCDImg.exe**) under the folder **\WinSrv2008\Utility\Remote** in "**Driver & Utility for Windows Ver.xx-xx**".



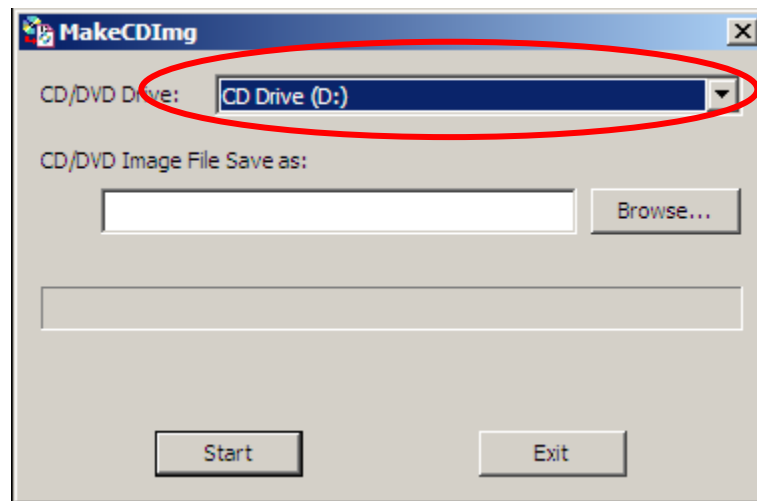
Always use a CD/DVD image created by the CD/DVD image makeup tool. If you use a CD/DVD image created by other programs, the remote CD/DVD function may not work properly.



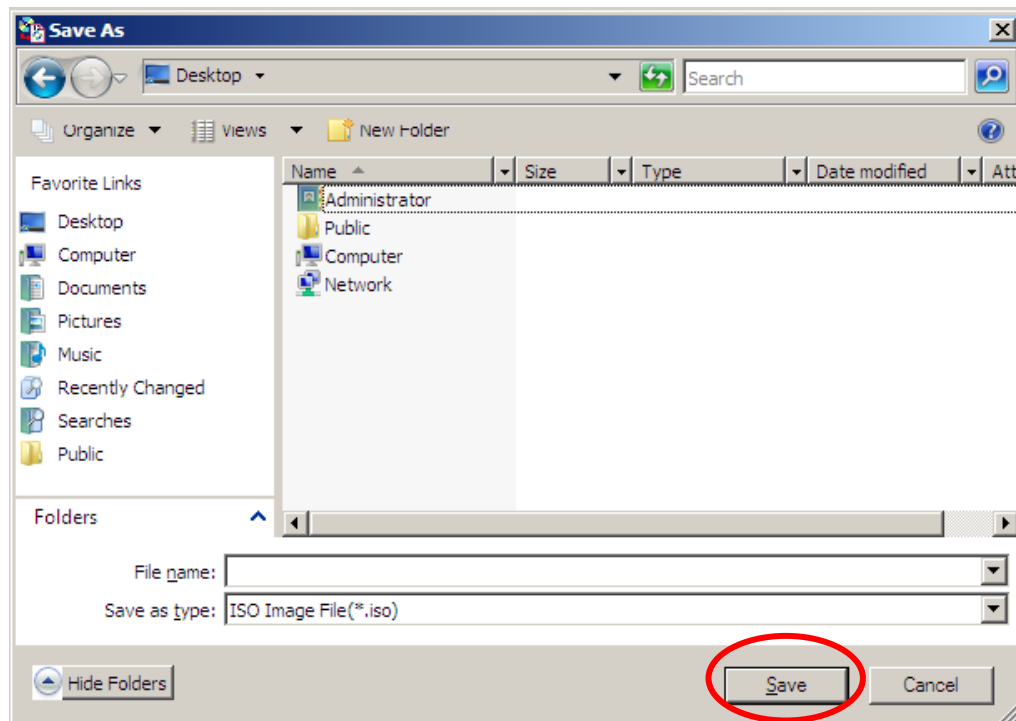
You can use the tool just by copying the CD/DVD image makeup tool (**MakeCDImg.exe**) to the console terminal. You do not need other preparations such as installing or setting up the tool.

The following describes how to create a CD/DVD image from the data in the CD/DVD.

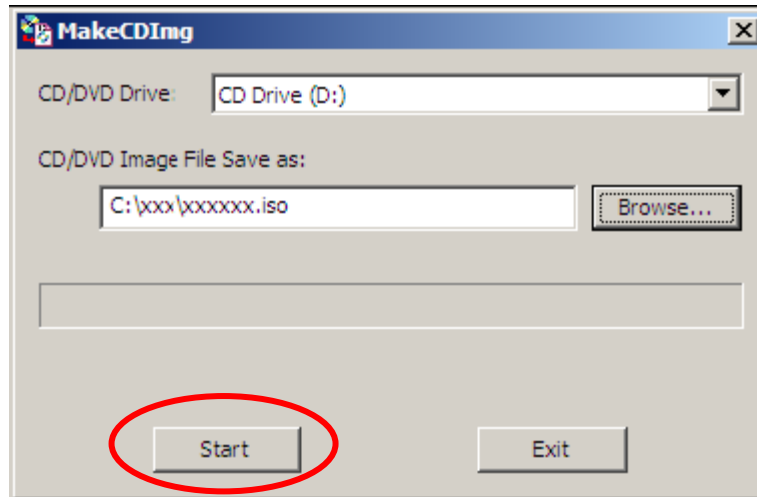
When you run the CD/DVD image makeup tool on the console terminal, the following dialog box is displayed. Insert the CD/DVD you want to create a CD/DVD image into the CD/DVD drive on the console terminal and select the drive on the dialog box.



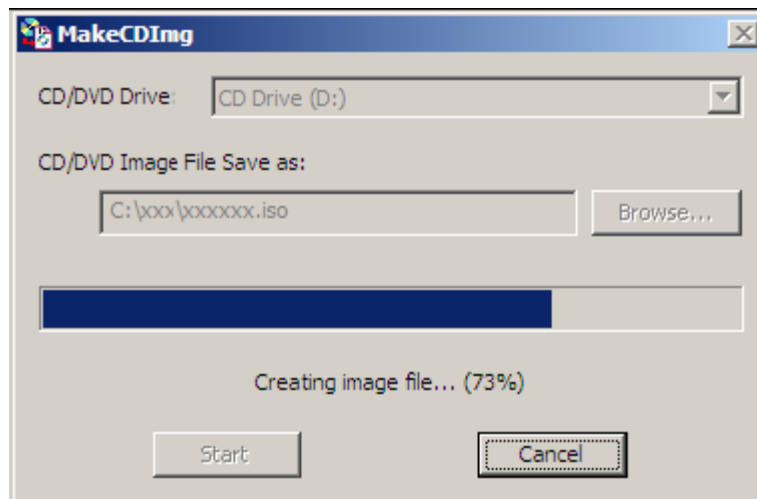
Then click **Browse**. The following dialog box is displayed. Select the location where you want to save the image file and type the file name. After you enter the file name, click **Save**.



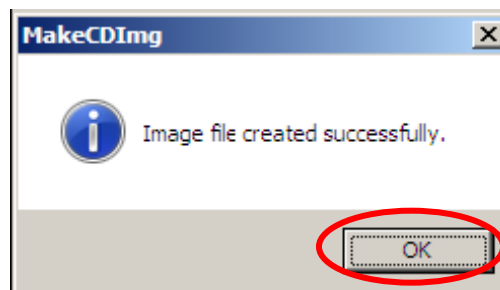
Now that the saving location is specified, click **Start**. After the medium check is completed, conversion to the CD/DVD image starts.



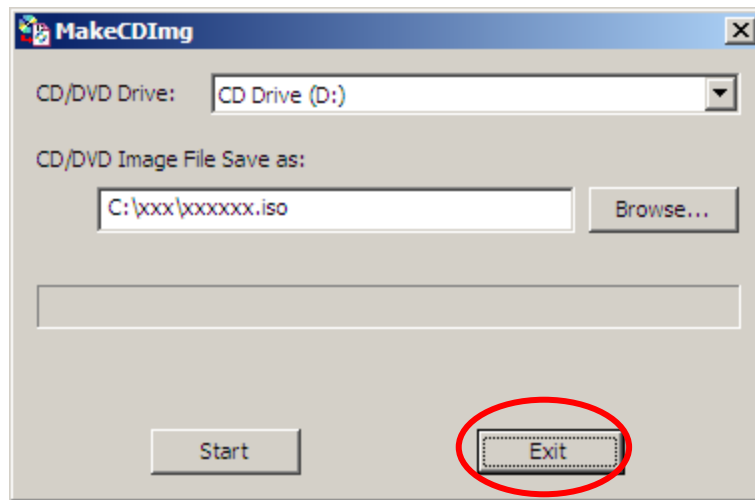
As shown below, the progress bar indicates how much of the conversion is finished so far.



When the following message box appears, conversion to the CD/DVD image completes. Click **OK** in the message box. The image file is created in the specified saving location.



When you finish, click **Exit** to quit **MakeCDImg.exe**.



Notes on CD/DVD media to be converted to image files

When you convert a CD/DVD medium to an image file, make sure the medium satisfies the following conditions:

- The medium is formatted with the ISO9660 file system.
- The medium is not a multi-session disk.

Even when the medium satisfies the above conditions, you cannot create an image file if, for example, the medium has some special protection or the media and the CD/DVD drive have compatibility issues.

If the CD or DVD is not created in the "disk at once" mode, more likely creating an image file fails.

If you cannot create an image file, use the CD/DVD drive on the console terminal for the remote CD/DVD function instead.

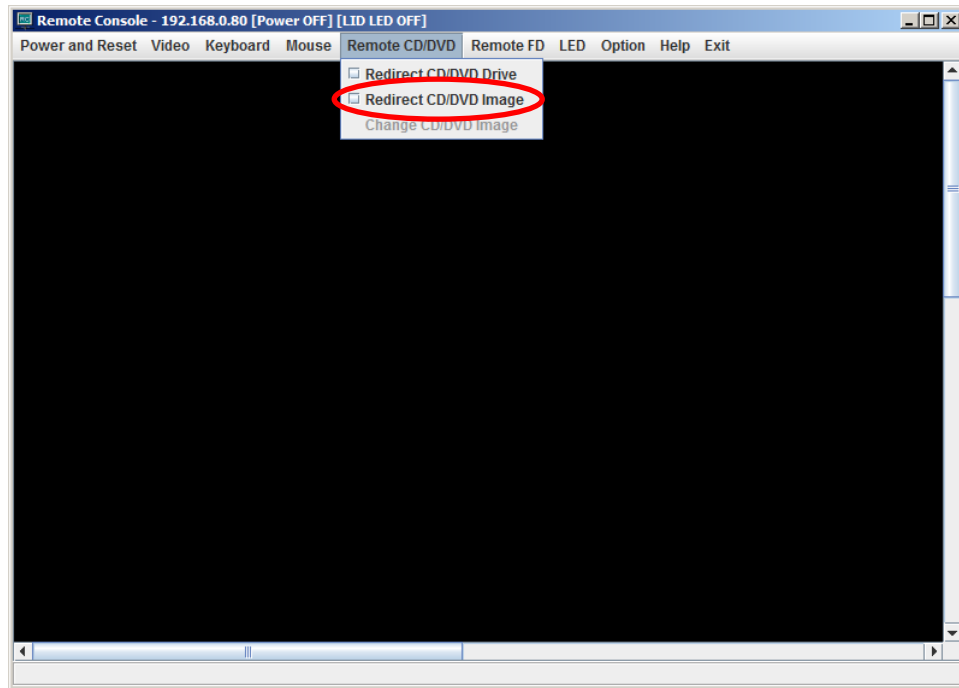
Notes on CD/DVD image files

Be cautious about the following notes when you use CD/DVD image files.

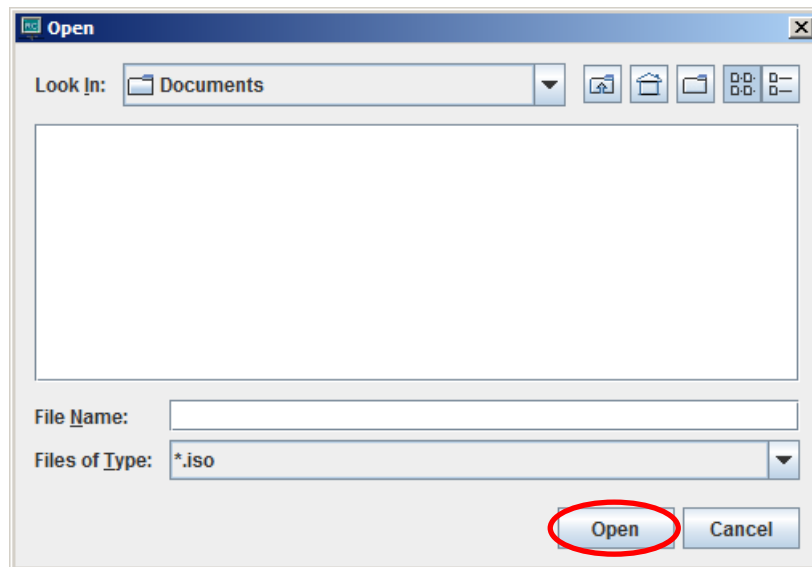
- (1) For an image file of the medium with a license agreement, such as the OS install medium, the same license agreement applies. Make sure you do not breach the license agreement when using the image file.
- (2) Image files created by MakeCDImg can only be used by the remote CD/DVD function of the remote console application. If you use those images for other purposes, Hitachi has no obligation or liability for the caused damages.

The following describes how to use a CD/DVD image using the remote console application.

Select [**Remote CD/DVD**] > [**Redirect CD/DVD image**] on the menu.



The **Open** file dialog box is displayed. Select the image file and click **Open**.



The CD/DVD image on the console terminal has just been connected to the system unit as a remote CD/DVD.

To finish the remote CD/DVD function, select [**Remote CD/DVD**] > [**Redirect CD/DVD image**] on the menu again.

Using the LID on the system unit

You can turn on the LID (SERVICE LED switch) on the system unit connected to the remote console.

You cannot use this function if the system unit does not have an LID (SERVICE LED switch).

You can check the current status of the system unit LID on the title of the toolbar.

You can set the status of the system unit LID by selecting [**LED**] on the menu.

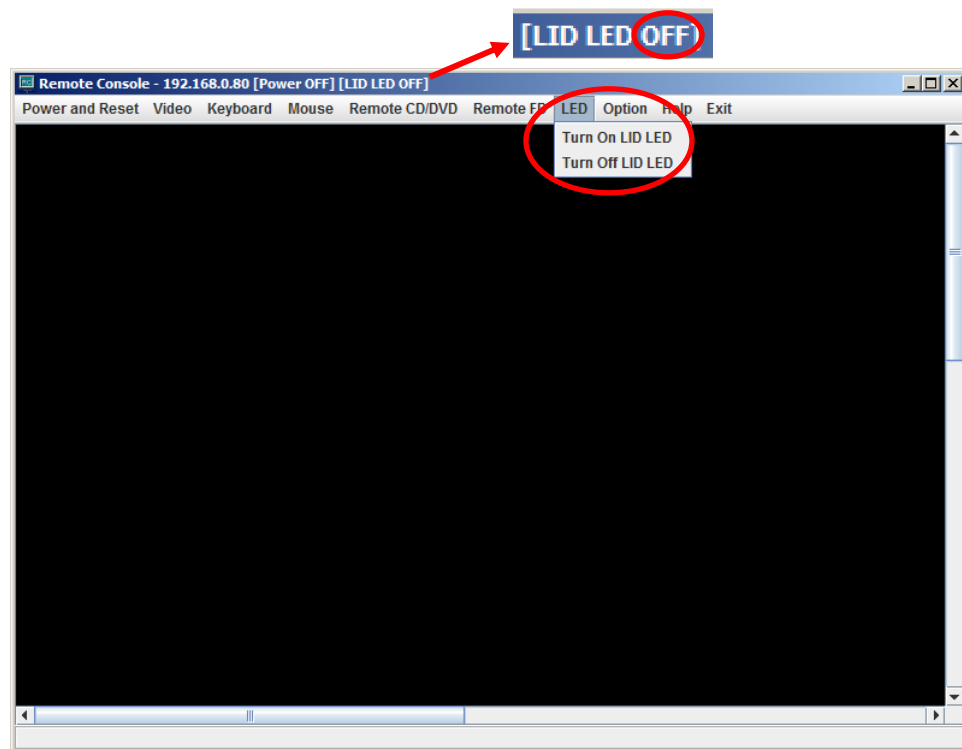


Table 4-5

Menu	How the status is displayed on the toolbar	System unit LID
[Turn On LID LED]	ON	LED on
[Turn Off LID LED]	OFF	LED off



The LID (SERVICE LED switch) is also controlled by other ways than the remote console application. Consequently, depending on the timing, specifying the status of the LID by the remote console application may not affect the actual status of the LID.



When you turn on and off the LID (SERVICE LED switch), the display mode of the SERVICE LED switch changes in the same way as you turn on or off the SERVICE LED switch on the system unit.

Setting up the mouse mode

The remote console supports the following two mouse modes.

Table 4-6

Mode	Function
ABSOLUTE mode	In this mode, the mouse cursor displayed by the OS on the console terminal is used for mouse control.
RELATIVE mode	In this mode, the mouse cursor displayed on the system unit screen is used for mouse control.

In order to operate mouse properly, you need to change Mouse Mode depending on system unit and start remote console application.

- If the OS(Windows or RHEL6) on the system unit starts, specify ABSOLUTE mode.
- If the system unit OS is not the above OS, or before the OS starts (Web BIOS etc), specify RELATIVE mode.



If you specify RELATIVE mode, it is recommended to hide the mouse cursor of the console terminal. Depending on the OS on the system unit, the location of the mouse cursor of the console terminal may be different from the location of the mouse cursor of the remote console.

Setting up the mouse mode



When you change the mouse mode, make sure the remote console is terminated. If you change the setting while the remote console is running, the operation of the mouse may get unstable.

Use the Web console on the system unit to change the setting of the mouse mode. You need to restart the remote console application to make the mouse mode change effective.

For details, see *User's Guide* Remote management function.

Scrolling the screen

If you set the resolution of the system unit screen larger than the window size on the console terminal side, only part of the screen that fits the window size on the console terminal side is displayed. Use the scroll bars at the bottom and at the right of the window to scroll the system unit screen.

Precautions

This chapter describes what you need to be aware of when you use the remote console.

- [Restrictions on keyboard input](#)
- [List of shortcut keys](#)
- [Automatic logout](#)
- [List of messages](#)

Restrictions on keyboard input

The remote console transfers the keyboard input on the console terminal to the system unit as is. As an exception, some keys are not transferred as is. When you use the remote console, beware of those keys with restrictions. The following table shows the keys with restrictions for 109 keyboard.

Table 5-1

Key	Problem	Action to be taken
Left Alt key Right Alt key	The key input is not transferred to the system unit.	Use the menu or the shortcut key to send this key to the system unit.
Left Windows logo key Right Windows logo key	The key input is not transferred to the system unit.	Use the menu or the shortcut key to send this key to the system unit.
ALPHANUMERIC key	If the OS on the system unit is Linux, after the alphanumeric key is pressed, Shift + Caps Lock may be transferred every couple of seconds repetitively.	When you want to switch between uppercase and lowercase letters, use Shift + Caps Lock instead. Pressing the alphanumeric key one more time can cancel the situation where Shift + Caps Lock are transferred repetitively.

List of shortcut keys

For your convenience when you use the console terminal, the following shortcut keys are provided.

All shortcut keys use the Alt key in their combinations.

Table 5-2

Key input	Description
Alt + Z	Use this shortcut key to press the Left Alt key. The Left Alt key is held down until this shortcut key is used again.
Alt + M	Use this shortcut key to press the Right Alt key. The Right Alt key is held down until this shortcut key is used again.
Alt + X	Use this shortcut key to press the left Windows logo key. The left Windows logo key is held down until this shortcut key is used again.
Alt + N	Use this shortcut key to press the right Windows logo key. The right Windows logo key is held down until this shortcut key is used again.
Alt + L	Use this shortcut key to press the Ctrl+Alt+Del keys.
Alt + R	Use this shortcut key to refresh the screen to the latest graphics screen of the server blade.
Alt + G	Use this shortcut key to hide the mouse cursor of the console terminal. Use this shortcut key again to show the cursor.
Alt + W	Use this shortcut key to toggle between the full screen mode and the window display mode.
Alt + E	Use this shortcut key to exit from the remote console application.

Automatic logout

If the keyboard and the mouse are inactive for 15 minutes, the user is logged out from the remote console automatically and the remote console application terminates.

The automatic logout function can be disabled by selecting [**Options > Disable Auto Logout**] on the menu.

List of messages

The following table shows the meanings of the messages you see when using the remote console and how to handle each message.

Table 5-3

Item	Message	Action
1	The operation cannot be performed.	If you see this message again and again, terminate the remote console and then reconnect.
2	The operation cannot be performed. This program will exit.	Check the operating environment.
3	Invalid arguments. Please try again.	Terminate the remote console and the Web console, and then reconnect.
4	The execution environment does not meet the system requirements. Please check the execution environment and download the program again.	Terminate the remote console, check the operating environment, and then reconnect.
5	The execution environment does not meet the system requirements. Please check the execution environment.	A problem occurred when the Select the FD drive dialog box or the Select the CD/DVD drive dialog box was being created. Check the operating environment.
6	Failed to connect to the server (xxx.xxx.xxx.x). This program will exit.	Check the operating environment and the IP address of the connection destination.
7	Unable to connect to the server (xxx.xxx.xxx.x). Please check the IP address and the port number.	Check the IP address of the connection destination. You do not need to change the port number.
8	Failed to connect to the server (xxx.xxx.xxx.x).	A problem occurred during login authentication. Check the user ID and password.
9	The Remote Console is already being executed on the server (xxx.xxx.xxx.x).	Another remote console has already connected to the server at the connection destination. Multiple console terminals cannot connect to the remote console at the same time.
10	The user does not have the permission to use Remote Console.	The user does not have the access right to use the remote console. Use the Web console to check the access right of the user.
11	User authentication failed.	A problem occurred during login authentication. Check the user ID and password.
12	Initialization failed. Please restart this program.	A problem occurred during initialization of the login dialog box. Restart the Internet Explorer on the console terminal and then reconnect.
13	Please enter IP address.	You entered an invalid IP address. Check the IP address.
14	Please enter user ID.	You entered an invalid user ID. Check the user ID.
15	The user ID must be between 1 and 32 characters.	You entered an invalid user ID. Enter a user ID with a correct character length.
16	Please enter password.	You did not enter a password. Check the entered password.

Item	Message	Action
17	The password must be between 1 and 32 characters.	You entered an invalid password. Enter a password with a correct character length.
18	The connection to the server (xxx.xxx.xxx.x) has been lost. This program will exit.	Connection to the server is terminated. Reconnect to the server. If the left message is displayed during starting a remote console, reconnect to the server after waiting one minute.
19	The connection to the server (xxx.xxx.xxx.x) timed out. This program will exit.	No communication was made with the server for certain amount of time and the connection was terminated because of timeout. If you want to continue using the remote console application, reconnect to the server.
20	Invalid Mouse Mode. Mouse Mode response packet not yet received from Video Server. Please try after some time.	A problem occurred during communication of the mouse mode. Wait for a while and re-execute.
21	Exception occurred while starting mouse redirection in Relative mode. Please close this session and try again. If the problem persists, please switch to Absolute mouse mode and try again.	Mouse initialization failed. Terminate the remote console and then reconnect. If the problem continues, change the mouse mode to ABSOLUTE mode and re-execute.
22	Window size is too small. Please resize the window and try again.	The window size is too small. Adjust the window size and re-execute.
23	More than 50% of your redirection window lies outside the screen. Mouse redirection in relative mode requires redirection window of at least 50% visible on the screen. It is recommended to have redirection window area completely visible on the screen during mouse redirection in relative mode. Please move/resize your redirection window and try again.	The mouse cannot work properly because not less than half of the window is hidden. Adjust the position and size of the window and re-execute. We recommend displaying the whole window on the screen.
24	Emulation cannot be started.	Confirm that the FD drive or the CD/DVD drive on the console terminal is not currently being used and re-execute.
25	The connection of Remote FD has been lost.	Connection to the remote FD is terminated. If you want to continue using the remote FD, reconnect to the remote FD.
26	The connection of Remote CD/DVD has been lost.	Connection to the remote CD/DVD is terminated. If you want to continue using the remote CD/DVD, reconnect to the remote CD/DVD.
27	The device is busy. Please try after some time.	Wait for a while and re-execute.
28	CD/DVD redirection cannot be started until ISO redirection is stopped.	The remote CD/DVD function has been already using the CD/DVD image. If you cannot access the image, terminate the remote CD/DVD function using the CD/DVD image and re-execute.

Item	Message	Action
29	FD redirection cannot be started until FD image redirection is stopped.	The remote FD function (image file) has already started. If you cannot access the image, terminate the remote FD function using the FD image and re-execute.
30	CD/DVD image redirection cannot be started until normal CD/DVD redirection is stopped.	The remote CD/DVD function has been already using the CD/DVD drive. If you cannot access the drive, terminate the remote CD/DVD function using the CD/DVD drive and re-execute.
31	FD image redirection cannot be started until normal FD redirection is stopped.	The remote FD function has been already using the FD drive. If you cannot access the drive, terminate the remote FD function using the FD drive and re-execute.
32	There is no emulation supporting drive.	Check the operating environment to see if any drives are available.
33	Remote FD cannot be started because it cannot connect to server.	Check the operating environment and the IP address of the connection destination.
34	Remote CD/DVD cannot be started because it cannot connect to server.	Check the operating environment and the IP address of the connection destination.
35	Remote FD cannot be used.	Check the operating environment and the IP address of the connection destination.
36	Remote CD/DVD cannot be used.	Check the operating environment and the IP address of the connection destination.
37	This user doesn't have an authority to use Remote FD.	The user does not have the access right to use the remote FD. Use the Web console to check the access right of the user.
38	This user doesn't have an authority to use Remote CD/DVD.	The user does not have the access right to use the remote CD/DVD. Use the Web console to check the access right of the user.
39	Remote FD cannot be used because of a wrong session.	The communication may be terminated. Check the operating environment, and then reconnect.
40	Remote CD/DVD cannot be used because of a wrong session.	The communication may be terminated. Check the operating environment, and then reconnect.
41	Other Remote Console is using Remote FD.	Wait for a while and re-execute. If multiple servers use the same remote FD, you need to specify "Read only" for the FD medium or the FD image file.
42	Other Remote Console is using Remote CD/DVD.	Wait for a while and re-execute.
43	Remote FD cannot be started because FD drive(x) could not be opened.	Confirm that the (x) drive on the console terminal is currently available and re-execute. If multiple servers use the same remote FD, you need to specify "Read only" for the FD medium.
44	Remote CD/DVD is stopped because CD/DVD drive(x) could not be opened.	Confirm that the (x) drive on the console terminal is currently available and re-execute.
45	Remote FD cannot be started because image file could not be opened.	The selected image file does not exist or other problems occurred. Check if the selected image file is OK. If multiple servers use the same remote FD, you need to specify "Read only" for the FD image file.
46	Remote CD/DVD cannot be started because image file could not be opened.	The selected image file does not exist or other problems occurred. Check if the selected image file is OK.

Item	Message	Action
47	Failed to open image file.	The selected image file does not exist or other problems occurred. Check if the selected image file is OK.
48	Remote FD cannot be started because it is already started.	The connection to the remote FD is already established. You cannot connect to the multiple remote FDs at the same time. Check if the remote FD function has been already started.
49	Remote CD/DVD cannot be started because it is already started.	The connection to the remote CD/DVD is already established. You cannot connect to the multiple remote CD/DVDs at the same time. Check if the remote CD/DVD function has been already started.
50	Remote FD is stopped because it received error data.	Check the operating environment, and then reconnect.
51	Remote CD/DVD is stopped because it received error data.	Check the operating environment, and then reconnect.
52	Shortcut key list cannot be shown.	A problem occurred when the list of the shortcut keys was being displayed. If you see this message again and again, terminate the remote console and then reconnect.
53	Version information cannot be shown.	A problem occurred when the version information was being displayed. If you see this message again and again, terminate the remote console and then reconnect.
54	The user logged out Remote Console because there were no keyboard or mouse operations for auto-logout period. Logout Time: xxxx.xx.xx xx:xx:xx This program will exit.	The keyboard and the mouse have been inactive for certain amount of time and the user has been logged out. The automatic logout function can be disabled by selecting [Options > Disable Auto logout] on the menu.

Q&A

This chapter explains how to handle minor problems. When the following instructions cannot resolve the problem, contact the dealer or talk to the maintenance personnel.

- ☐ [Procedures to take when you cannot connect to the remote console](#)
- ☐ [Procedures to take when the keyboard and mouse cannot be used remotely](#)
- ☐ [Checking the version of the application](#)
- ☐ [How to recover when you cannot use the remote FD or remote CD/DVD](#)
- ☐ [Procedures to take when you cannot connect to the remote console with JRE 7u25 or higher.](#)

Table 6-1

Item	Problem	Action to be taken
1	You cannot register a user.	The character length of the user ID and password has to be 32 characters or less.
2	You cannot log in to the system unit.	Make sure that the LAN cable connection is OK. Check if the user ID and password are registered to the system unit. Check if the network settings (IP address, subnet mask, and so on) are correct.
3	Mouse movement and screen rendition are slow when the remote console is used.	When the remote console is used, the speed of mouse movement and screen rendition is slower than the speed on the normal server screen. Setting the resolution of the system unit screen lower, and changing color of the Desktop Background Wallpaper to simple, may make response better. If the speed is extremely slow or the screen rendition does not work properly, check the refresh rate. If the speed of the screen rendition is extremely slow, press "Refresh Screen" button on tool bar.
4	You cannot use the keyboard or the mouse from the remote console.	Check the tool bar to see if none of the Alt keys or Windows logo keys are being pressed. Check if the network environment (firewalls and so on) is OK. Terminate the remote console and then restart the remote console. If the above measures cannot resolve the issue, follow the instructions in Procedures to take when the keyboard and mouse cannot be used remotely .
5	The mouse cursor does not appear when the system unit OS is Windows.	You need to specify ABSOLUTE mode for the mouse mode when the system unit OS is Windows. Change the mouse mode after you terminate the remote console. (For information, see Setting up the mouse mode .)
6	The mouse cursor does not appear when the system unit OS is Linux	You need to specify RELATIVE mode for the mouse mode when the system unit OS is RHEL 5.x. You need to specify ABSOLUTE mode for the mouse mode when the system unit OS is RHEL 6.x. If you change Mouse Mode, terminate the remote console and shut down the system before changing Mouse Mode. (For information, see Setting up the mouse mode .)
7	The ! mark is displayed at HID mouse device or HID keyboard device in the device manager.	Terminate the remote console and shut down the system. Disconnect AC cables from the system unit, wait for about 30 seconds, connect the AC cables, and then restart the system unit.
8	You cannot activate the CAPS LOCK key from the console terminal.	You cannot use the CAPS LOCK key itself. You can use the combination of the SHIFT + CAPS LOCK keys instead.

Item	Problem	Action to be taken
9	The keyboard or mouse input is not transferred to the system unit.	<p>In the condition that the setting of keyboard menu of remote console ([Hold Alt key] or [Hold Windows key]) is enabled, or that the key of keyboard or the button of mouse is pressed,</p> <p>terminating the remote console application may cause the problem that the key of keyboard or the button of mouse is kept pressed</p> <p>The following describes how to resolve the problem.</p> <p>Step1 : Connect remote console application, disable all of the keyboard menu.</p> <p>Step2 : If step1 does not resolve the problem, press the system's key that is same key that is kept pressed on the remote console, only once. If you don't know the key that is kept pressed on the remote console, press [left Alt key], [right Alt key], [left Windows key], [right Windows key] only once.</p> <p>Step3 : If Step1 and Step2 does not resolve the problem, reboot the system.</p>
10	You can not connect to the system.	<p>If it is failed to connect to the system, terminate the remote console and then reconnect.</p> <p>If it is failed to reconnect to the system, follow the instructions in "Procedures to take when you cannot connect to the remote console".</p> <p>Check that there is not restriction when using the remote console application.</p> <p>Follow the instructions in "Remote console settings".</p>
11	You want to check the version of the application.	Follow the steps in Checking the version of the application .
12	Only part of the system unit screen is displayed.	<p>If you set the resolution of the system unit screen larger than the window size at the console terminal side, only part of the screen is displayed. Use the scroll bars at the bottom and at the right of the window to scroll the system unit screen.</p> <p>(For information, see Scrolling the screen.)</p>
13	In Linux, changing the setting of the resolution or the color depth is not affected properly.	<p>If you click System > administration > display or System > Preferences > Screen Resolution on GUI menu, and change the setting of the resolution or the color depth, the setting of the resolution or the color depth may not be affected properly, the system unit screen may not be displayed properly.</p> <p>In order to change the setting of the resolution or the color depth, change "/etc/X11/xorg.conf".</p> <p>It is recommended to use 1024 x 768 resolution.</p> <p>(Refer to "How to set display settings in Linux")</p>
14	In Linux, you can set only 800 x 600 resolution or lower.	<p>If you install "VESA driver", you may be able to set only 800 x 600 resolution or lower.</p> <p>If you want to set 1024 x 768 resolution or higher, please install "MGA driver".</p> <p>(Refer to "How to set display settings in Linux")</p>

Item	Problem	Action to be taken
15	In Windows, if you specify "High (24 bit)" for Colors, the screen is not displayed.	If you use 1024 x 768 or lower resolution, you can specify only "Medium (16 bit)" and "Highest (32 bit)" for Colors. If you use a higher resolution than 1024 x 768, only "Medium (16 bit)" is supported. Use the above settings for Colors.
16	You cannot select an FD drive when trying to use the remote FD function.	If some application on the console terminal has already opened the FD drive, you cannot start the remote FD. Close the application by using the FD drive.
17	You cannot share the FD image file from multiple servers.	In order for multiple servers to share the same FD image file, you need to specify "Read only" for the FD image file.
18	In Linux, FD media or FD image file is not immediately reflected by writing remote FD.	It may takes some times to FD media or FD image file is not immediately reflected by writing remote FD. Please unmount remote FD, execute "sync" command. FD media or FD image file will be reflected.
19	You cannot use the remote FD or remote CD/DVD due to disconnection.	Follow the instructions described in How to recover when you cannot use the remote FD or remote CD/DVD .
20	You can not start the remote FD, or the remote CD/DVD.	Remote console application communicates with the port 4995 or the port 4997 in the system unit, this communication is for the remote FD or the remote CD/DVD drive. It is necessary to be able to use the port 4995 and the port 4997 in the network environment.
21	When you change the installation media during installation of an OS, the new medium is not recognized.	If you continue the installation immediately after you change the media, the new medium may not be recognized by the OS installer. When you are using a physical drive, wait until the physical drive is ready and then continue the installation. When you are using an image file, wait for about 5 seconds after you change the media and then continue the installation.
22	When Internet Explorer 8 is used, two login dialog boxes for the remote console are sometimes displayed.	The following problem with Internet Explorer 8 may be causing this symptom. For information about the workaround for this problem, visit the following: http://support.microsoft.com/kb/973082/en-us
23	Remote Console's screen is not displayed, or only part of the screen is displayed.	Depending on the network traffic, quantity of image data may be changed, and remote Console's screen may be not displayed, or only part of the screen may be displayed. If remote Console's screen is not displayed, please press "Refresh Screen" button on remote console menu.
24	If the OS on the console terminal is 64bit OS while starting the remote console application, the error message of JAVA application is displayed, and you can not use remote console application.	On the console terminal, 64bit Internet Explorer and 64bit Java are not supported. If the OS on the console terminal is 64bit OS, please use 32bit Internet Explorer, and 32bit Java Runtime Environment.
25	Certificate error is displayed when you use Internet Explorer 8 or higher.	Certificate error may be displayed depending on security setting of Internet Explorer, when you use SSL connections by using "https" in order to connect Web Console.

Procedures to take when you cannot connect to the remote console

When you get into the situation where you cannot connect to the remote console, try step 1 to connect again. If step 1 cannot recover, try step 2.

Step 1

- (1) Select [**Exit** > **Exit**] on the remote console menu to close the remote console application.
- (2) Use the Ping command on the command prompt to check if network communication is OK.
- (3) Wait for about 30 seconds and restart the remote console application.
For more information, see [4. Using the remote console](#).

Step 2

- (1) Select [**Exit** > **Exit**] on the remote console menu to close the remote console application.
- (2) Shut down the system unit and disconnect the AC cables from the system unit.
- (3) Wait for about 30 seconds, connect the AC cables, and restart the system unit.
- (4) Restart the remote console application.
For more information, see [4. Using the remote console](#).

Procedures to take when the keyboard and mouse cannot be used remotely

When you get into the situation where you cannot transfer the keyboard/mouse input to the system unit using the remote KVM, terminate the remote console and restart. If the above procedure does not resolve the problem, try step 1. If step 1 cannot recover, try step 2.

Step 1

- (1) Confirm that on the console terminal, the keyboard and mouse work properly.
- (2) Select [**Exit** > **Exit**] on the remote console menu to close the remote console application.
- (3) Switch the mouse mode on the Web console and restart the remote console.
For more information, see [Setting up the mouse mode](#).
- (4) Select [**Exit** > **Exit**] on the remote console menu to close the remote console application once again.
- (5) Restore the mouse mode on the Web console and restart the remote console.
For more information, see [4. Using the remote console](#).

Step 2

- (1) Select [**Exit** > **Exit**] on the remote console menu to close the remote console application.
- (2) Shut down the system unit and disconnect the AC cables from the system unit.
- (3) Wait for about 30 seconds, connect the AC cables, and restart the system unit.
- (4) Restart the remote console application.
For more information, see [4. Using the remote console](#).

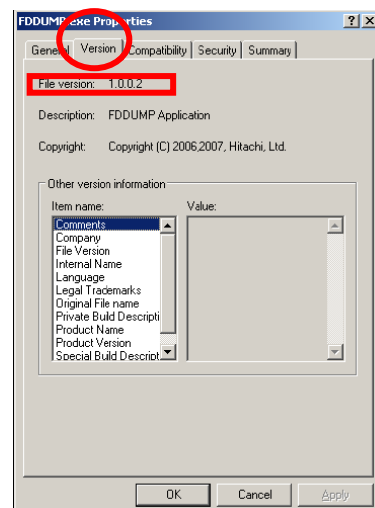
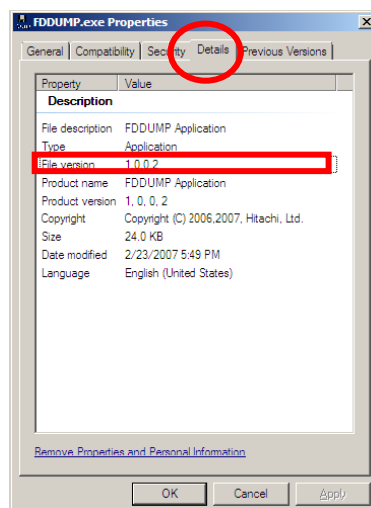
Checking the version of the application

This section explains how to check the version of the application.

If you want to check the version of the FD image makeup tool (**FDDUMP.exe**) and the CD/DVD image makeup tool (**MakeCDImg.exe**), follow the steps below.

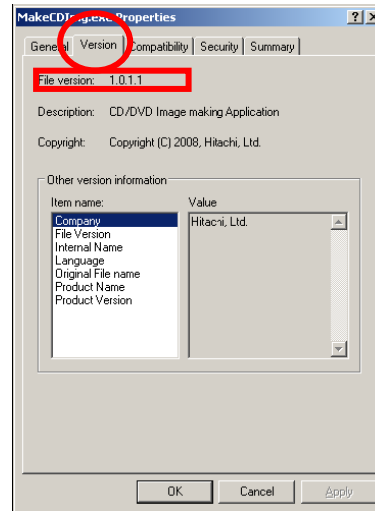
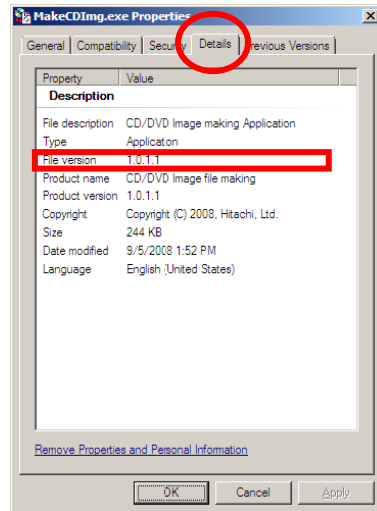
Checking the version of the FD image makeup tool (FDDUMP.exe)

- (1) If the OS on the console terminal is Windows Server 2003, Windows XP, select the [Version] tab on the properties of "FDDUMP.exe" dialog box. If the OS is other than the above, select the [Details] tab on the properties of "FDDUMP.exe" dialog box.
- (2) Check the "File Version" on each tab page.



Checking the version of the CD/DVD image makeup tool (MakeCDImg.exe)

- (1) If the OS on the console terminal is Windows Server 2003, Windows XP, select the [Version] tab on the properties of "MakeCDImg.exe" dialog box. If the OS is other than the above, select the [Details] tab on the properties of "FDDUMP.exe" dialog box.
- (2) Check the "File Version" on each tab page.



How to recover when you cannot use the remote FD or remote CD/DVD

If the remote FD or remote CD/DVD is not recognized by the BIOS or OS on the system unit or if the remote FD or remote CD/DVD is disconnected and cannot be used, follow the procedure below.

Step 1 (checking the network failure)

If the TCP connection between the console terminal and the system unit cannot be kept alive because of network failure, the remote FD or remote CD/DVD may be disconnected or unable to use.

Check if network failure exists. If network failure does not exist, try step 2.

Step 2 (reconnecting the remote FD or remote CD/DVD)

- (1) Terminate the remote FD or remote CD/DVD from the remote console menu.
- (2) Wait for one minute and start the remote FD or remote CD/DVD from the remote console menu. If step 2 cannot recover, try step 3.

For more information, see [4. Using the remote console](#).

Step 3 (system unit power off/on)

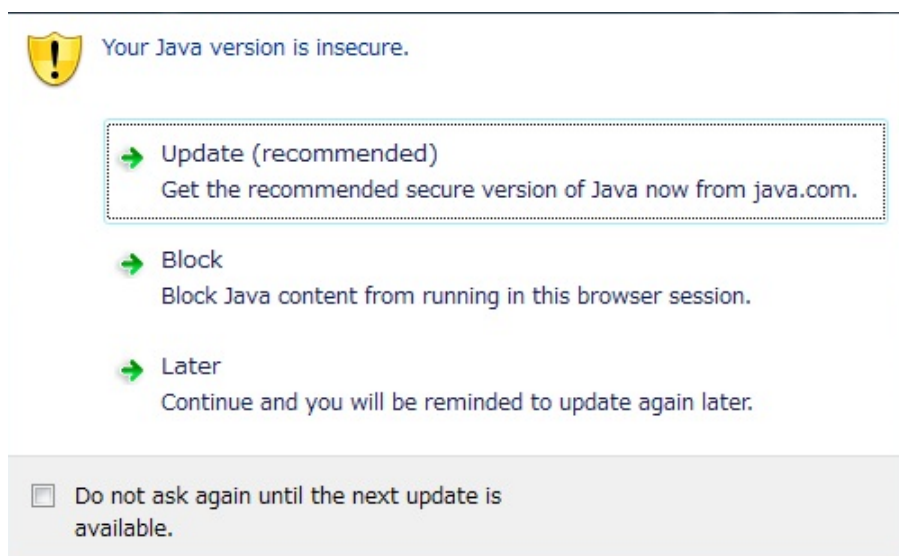
- (1) Shut down the OS on the system unit to turn the power off. If the OS is not running, select [**Power and Reset > Forced Power OFF**] on the remote console menu to turn off the power for the system unit.
- (2) Select [**Exit > Exit**] on the menu to close the remote console application. Restart the remote console application and connect to the system unit.
- (3) Restart the remote FD or remote CD/DVD from the remote console menu.
- (4) Select [**Power and Reset > Power on**] on the remote console menu to turn on the power for the system unit.

If steps 1 through 3 cannot resolve the problem, contact the sales representative or call the maintenance personnel.

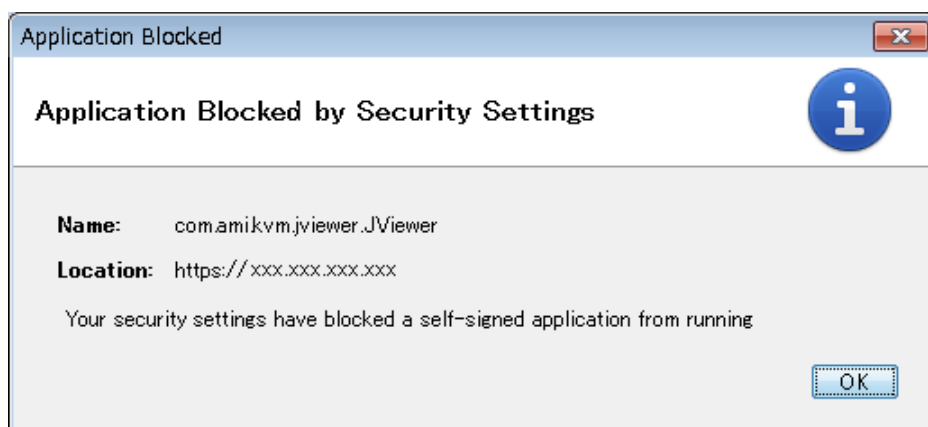
Procedures to take when you cannot connect to the remote console with JRE 7u25 or higher.

The following #1 and #2 problems are caused by the change of JRE 7u25 or higher security policy.

#1. The Remote Console Application will be blocked when JRE expired. The *JRE Expiration Date* is added from JRE 7u21. In expired, JRE will prompt you to upgrade new JRE version. In this case, the following message appears.



In addition, JRE 7u25 or higher will automatically change security setting and Remote Console application will be blocked. In this case, the following message appears.



#2. Remote Console application is blocked with JRE 7u51 or higher and the default setting (**High**).

In this case, the same message as problem #1 appears, and then Remote Console application is blocked.

The following release note is additional information for problems #1.
[Release Note Title] Java SE Development Kit 7, Update 21 (JDK 7u21)
<http://www.oracle.com/technetwork/java/javase/7u21-relnotes-1932873.html>

The following article is additional information for problems #2.
[Article Title] New security requirements for RIAs in 7u51 (January 2014)
https://blogs.oracle.com/java-platform-group/entry/new_security_requirements_for_rias

There are three workarounds in the following for these problems.

Step 1 (Use Java Runtime Environment (JRE) version 7 update 17 or lower.)

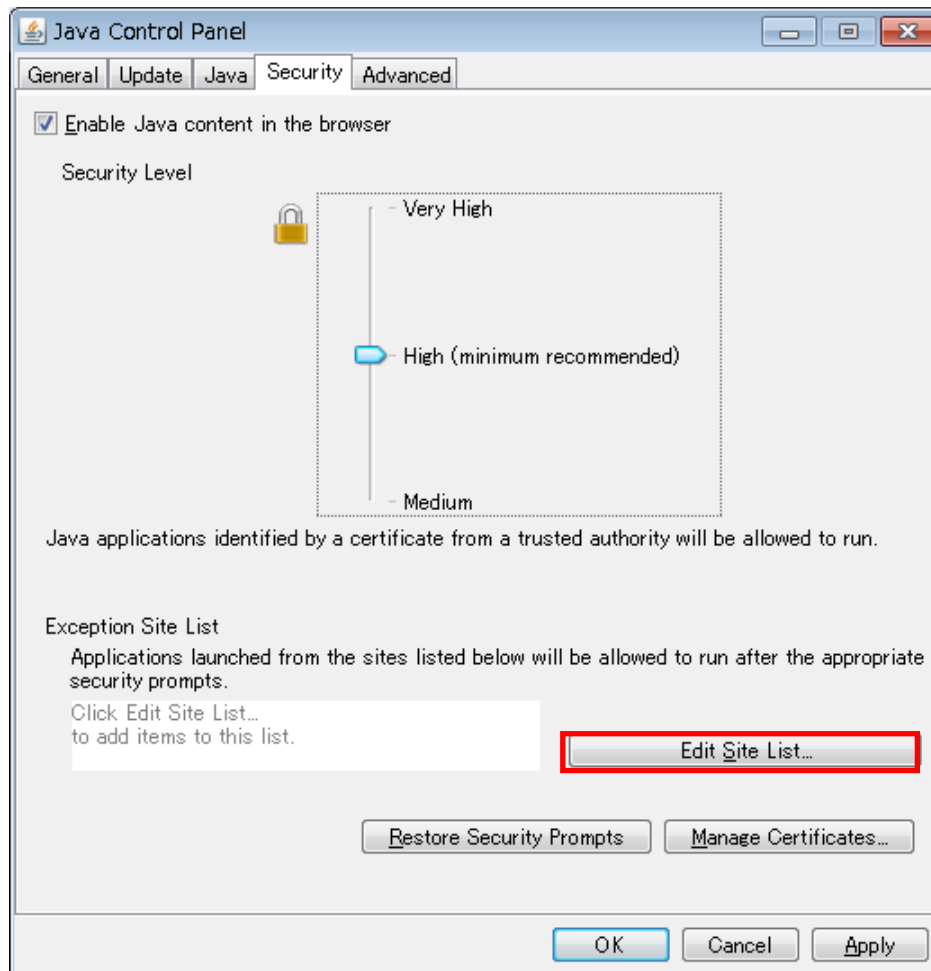
Remote Console application supports SSL/TLS connection. If you use SSL/TLS connection, you will need to install JRE 7u2 or higher.

1. Uninstall the current installation of JRE if already installed.
2. Install JRE 7u17 or lower.

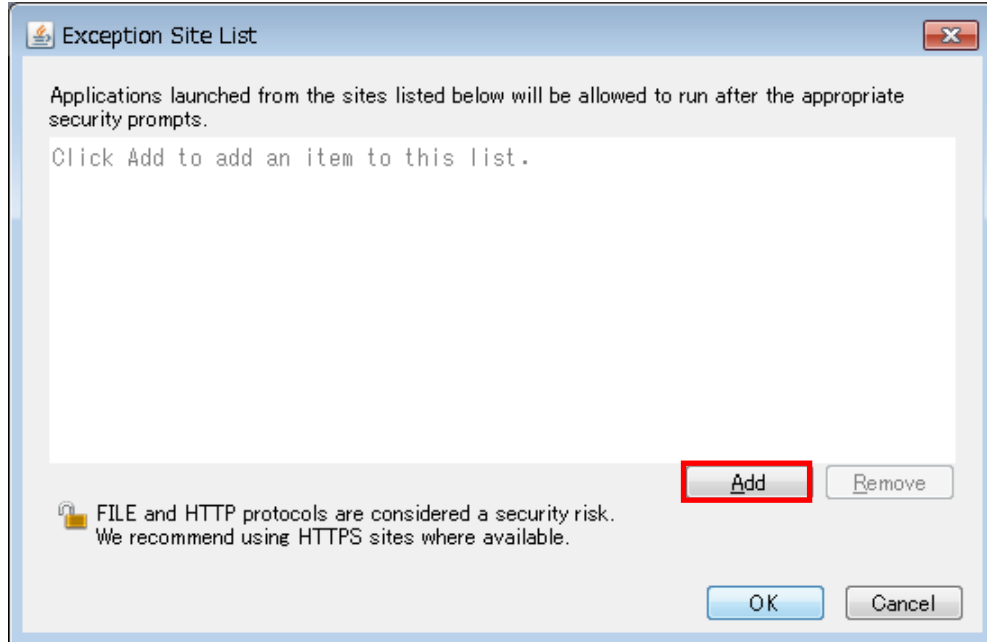
Step 2 (Use Exception Site List)

This function is supported from JRE 7u51.

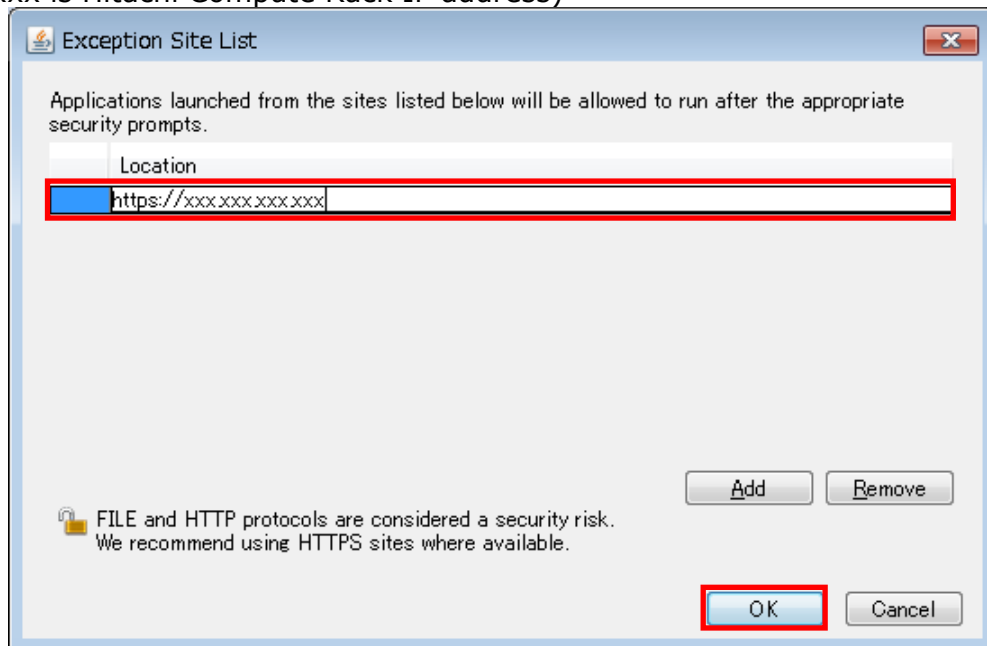
1. Start Java Control Panel, and press the **Edit Site List** button in Security Tab.



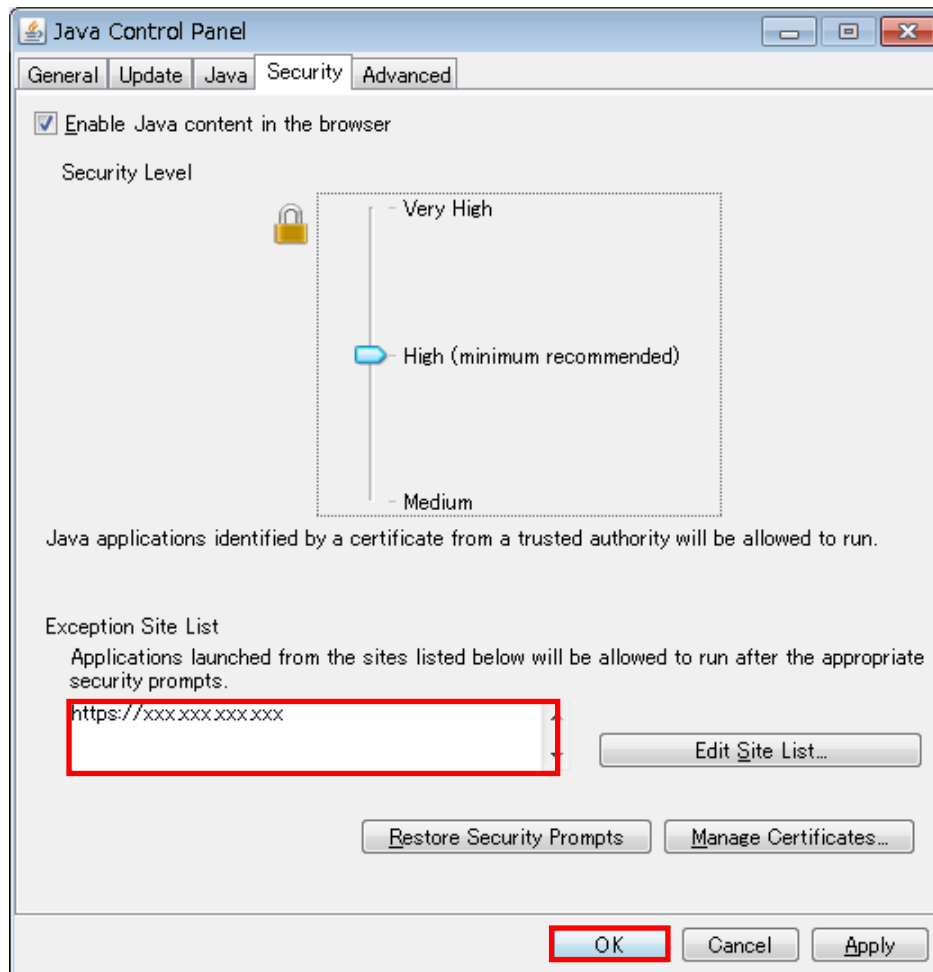
2. Press the **Add** button.



3. Set <https://xxx.xxx.xxx.xxx> in the field and press the **OK** button.
(xxx is Hitachi Compute Rack IP address)



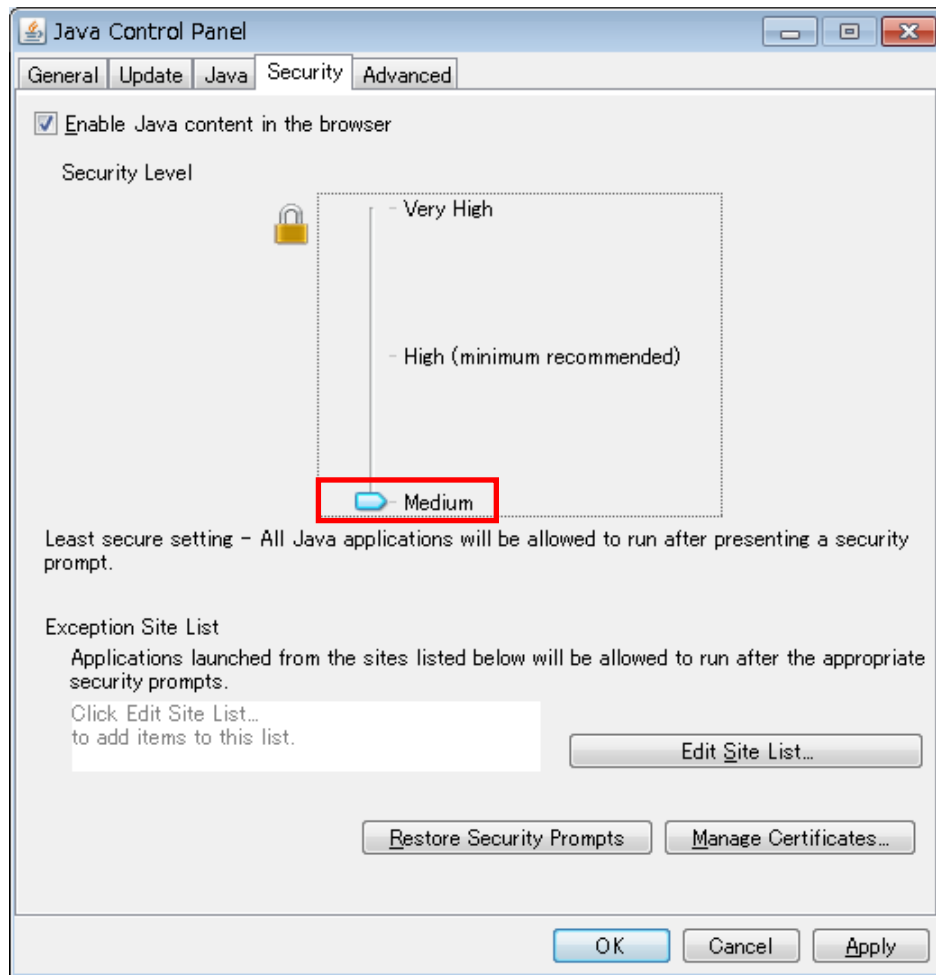
4. Confirm whether the IP address is set to Exception Site List or not.
If set correctly, press the **OK** button.



Step 3 (Change the security level to Medium)

This is not recommended, because security risk will be increased. If possible, use Exception Site List. This function is supported with JRE 7u51 or higher.

1. Start Java Control Panel, and move the security level slider to **Medium**.
2. Press **Apply** button.



How to circumvent the problem that Remote Console boot time is longer when a Client PC is using JRE 7u55.

When a Client PC is using Java Runtime Environment version 7 update 55 (JRE 7u55), it takes about 4 minutes for Remote Console to boot instead of taking 10 seconds (*5).

(*5) : This is depending on the communication environment.

This problem is caused by newly modified behavior in JRE 7u55.

When the following conditions are all met, this problem occurs.

1. The Client PC's JRE version is 7u55 or higher.
2. BMC version is 09-80 or lower.

Workaround

→ Use the JRE 7u51 or lower.

Please download JRE 7u51 or lower which does not have the potential of this problem from the following URL.

<http://www.oracle.com/technetwork/java/archive-139210.html>

Countermeasure

We will have a solution for this problem with the modified BMC code which adopt the behavior of the JRE7u55.

→ Upgrade BMC firmware to version 09.81 or higher.

This version is included in the BIOS/BMC FW Update Tool 01-10-01 or higher.

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