

HDE Controller[®]

Installation Manual

Please note that this user manual may be subjected to change due to product upgrades without any prior notice.

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■ How to Read This Manual

● About this Manual

The “HDE Controller Installation Manual” provides users with instructions to installing OS and the HDE Controller (this Product) as well as steps for configuring the initial settings of the Product.

Annotations are provided for any matters requiring special attention and phrase supplements.

	Any matters which require special attention are marked with this "Alert" icon in bold frame.
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	Contents which provide useful reference for using HDE Controller are marked with this "Hint" icon.
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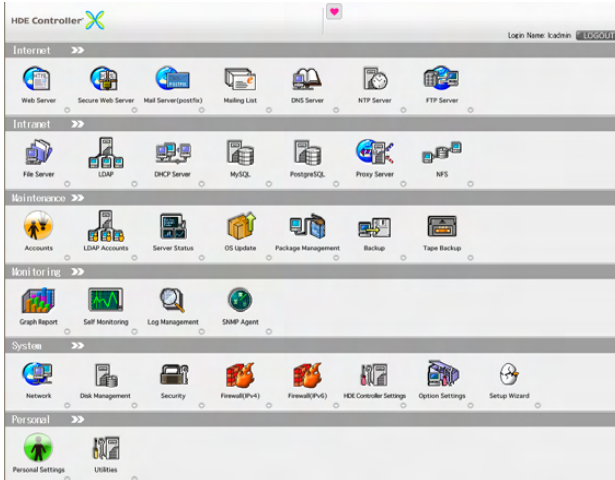


HDE Controller X

Chapter 1 Before Installation

1. Summary

Thank you for purchasing HDE Controller (this Product). This first chapter will provide users with a summary of the Product and any matters which require special attention while using the Product.



HDE Controller Menu Screen

■ What is HDE Controller?

Many modern day servers use the Linux system due to its stability, quick security correspondence, and most of all, its high cost-performance.

As popularity towards Linux increases, users who have never used UNIX in the past are beginning to take high interest in Linux. However, since the Linux system incorporates UNIX, which requires command-line operations and complicated configuration file editing, it may be difficult to introduce users who are used to user-friendly operation screens, such as Windows, to this type of old-fashioned system.

HDE Controller, initially released in January 2000, provides such users with an easy-to-use tool for Linux server management. Since its release, we have continued to upgrade the Product by incorporating on-coming user demands.

Once HDE Controller is installed on a Linux Server, users are able to experience a Windows-like ease of operation by executing operations via a Web browser.

Our distinguished, Good Design Award awarded interface is designed to provide users with the tools to manage servers intuitively without requiring advanced knowledge on the actual Linux system.

HDE Controller enables users to perform server operations from the initial Network setting to general server operations such as configuring each server setting, account management, backup, log management, status monitoring, and security update, entirely on a Web browser. With HDE Controller, troublesome command-line operations are made no longer necessary.

HDE Controller not only enables the stable operations of Linux Servers, but it also reduces various types of management costs that often follows after introducing a new server: cost for server administrator training, administrator switching, moving to an remote area, etc.

■ What is Linux?

Linux is a free, re-distributable Operating System compatible to UNIX developed first by Linus Torvalds, who was a student at the University of Helsinki, Finland at the time. Although Linux is the name of the kernel, the core part of an OS; it is becoming more commonly known as a system package which includes the kernel as well as many other useful tools outside of the kernel.

Although Linux is distributed free of charge, the kernel alone does not include any installer and hence unpractical just by itself. Therefore, generally, Linux is distributed in packages called Distributions which includes a simple installer and other useful tools.

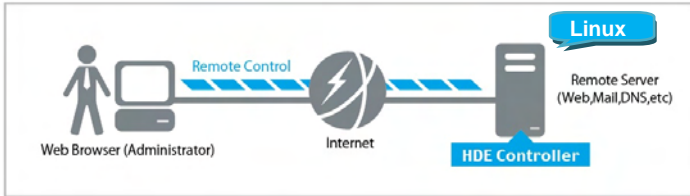
Sources of distributions are called “Distributors”, which distribute paid Linux distributions with attached user-support. Popular Distributions include Red Hat Linux and CentOS.

Although Linux was formally used exclusively by private users, it has gained a much higher reliability today as large companies and cooperation have incorporated Linux for their key operations. In the past, Linux only operated on PC/AT compatible machines; however, since the joining of large hardware vendors to its development, Linux is now available in many varieties of platforms today.

2. Using the HDE Controller

■ Summary of HDE Controller

By installing HDE Controller on a server machine with pre-installed Linux OS, users will be able to perform server management operations via a Web browser instead of the traditional command-line interface.



HDE Controller Summary

Hence, users are first required to setup a server machine with Linux OS already installed, and install this Product on the same machine.

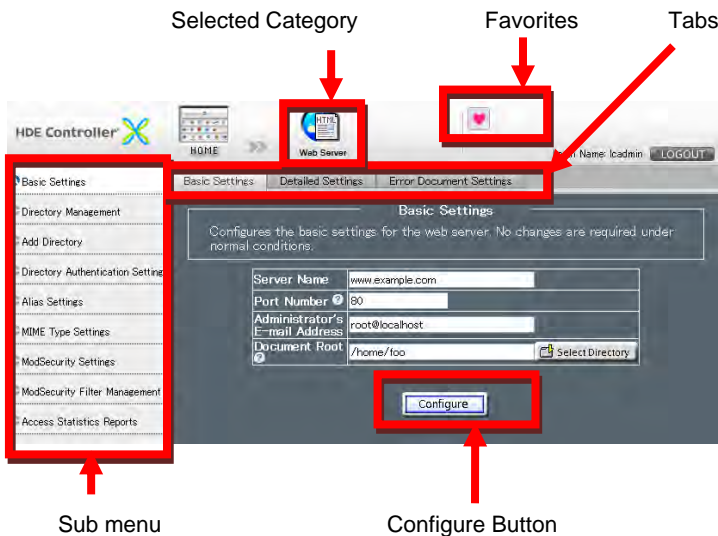
After the installation, users will be able to access and configure the server settings on a separate client machine via a Web browser.

■ Basic Operations of HDE Controller

HDE Controller is equipped with a variety of server management tools organized by their corresponding categories. The top page of HDE Controller is called the "Main Menu".

Each item in the Main Menu includes several sub-menus. The sub-menu will appear on the left side of the screen when each corresponding menus are accessed from the Main Menu. These sub-menus contain tools for performing detailed settings for the server.

Lower categories within a sub-menu are displayed as multiple tabs in the setting contents in the centre of the configuration screen as shown below.



Structure of the HDE Controller Menu

■ Setting Method

Each changes made in the configurations will be applied when the "Configure" button at the bottom center of the screen is clicked

When the "Configure" button is pressed, an alert window with the message "The configuration process completed successfully." will appear on the screen. Please note that any setting changes made will not be saved until the "Configure" button is pressed.

However, please note that the "Configure" button may be absent in some of the menu screens.

3. Required Operating Environment

The required operating environment of HDE Controller is listed as below.

Required Operating Environment (Server)	
CPU	Minimum Requirement: Intel Pentium III 1.0 GHz or above.
Memory	Minimum Requirement: Over 1GB of memory space for HDE Controller. Extra memory space may be required depending on the operating environment.
Hard Disk	Program Size: Over 50MB (upon installation) Extra hard disk space may be required depending on the operating environment.
Others	CD-ROM Drive (during installation only) Network Interface Card

Supported Distributions
Red Hat Enterprise Linux 6.0 Server for x86_64 (Intel64)
Red Hat Enterprise Linux 6.1 Server for x86_64 (Intel64)

※Only supported by Red Hat Enterprise Linux 6.0/6.1. For up-to-date information on supported distributions, please visit our Website at <http://www.hde-controller.com/>.

Supported Virtual Environment
VMware ESX/ESXi 4.0 / 4.1
We are confirming operations on a guest OS on a supported virtual environment. Please be aware of the following when using running on a virtual environment.
<ul style="list-style-type: none">•It is necessary to distribute the system resource in a manner that would avoid any decrease in performance.•Guest OS is limited to the supported distributions under the supported virtual environments as listed above.•Please note that we cannot provide any support for any OS that are not subjected to support by the VMware.•Please note that we do not provide any support regarding the VMware.

•The program must be able to acquire accurate system time on the guest OS.

Console	
OS	Microsoft Windows XP / Vista / 7
Browser	Microsoft Internet Explorer 8
Monitor Resolution	Display Resolution XGA (1024 × 768) or above.



Please disable the pop-up blocker on your Internet Explorer before using this Product.

For up-to-date information on required operating environment, please visit our Web site at <http://www.hde-controller.com/>

HDE Controller X

Chapter 2

Setup an Operating Environment

1. Summary

HDE Controller is a software designed for performing server machine configurations and management on a machine installed with Linux OS.

Therefore, it is necessary to properly install the Linux OS from the supported distributions.

For a list of supported distributions and supported virtual environments, please refer to [Chapter 1 Before Installation - 3. Required Operating Environment].

2. Matters to be Attended to during Installation

Please read and understand the following before installing this Product.

Please note that we will hold no responsibility towards any malfunctions that may result in installing this Product by any other method other than the one specified in this manual.

■ Attention Matters

● IP Address and Host Name Settings

It is necessary to set the IP address and Host name on the Linux server before installing this Product. Setting the domain name is a mandatory procedure and one or more dot “.” should be included in each domain names. Please note that the software will not function well if the FQDN is set to localhost or localhost.localdomain.

This Product will internally store and utilize information such as IP address and domain name. Please be sure to make any Network information changes (IP address, domain name, etc.) from the software's configuration menu after installation.

● Port Settings

The Web browser on the client machine must be able to access port number 16590 on the Linux server. Please be sure that this port is not blocked by any packet filter or firewall

● Packet Filter Settings

Please do not set any Linux and Network packet filters or firewalls before installing this Product.

● Security Enhanced Linux (SELinux) Settings

Please set SELinux to "Disable" or "Permissive".

● Termination of Unnecessary Services

Please terminate any unnecessary services running on Linux after installing this Product.

- **Installing Linux**

This product controls each configuration files under the assumption that they were installed according to the standard installation procedure specified in each Linux distributions. Please note that possible malfunction may occur if the user has edited the configuration files using an editor or if the initial state has been customized using OEM products.

- **Partition Settings**

When using disk quota, it is necessary to set the directory with disk quota set upon OS installation into a separate partition.

Each user's emails and data will be stored under /home and open-source software data such as database files will be stored under /var. Hence, it is recommended to leave extra disk space for the /home and /var partitions.

3. Installing Red Hat Enterprise Linux 6.0 Server (x86_64)

This section will describe the steps of installing the Linux system which supports this Product.



Please note that this product may malfunction when installed via procedures other than the one specified in this manual.

The following configuration steps are the minimum configuration procedure required in order to maintain a fully functional Controller. Please configure other settings in accordance with your operation environment.

● Booting from DVD Media

Insert the CD/DVD media containing Red Hat Enterprise Linux 6.0 Server (x86_64) into the CD/DVD drive of the server machine you wish to install. Boot from the media.



In order to start the OS installation, it is necessary to change the BIOS boot menu such that the system will boot from the CD/DVD drive instead of the hard disk.



CD/DVD media differs between the 32-bit version and the 64-bit version.

- Starting the Installer

Once the installer starts, a screen with the words "Welcome to Red Hat Enterprise Linux 6.0!" will be displayed on the screen.

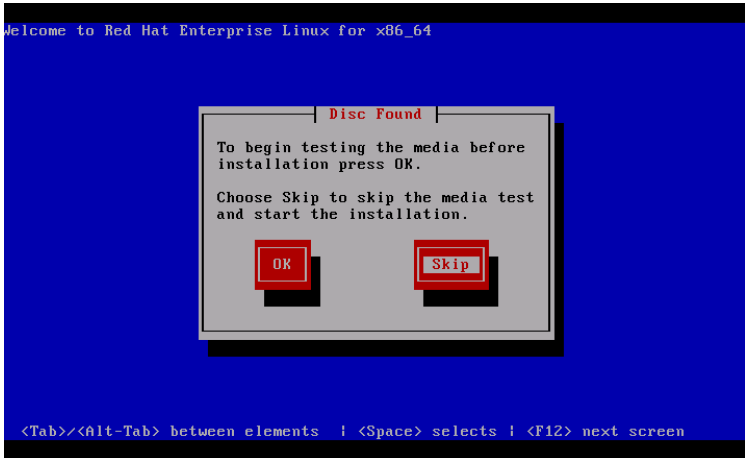
Please select "Install or upgrade an existing system" and click ENTER.



- **Selecting Media Check**

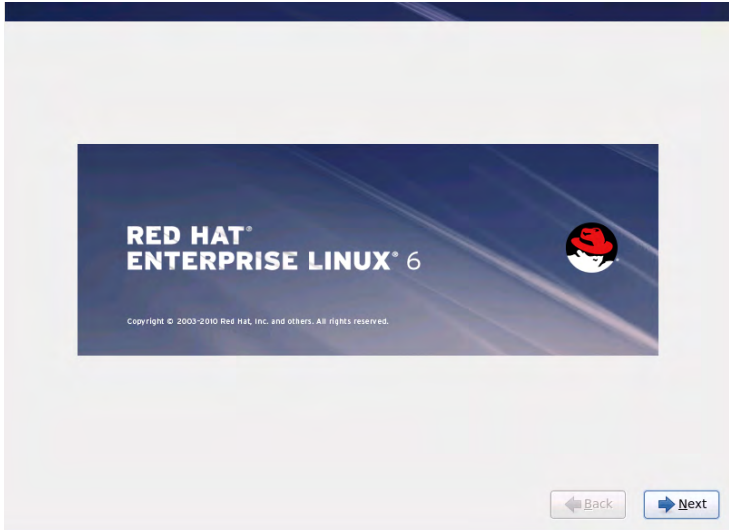
Install media check will be performed on the "Disc Found" screen.

If the DVD media you are using is custom-made and you encounter OS install error while trying to install the OS, please select "OK" on the Disc Found screen. Normally, selecting "Skip" will skip the media check.



- **Booting the Graphical Installer**

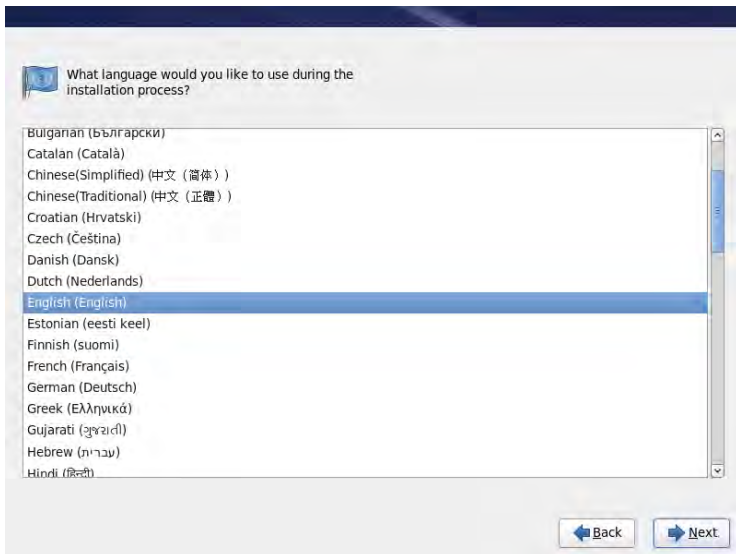
Once the Graphical Installer is booted, the "RED HAT ENTERPRISE LINUX 6" screen will appear on your screen. Please select "Next" to continue the installation.



● Installer Language Settings

The message "What language would you like to use during the installation process?" will appear on your screen.

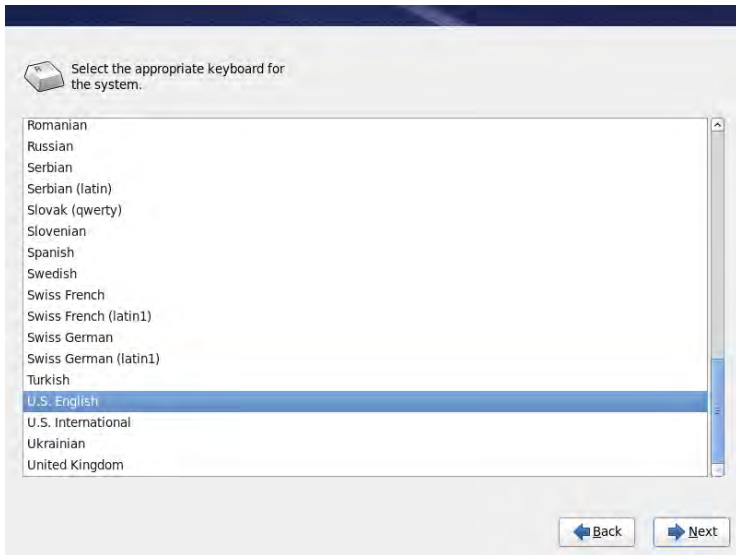
Please select a language for the installer. If you would like to perform the installation procedure in English, please select "English (English)" and click "Next".



- **Selecting Keyboard**

The message "Select the appropriate keyboard for the system" will appear on your screen.

For English keyboard, please select "U.S. English" and click "Next" to continue.



● Selecting the Storage Device

The message "What type of devices will your installation involve?" will appear on your screen.

Please select "Basic Storage Devices" and click "Next" to continue.

If the warning message "This device may require formatting" appears, click "Reformat All".



● Entering the Host Name

The text "Please name this computer. The hostname identifies the computer on a network" will appear on your screen.

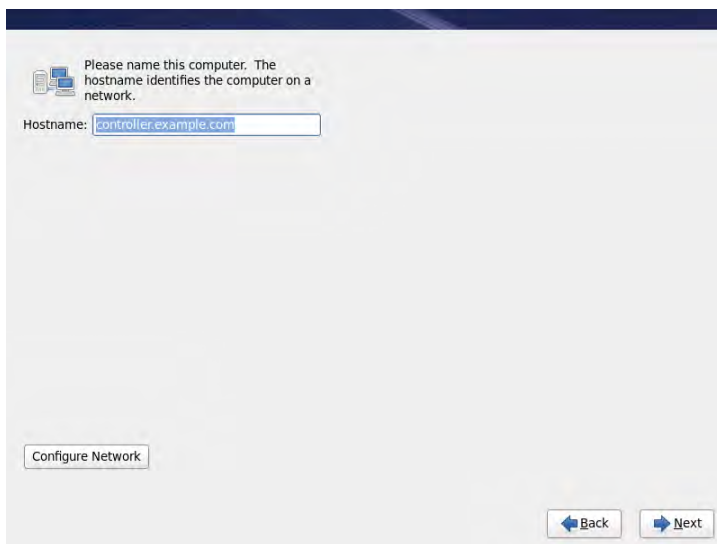
Please enter the FQDN for the Host name.

For example, If you enter "controller.example.com", your host name will be controller, your domain name will be example.com.



Setting the domain name is a mandatory procedure and one or more dot "." should be included in each domain names. Please note that the software will not function well if the FQDN is set to localhost or localhost.localdomain.

Enter the Host name for the server and click "Configure Network" to continue.

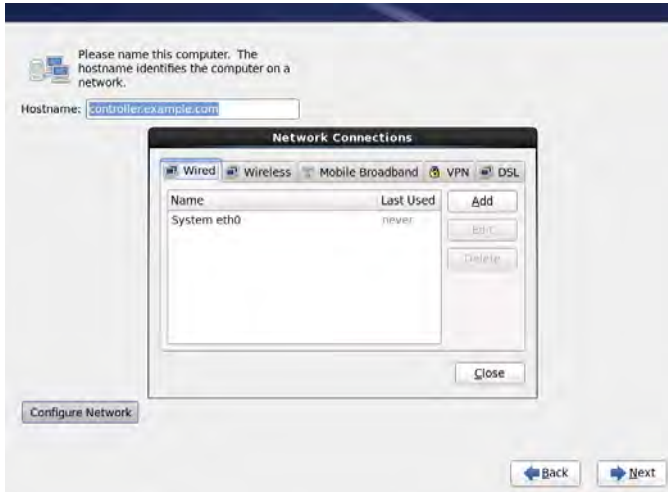


Please name this computer. The hostname identifies the computer on a network.

Hostname:

- Network Settings

The "Network Connections" screen will appear on your screen. Select the interface you wish to configure and click "Close" to continue.



Please set the IP address, host mask, DNS server in accordance with your operating environment.

Editing System eth0

Connection name: System eth0

Connect automatically

Wired 802.1x Security **IPv4 Settings** IPv6 Settings

Method: Manual

Addresses

Address	Netmask	Gateway	
192.168.100.10	24		<input type="button" value="Add"/>
			<input type="button" value="Delete"/>

DNS servers: 192.168.100.1


Search domains: example.com

DHCP client ID:

Require IPv4 addressing for this connection to complete

Available to all users

Once you have entered your configurations, click on "Apply...", "Cancel", and "Next" to continue.



It is necessary to set the IP address and host name on the server before installing HDE Controller.

● Time Zone Settings

The message "Please select the nearest city in your time zone:" will appear on your screen.

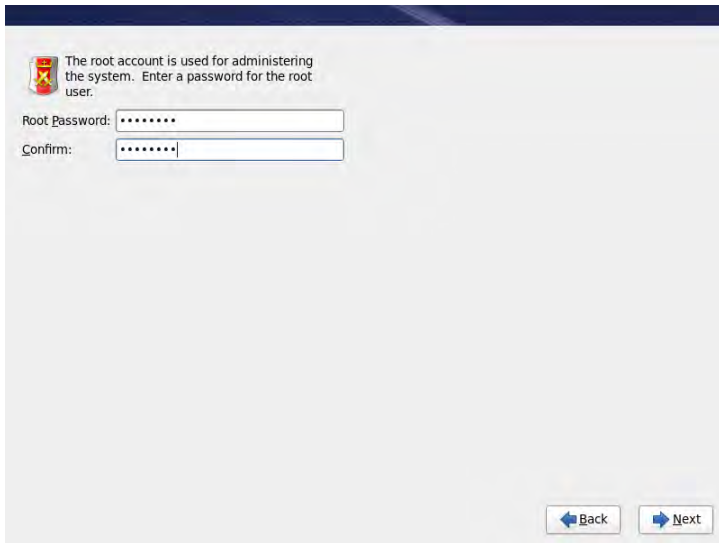
For the United States, please make sure "America/New York" is selected and "System clock uses UTC" is unchecked. Click "Next" to continue.



- **Root User Password Settings**

The message "The root account is used for administering the system. Enter a password for the root user" will appear on your screen.

Enter a root password for your server and click "Next" to continue.



● Partition Install Type

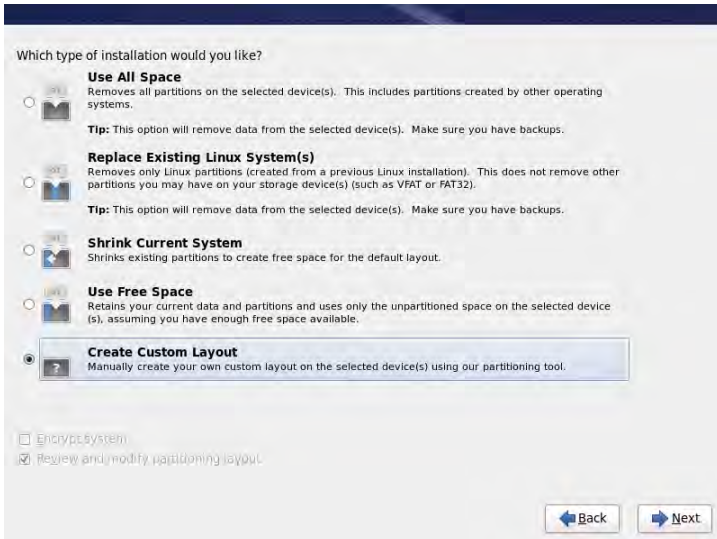
The message "Which type of installation would you like?" will appear on your screen.

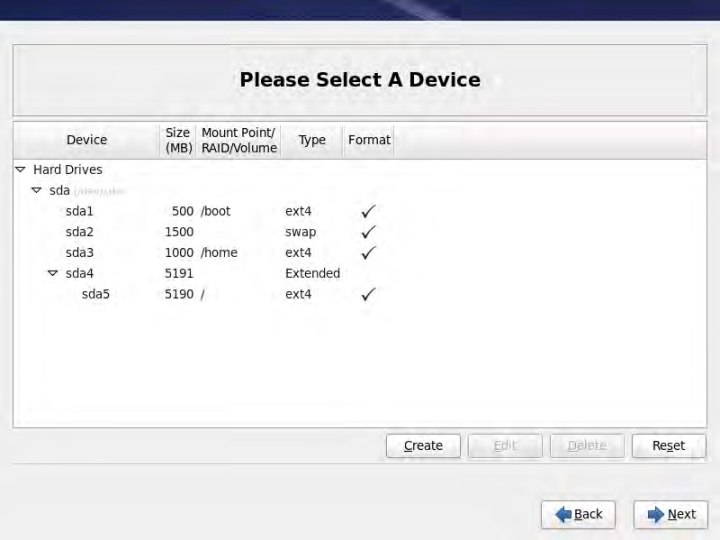
Here, users are asked to select the setting method of your partition.

Each user's data and E-mails will be stored under /home. We recommend users to leave extra space under the /home partition when configuring partitions.

If you wish to set disk quota on user account home directories, please select "Create Custom Layout" and click "Next". Please create the /home partition on the next screen.

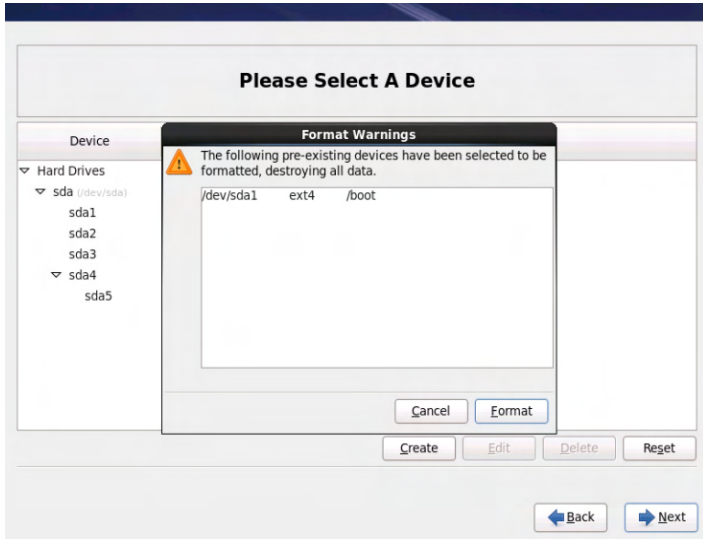
If there are any pre-existing partitions, a warning message will appear to warn the user about the deletion of all Linux partitions. In such case, please click "Yes" to continue.





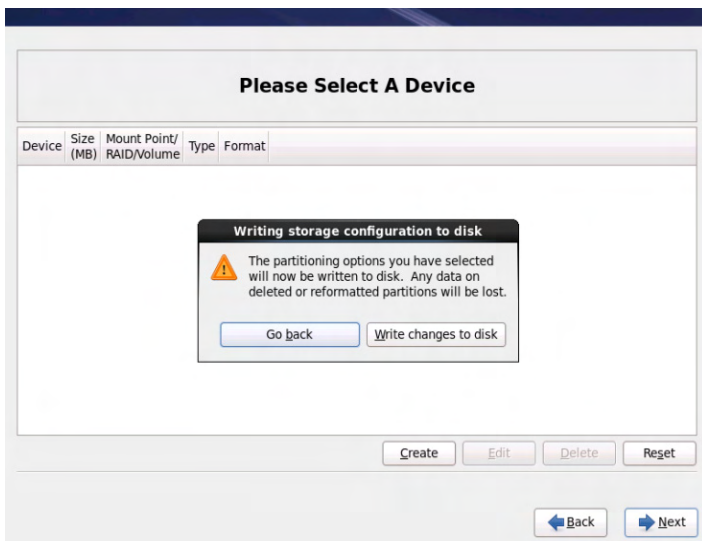
- **Format Confirmation**

When the “Format Warnings” window appears on your screen, please click “Format” to begin formatting.



- Writing Storage Settings to Disk

Next, the window "Writing storage configuration to disk" will appear your screen. Please select "Write changes to disk".



● Installing the Boot Loader

The Boot Loader Setting screen will appear on your screen. Please make sure that the installation path of the boot load is set to `"/dev/sda5"` and click "Next".

Note: The path `"/dex/sd5a"` may differ in accordance with your operating environment.

Install boot loader on /dev/sda.

Use a boot loader password

Boot loader operating system list

Default	Label	Device
<input checked="" type="radio"/>	Red Hat Enterprise Linux	/dev/sda5

● Selecting Software Packages

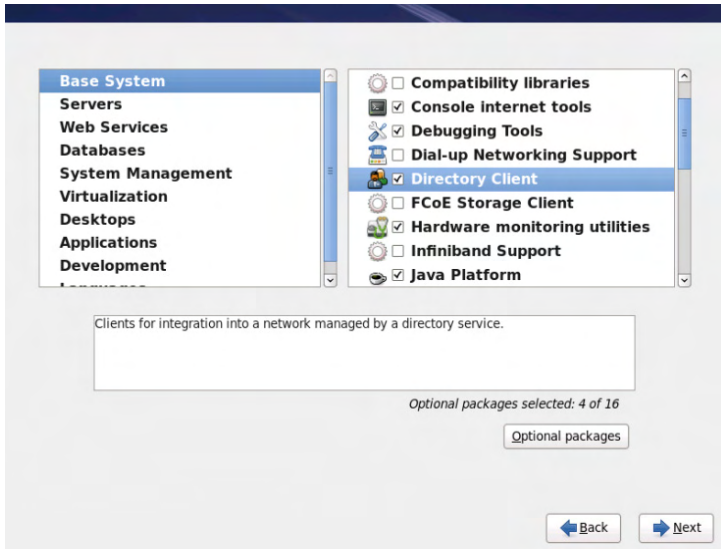
A screen will appear to allow users to set the type of server to install.

Please select "Basic Server". You must additionally select and add the packages required for the HDE Controller by selecting "Customize now" and clicking "Next".

The screenshot shows the 'Software Selection' screen in the Red Hat Enterprise Linux installer. At the top, it states: 'The default installation of Red Hat Enterprise Linux is a basic server install. You can optionally select a different set of software now.' Below this is a list of server types with radio buttons: 'Basic Server' (selected), 'Database Server', 'Web Server', 'Virtual Host', 'Desktop', and 'Software Development Workstation'. Underneath is a section for 'Additional repositories' with checkboxes for 'Load Balancer', 'Red Hat Enterprise Linux' (checked), and 'Resilient Storage'. There are two buttons: 'Add additional software repositories' and 'Modify repository'. At the bottom, there are two radio buttons: 'Customize later' and 'Customize now' (selected). Finally, there are 'Back' and 'Next' navigation buttons.

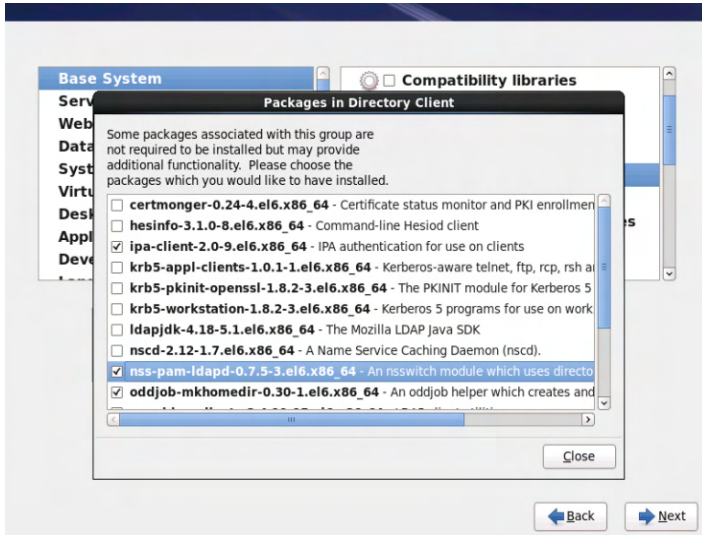
Please add the packages required for this Product as shown in the table below. (Leave the already-checked packages under Basic Server as they are and additionally select the packages listed in the table).

Users are not required to add any packages they feel are unnecessary; however, those functions will appear as disabled on the Product's menu. (Users will be able to go into the Customize Setting Menu and choose to hide such functions later on).



For option packages, please click the "Additional Packages" button.

Please do not un-check any check-boxes that were checked by default as it may disable some of the functions of this product.



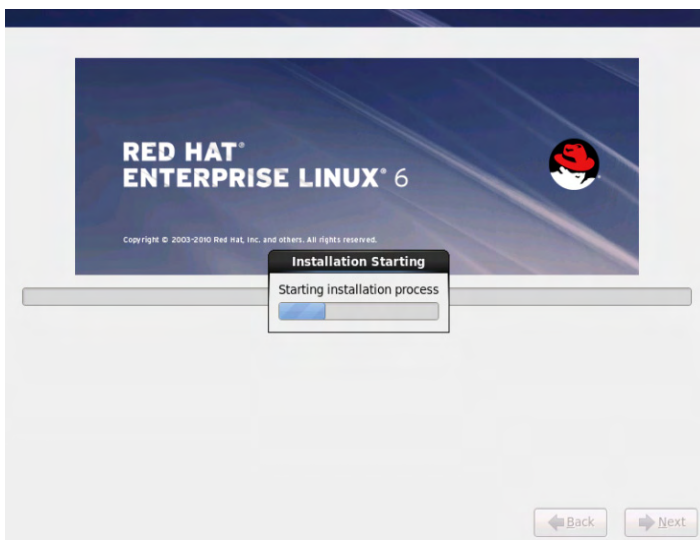
Additional Software Packages to be added:

Type	Package	Option Package
Basic System	Backup Client	Leave as default (no individual addition)
	Console Internet Tool	jwhois-4.0-18.el6.x86_64
	Directory Client	nscd-2.12-1.7.el6.x86_64 nss-pam-ldapd-0.7.5-3.el6.x86_64 openldap-clients-2.4.19-15.el6.x86_64 pam-ldap-185-5.el6.x86_64

	Networking Tools	stunnel-4.29-2.el6.x86_64
	Hardware Monitoring Utilities	lm_sensors-3.1.1-10.el6.x86_64
	Legacy UNIX Compatibility	dump-0.4-0.5.el6.x86_64 finger-0.17-39.el6.x86_64 tcp_wrappers-7.6-56.el6.x86_64
	Compatibility Library	All Packages
	Printer Client	Leave as default (no individual addition)
Server	CIFS File Server	Leave as default (no individual addition)
	FTP Server	Leave as default (no individual addition)
	NFS File Server	Leave as default (no individual addition)
	Backup Server	mt-st-1.1-4.el6.x86_64 mtx-1.3.12-5.el6.x86_64
	Directory Server	openldap-servers-2.4.19-15.el6.x86_64
	Network Infrastructure Server	bind-9.7.0-5.P2.el6.x86_64 bind-chroot-9.7.0-5.P2.el6.x86_64 dhcp-4.1.1-12.P1.el6.x86_64
	E-mail Server	Leave as default (no individual addition)
Web Service	Web Server	squid-3.1.4-1.el6.x86_64
Database	MySQL Database Client	perl-DBD-MySQL-4.013-3.el6.x86_64
	MySQL Database Server	Leave as default (no individual addition)
	PostgreSQL Database Client	Leave as default (no individual addition)

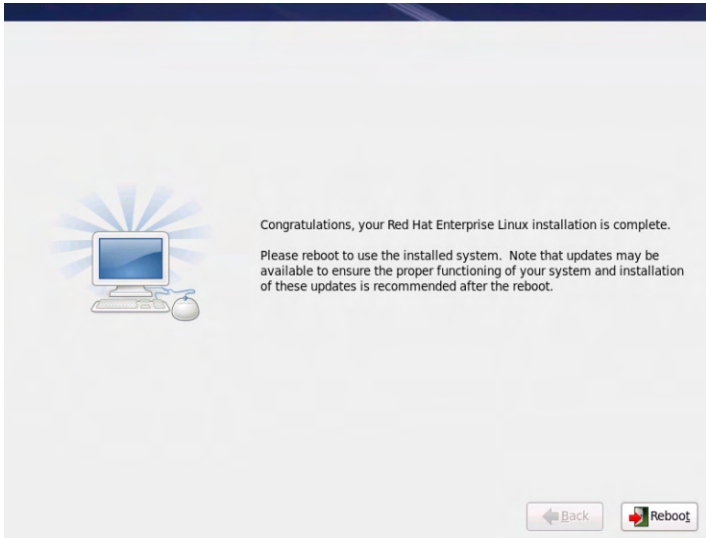
	PostgreSQL Database Server	Leave as default (no individual addition)
System Management	SNMP Support	Leave as default (no individual addition)
Development	Other Development	libxslt-devel-1.1.26-2.el6.x86_64

After you have added all of the necessary packages listed above, click the "Next" button and begin the installation.



- **Completing OS Installation**

The message "Congratulations, your Red Hat Enterprise Linux installation is complete" will appear on your screen. The Installation is now complete. Please follow the instruction on your screen and restart your computer.



4. Installing Red Hat Enterprise Linux 6.1 Server (x86_64)

This section will describe the steps of installing the Linux system which supports this Product.



Please note that this product may malfunction when installed via procedures other than the one specified in this manual.

The following configuration steps are the minimum configuration procedure required in order to maintain a fully functional Controller. Please configure other settings in accordance with your operation environment.

● Booting from DVD Media

Insert the CD/DVD media containing Red Hat Enterprise Linux 6.1 Server (x86_64) into the CD/DVD drive of the server machine you wish to install. Boot from the media.



In order to start the OS installation, it is necessary to change the BIOS boot menu such that the system will boot from the CD/DVD drive instead of the hard disk.



CD/DVD media differs between the 32-bit version and the 64-bit version.

- Starting the Installer

Once the installer starts, a screen with the words "Welcome to Red Hat Enterprise Linux 6.1!" will be displayed on the screen.

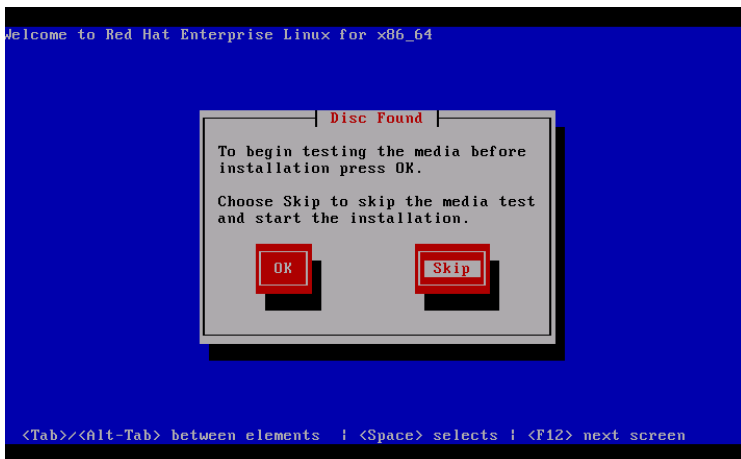
Please select "Install or upgrade an existing system" and click ENTER.



- **Selecting Media Check**

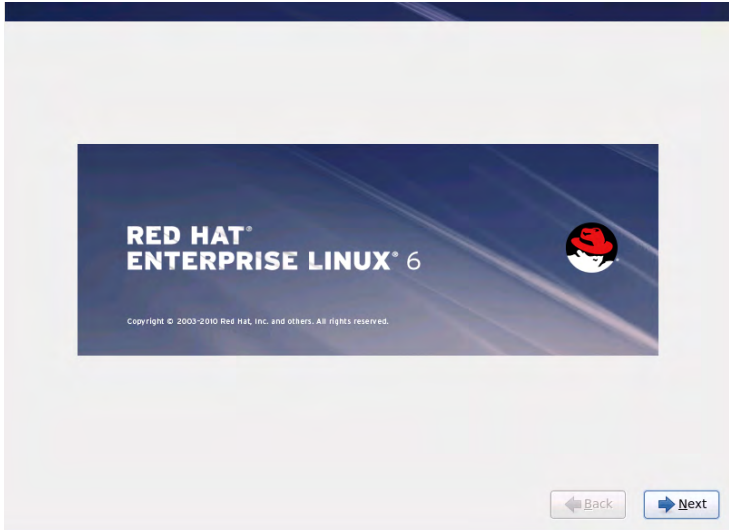
Install media check will be performed on the "Disc Found" screen.

If the DVD media you are using is custom-made and you encounter OS install error while trying to install the OS, please select "OK" on the Disc Found screen. Normally, selecting "Skip" will skip the media check.



- **Booting the Graphical Installer**

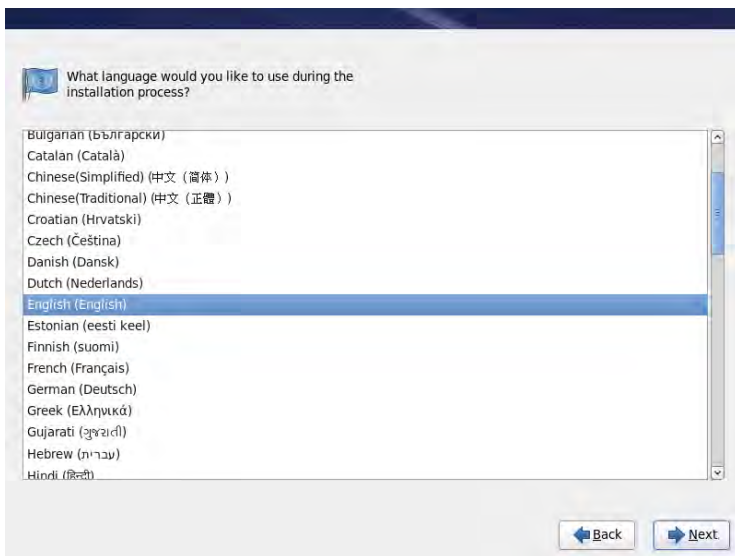
Once the Graphical Installer is booted, the "RED HAT ENTERPRISE LINUX 6" screen will appear on your screen. Please select "Next" to continue the installation.



● Installer Language Settings

The message "What language would you like to use during the installation process?" will appear on your screen.

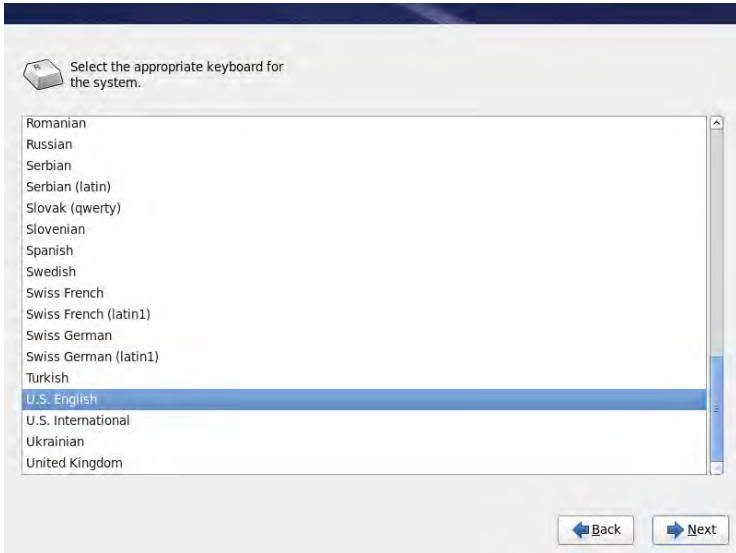
Please select a language for the installer. If you would like to perform the installation procedure in English, please select "English (English)" and click "Next".



- **Selecting Keyboard**

The message "Select the appropriate keyboard for the system" will appear on your screen.

For English keyboard, please select "U.S. English" and click "Next" to continue.

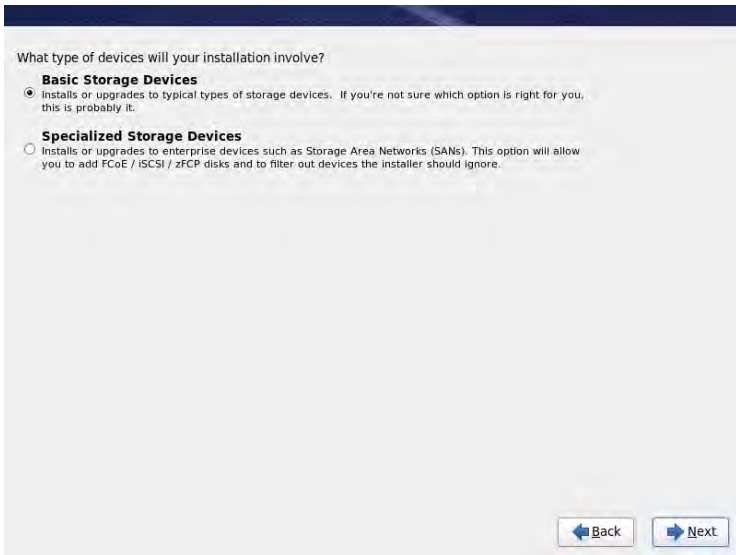


● Selecting the Storage Device

The message "What type of devices will your installation involve?" will appear on your screen.

Please select "Basic Storage Devices" and click "Next" to continue.

If the warning message "This device may require formatting" appears, click "Reformat All".



- Entering the Host Name

The text "Please name this computer. The hostname identifies the computer on a network" will appear on your screen.

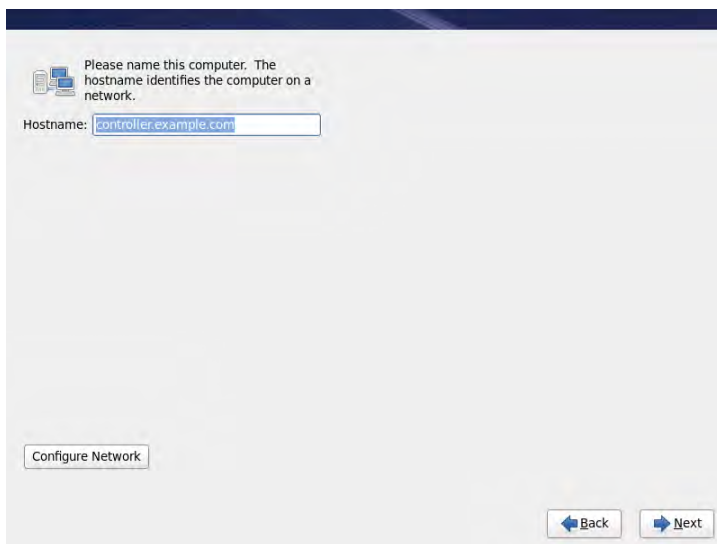
Please enter the FQDN for the Host name.

For example, If you enter "controller.example.com", your host name will be controller, your domain name will be example.com.



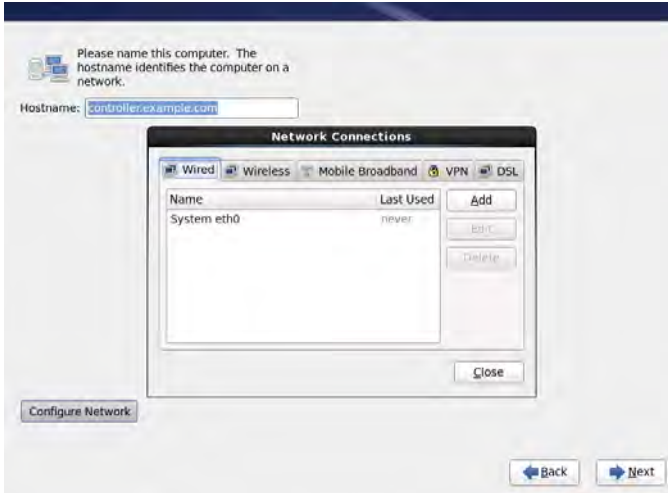
Setting the domain name is a mandatory procedure and one or more dot "." should be included in each domain names. Please note that the software will not function well if the FQDN is set to localhost or localhost.localdomain.

Enter the Host name for the server and click "Configure Network" to continue.



- Network Settings

The "Network Connections" screen will appear on your screen. Select the interface you wish to configure and click "Close" to continue.



Please set the IP address, host mask, DNS server in accordance with your operating environment.

Editing System eth0

Connection name:

Connect automatically

Wired 802.1x Security **IPv4 Settings** IPv6 Settings

Method:

Addresses

Address	Netmask	Gateway	
192.168.100.10	24		<input type="button" value="Add"/>
			<input type="button" value="Delete"/>

DNS servers:


Search domains:

DHCP client ID:

Require IPv4 addressing for this connection to complete

Available to all users

Once you have entered your configurations, click on "Apply...", "Cancel", and "Next" to continue.



It is necessary to set the IP address and host name on the server before installing HDE Controller.

- Time Zone Settings

The message "Please select the nearest city in your time zone:" will appear on your screen.

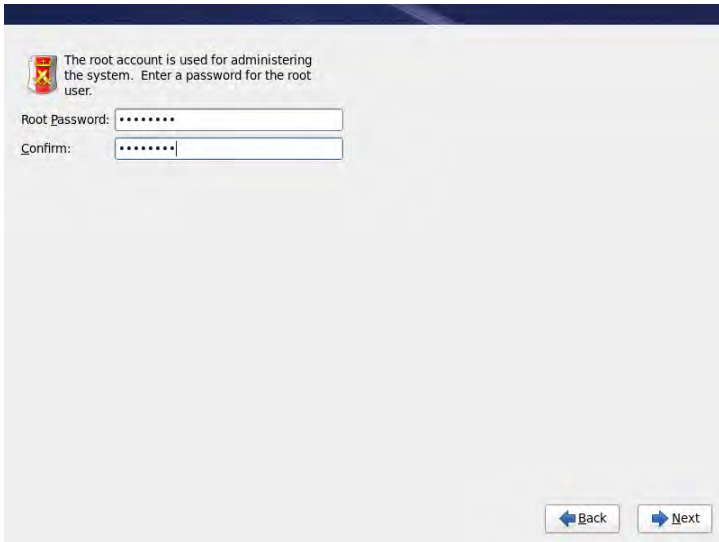
For the United States, please make sure "America/New York" is selected and "System clock uses UTC" is unchecked. Click "Next" to continue.



- **Root User Password Settings**

The message "The root account is used for administering the system. Enter a password for the root user" will appear on your screen.

Enter a root password for your server and click "Next" to continue.



● Partition Install Type

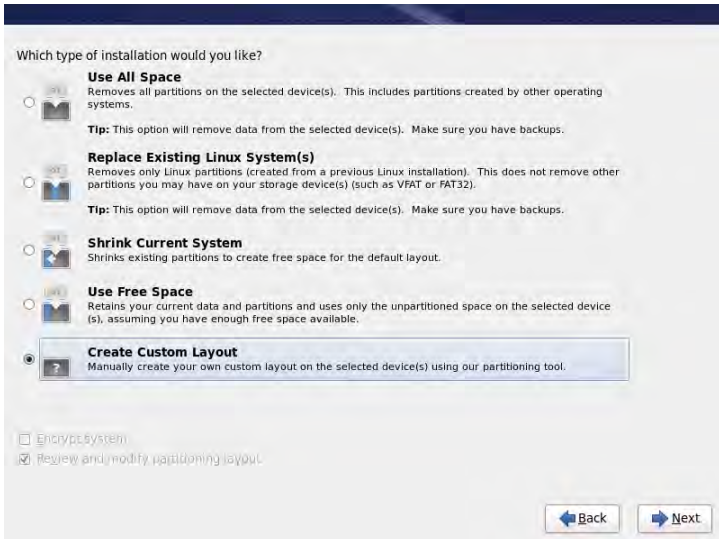
The message "Which type of installation would you like?" will appear on your screen.

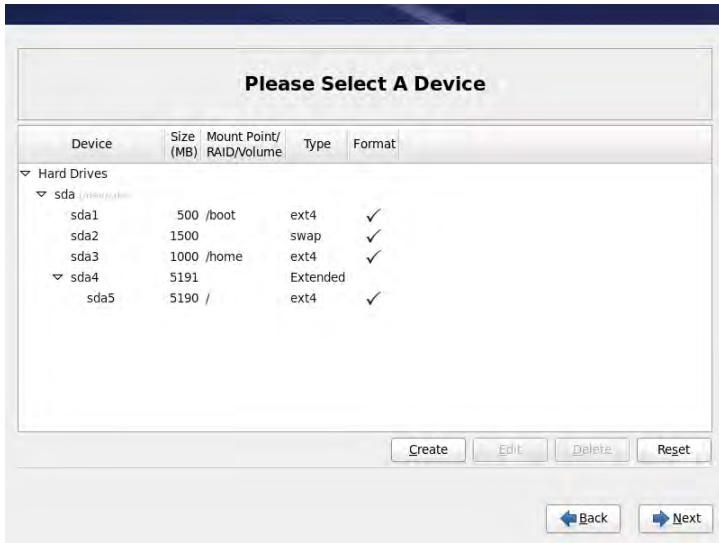
Here, users are asked to select the setting method of your partition.

Each user's data and E-mails will be stored under /home. We recommend users to leave extra space under the /home partition when configuring partitions.

If you wish to set disk quota on user account home directories, please select "Create Custom Layout" and click "Next". Please create the /home partition on the next screen.

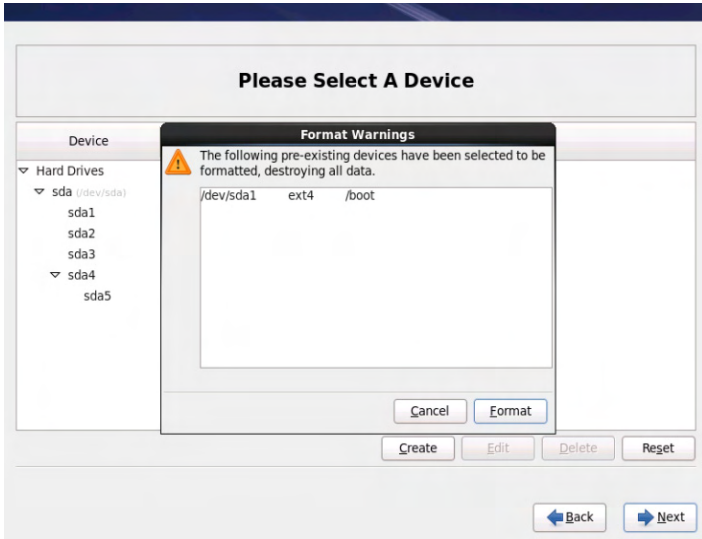
If there are any pre-existing partitions, a warning message will appear to warn the user about the deletion of all Linux partitions. In such case, please click "Yes" to continue.





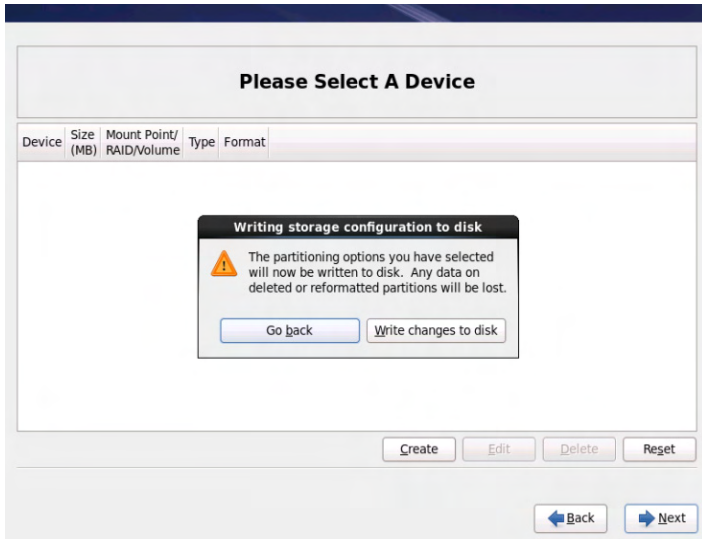
- **Format Confirmation**

When the “Format Warnings” window appears on your screen, please click “Format” to begin formatting.



- Writing Storage Settings to Disk

Next, the window "Writing storage configuration to disk" will appear your screen. Please select "Write changes to disk".



● Installing the Boot Loader

The Boot Loader Setting screen will appear on your screen. Please make sure that the installation path of the boot load is set to `"/dev/sda5"` and click "Next".

Note: The path `"/dex/sd5a"` may differ in accordance with your operating environment.

Install boot loader on /dev/sda.

Use a boot loader password

Boot loader operating system list

Default	Label	Device
<input checked="" type="radio"/>	Red Hat Enterprise Linux	/dev/sda5

● Selecting Software Packages

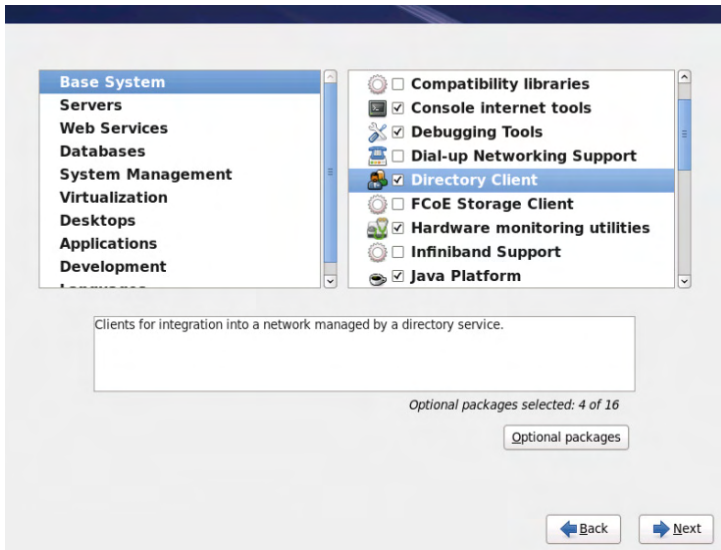
A screen will appear to allow users to set the type of server to install.

Please select "Basic Server". You must additionally select and add the packages required for the HDE Controller by selecting "Customize now" and clicking "Next".

The screenshot shows the software selection interface for Red Hat Enterprise Linux. At the top, it states: "The default installation of Red Hat Enterprise Linux is a basic server install. You can optionally select a different set of software now." Below this is a list of server types with radio buttons: "Basic Server" (selected), "Database Server", "Web Server", "Virtual Host", "Desktop", and "Software Development Workstation". Underneath is a section for additional repositories with checkboxes: "Load Balancer", "Red Hat Enterprise Linux" (checked), and "Resilient Storage". There are two buttons: "Add additional software repositories" and "Modify repository". At the bottom, there are radio buttons for "Customize later" and "Customize now" (selected). Finally, there are "Back" and "Next" navigation buttons.

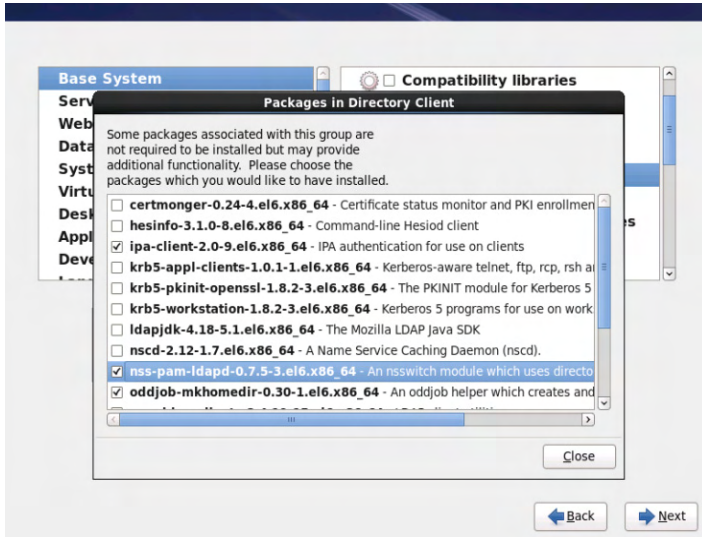
Please add the packages required for this Product as shown in the table below. (Leave the already-checked packages under Basic Server as they are and additionally select the packages listed in the table).

Users are not required to add any packages they feel are unnecessary; however, those functions will appear as disabled on the Product's menu. (Users will be able to go into the Customize Setting Menu and choose to hide such functions later on).



For option packages, please click the "Additional Packages" button.

Please do not un-check any check-boxes that were checked by default as it may disable some of the functions of this product.

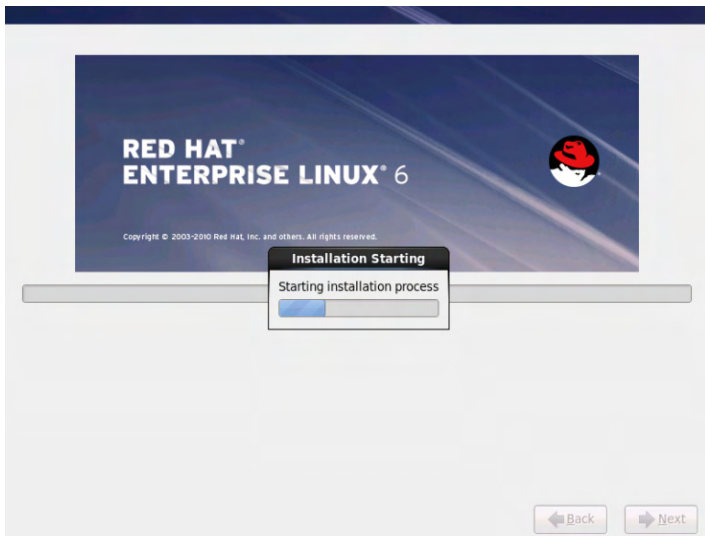


Additional Software Packages to be added:

Type	Package	Option Package
Base System	Console Internet Tool	jwhois-4.0-18.el6.x86_64
	Directory Connection Client	nscd-2.12-1.25.el6.x86_64 nss-pam-ldapd-0.7.5-7.el6.x86_64 openldap-clients-2.4.23-15.el6.x86_64 pam_ldap-185-8.el6.x86_64
	Networking Tools	stunnel-4.29-2.el6.x86_64
	Hardware Monitoring Utilities	lm_sensors-3.1.1-10.el6.x86_64
	Backup Client	Leave as default (no individual addition)
	Legacy UNIX Compatibility	dump-0.4-0.5.el6.x86_64 finger-0.17-39.el6.x86_64 tcp_wrappers-7.6-56.el6.x86_64
	Compatibility Library	All Packages
	Printer Client	Leave as default (no individual addition)
	Server	CIFS File Server
FTP Server		Leave as default (no individual addition)
NFS File Server		Leave as default (no individual addition)
Directory Server		openldap-servers-2.4.23-15.el6.x86_64
Network Infrastructure Server		bind-9.7.3-2.P2.el6.x86_64 bind-chroot-9.7.3-2.P2.el6.x86_64 dhcp-4.1.1-19.P1.el6.x86_64

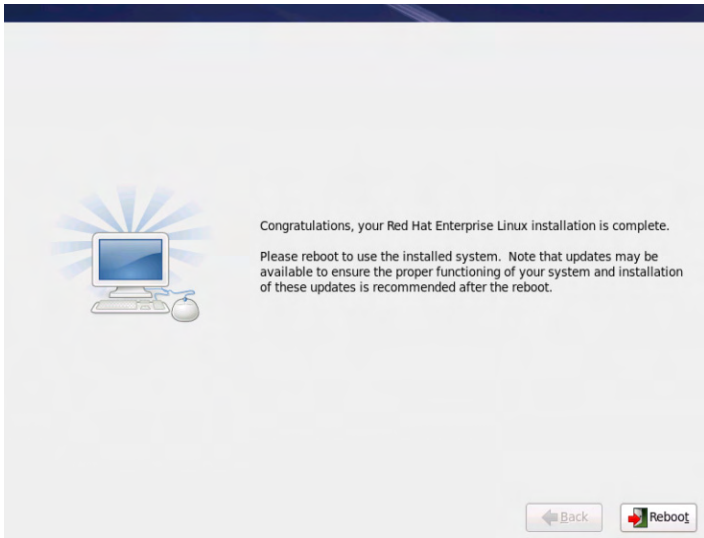
	Backup Server	mt-st-1.1-4.el6.x86_64 mtx-1.3.12-5.el6.x86_64
	E-mail Server	Leave as default (no individual addition)
Web Service	Web Server	squid-3.1.10-1.el6.x86_64
Database	MySQL Database Server	Leave as default (no individual addition)
	MySQL Database Connection Client	perl-DBD-MySQL-4.013-3.el6.x86_64
	PostgreSQL Database Server	Leave as default (no individual addition)
	PostgreSQL Database Client	Leave as default (no individual addition)
System Management	SNMP Support	Leave as default (no individual addition)
Development	Other Development	libxslt-devel-1.1.26-2.el6.x86_64

After you have added all of the necessary packages listed above, click the "Next" button and begin the installation.



- **Completing OS Installation**

The message "Congratulations, your Red Hat Enterprise Linux installation is complete" will appear on your screen. The Installation is now complete. Please follow the instruction on your screen and restart your computer.



4. Installing Cent OS 6.0 (x86_64)

This section will describe the steps of installing the Linux system which supports this Product.



Please note that this product may malfunction when installed via procedures other than the one specified in this manual.

The following configuration steps are the minimum configuration procedure required in order to maintain a fully functional Controller. Please configure other settings in accordance with your operation environment.

● Booting from DVD Media

Insert the CD/DVD media containing Cent OS 6.0 (x86_64) into the CD/DVD drive of the server machine you wish to install. Boot from the media.



In order to start the OS installation, it is necessary to change the BIOS boot menu such that the system will boot from the CD/DVD drive instead of the hard disk.



CD/DVD media differs between the 32-bit version and the 64-bit version.

● Starting the Installer

Once the installer starts, a screen with the words "Welcome to Cent OS 6.0!" will be displayed on the screen.

Please select "Install or upgrade an existing system" and click ENTER.






Installing CentOS 6.0 is as same as Red Hat Enterprise Linux 6.0. You can refer to Red Hat 6.0 installation guide.

HDE Controller X

Chapter 3 Installing

1. Installation Summary

The following flowchart shows an outline of the steps from the installation to the actual utilization of HDE Controller.

- (1) Install Linux (Chapter 2)

- (2) Install HDE Controller (Chapter 3 Section 2)

- (3) Access the Administrator Screen using a provisional license (Chapter 3 Section 3)

- (4) Perform User Registration to obtain a full license. (Chapter 3 Section 4)

- (5) Register full license in the Administrator's Screen (Chapter 3 Section 5)

- (6) Initialization (Chapter 4)



There is a 60-days validity period on the Product if a legitimate license is not registered. Please make sure to complete user registration as soon as possible.

2. Installing HDE Controller

■ Before the Installation

Please take note of the following before you begin the installation for HDE Controller.



The Installer of this Product will automatically disable SELinux on your computer.

Please note that HDE Controller is cannot coexist with SELinux.



After OS installation, only minimum numbers of ports on iptables are open; however, by executing initialization setup of HDE Controller, the necessary ports will be opened. Please be sure to execute the "Setup Wizard" after installation.

■ Installation

All installation operations must be done by the root user in command-line. Please enable command-line in Terminal, xterm, text-consol login and logins using ssh.

First, switch to the root user using the "su" command.

```
% su - root
```

You will now be asked for the root user password. Please enter the password.

Mount the HDE Controller CD-ROM.

```
# mount -t iso9660 /dev/cdrom /media
```

(* The mount point will differ in accordance with the distribution you are using. Some distributions will mount automatically.)

Move to the directory containing the install script.

```
# cd /media/HDE_Controller_10.0//
```

Execute the install script.

```
# ./lc-install
```

Please be aware that executing `./lc-install` when not all of the necessary packages are installed will result in a warning window with a list of necessary packages that are not installed. Please follow the screen and install the missing packages.

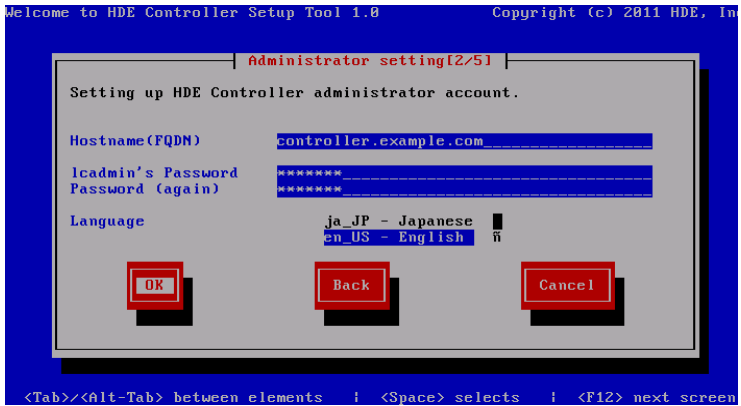
Follow the instructions in the install script to enter the `lcadmin` (HDE Controller administrator) password, domain name, and the host name.

Follow the instructions in the installer and continue the installation process.



First, you will configure the administrator setting. The host name will appear as the name you have set during OS installation. Leave the host name as it is under normal conditions.

Next, you will enter the `lcadmin` (HDE Controller administrator) password required to access the administrator screen. The administrator user name is fixed to `lcadmin`.



Next, you will configure the Proxy Setting.

Please configure this setting if you require a proxy when establishing external Internet connection.

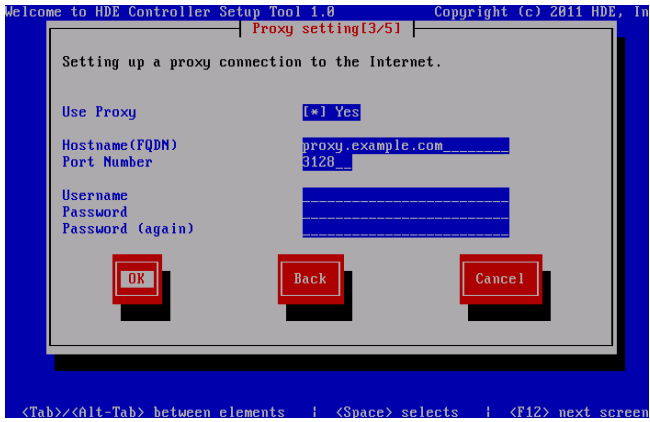
If user name and password are required upon access, please enter them into the configuration as well.

Leave the fields black if user name and password are not required.

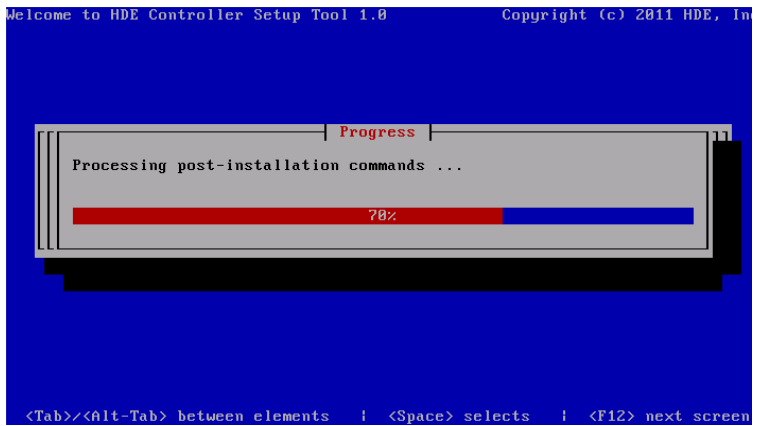
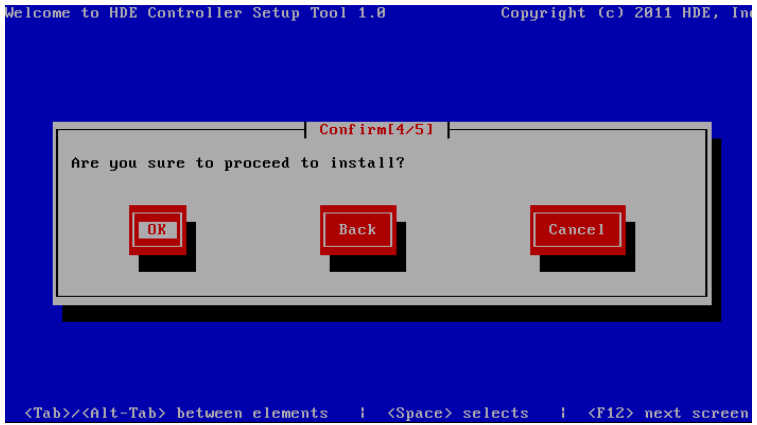


The proxy setting must be configured as it requires Internet access to update the HDE Controller.

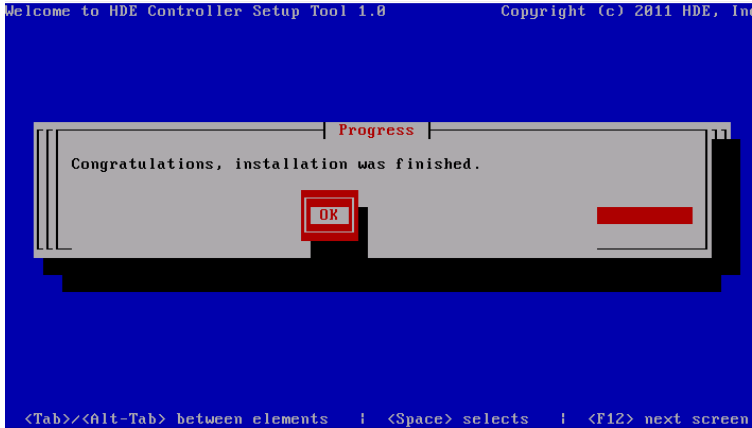
It is still possible to access and change the proxy setting from the administrator screen after installation.



After these configurations, you may start the installation by selecting the “OK” button on the confirmation screen.




After the installation is fully complete, you should see a screen similar to the one shown below.



You may now exit the installer by selecting the "OK".

If you see the following message in the end, your installation has successfully completed.

```
Installation complete.  
Please access and login to the URL below.  
https://controller.example.com:16590/
```

 If installation terminates with an error message, please confirm the cause of the error from the message and the log file (/root/lc-install.log) and resolve the problem before attempting to re-install the Product.

3. Accessing the Administrator Screen

Users will access the following URL from a client that is network accessible to this Product. For a list of compatible browsers, please refer to "Required Operating Environment" in Chapter 1.

`https://[ServerFQDN]:16590/`



The following screen will appear in the Web browser when the administrator screen URL is accessed.

This is due to the fact that the certificate used in the administrator screen is a self-signed certificate.



There is a problem with this website's security certificate.

The security certificate presented by this website was not issued by a trusted certificate authority.

Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.

We recommend that you close this webpage and do not continue to this website.

[✔ Click here to close this webpage.](#)

[✘ Continue to this website \(not recommended\).](#)

[🔍 More information](#)

The following End-User License Agreement will appear once the above URL is accessed. In order to use this Product, you must read and agree to the Agreement by clicking the "I Agree" button on the button of the screen.

License Agreement

You have to agree the License Agreement below before starting to use.

HDE Controller X PRO End-User License Agreement

This End-User License Agreement (this "Agreement") is a legal contract entered into by and between you, an end-user, and HDE Inc. ("HDE"), which sets forth terms and conditions regarding the grant of software license, certain limitations, and other matters relating to the use of the software as set forth in Article 1 of this Agreement. This Agreement shall become effective upon the installation of the Software or when you start using the Product.

Article 1 Definitions

(1) Software

The "Software" is defined as all of the programs of HDE Controller X PRO that are computer readable. The Software contains a separate software named "ionCube PHP Loader" incorporated in the Product and supplied by ionCube Ltd., of which HDE has obtained license for distribution and other matters.

(2) Documents

"Documents" shall refer to all of the documents including, but not limited to, the user manual and other documents regarding use of the Software.

(3) Product

The "Product" is defined as the HDE Controller X PRO which includes the Software and the Documents. Upon updating the product, or version-upgrade, in accordance with a support service agreement, which may be entered into separately, such updated or version-upgraded product shall be treated as the Product.

"Update" is defined as the repairing of bugs in the Product, including the Software, under the current version of the Product without any version upgrade. Updates shall be implemented by HDE for the purpose of preparing and distributing programs for bug-fix or other improvement.

"Version" is defined as certain numbers, characters, or combination of numbers and characters embedded in the name of the Product. "Version-boards" shall

Once you agree upon the End-User License Agreement, the following window will appear when you access the administrator screen next time forth.



The server vmtaizo8.prd.local.hde.co.jp at HDE Controller requires a username and password.

User Name (U):

Password (P):

Remember my password(R)

OK Cancel

To access the administrator screen, please enter each field as below.

Username	ladmin
Password	Password set upon product installation



Users are also able to login to the administrator screen using the root username and password.

When the Product and License ID window appears, enter the product ID and the license ID into the corresponding fields.

This Product contains the product ID as well as a license certificate which includes a provisional license ID. The provisional license ID written on the attached license certificate has a 60-day validly period after which the license will expire.

In order to obtain a full license, please visit our Website to complete user registration.

Please be sure to register user and obtain a full license before start using this Product.



If you already have completed user registration and obtained a full license, you may enter your license ID into the corresponding field at this time.

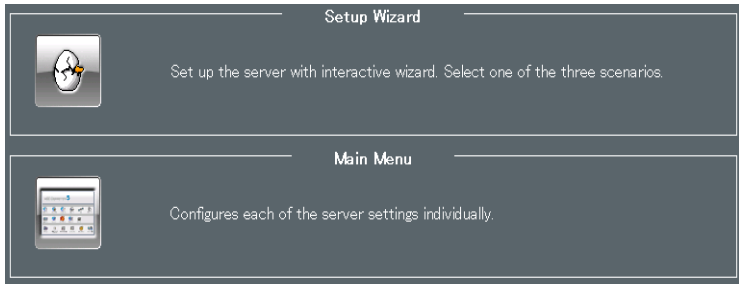
HDE Controller[®]
Web-based Administration Software for Linux Servers

Setting Product/License ID

Product ID

License ID

The HDE Controller Main Menu will appear once the product ID and the license ID have been entered.



On your first access to HDE Controller, an initialization screen will appear as shown above. You may now select to display the "Main Menu" or enter the "Setup Wizard". Please select the "Setup Wizard" if this is your first access after installation. After the Setup Wizard you will be able to begin your server management operations using HDE Controller without having to configure any special settings.

The initialization screen will no longer appear on your next access and you will be taken directly to the HDE Controller Main Menu.



Please note that multiple accesses to the HDE Controller administrator screen using administrator privilege will result in faulty configuration of the settings.

4. User Registration

In order to use the HDE Controller, users are required to obtain both a product ID and a license ID. Attached to the HDE Controller products are the product ID and a certificate that includes a provisional license ID. Users are able to obtain a full license ID once they complete user registration on our Website.



The provisional license has a 60-day validity period after which the license will expire. Please make sure to complete the user registration and obtain a full license ID before start using this Product.

■ User Registration Page

Users can access the user registration page from the URL below.

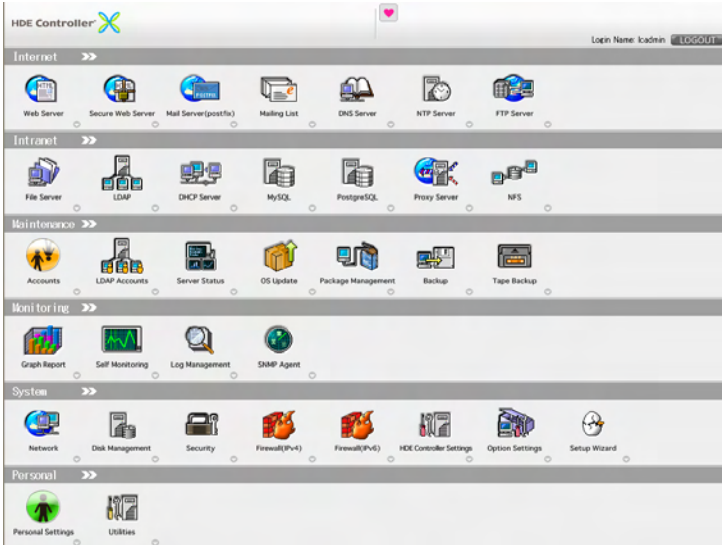
<http://www.hde.co.jp/registration/>

Please view the above URL for more detailed information regarding user registration.

5. Registering A Full License

After you have completed user registration and obtained a full license ID, you must enter the full license ID into HDE Controller.

Please access the HDE Controller administrator screen via a Web browser.



The following screen will be displayed if you have not completed the Setup Wizard. Select "Main Menu" to continue.



Click the “HDE Controller Settings” menu in the Main Menu and select the “License Information” sub-menu.

Once the license information window appears, enter your product ID and full license ID in the corresponding fields.

The image shows the "Product Information" configuration window. At the top, it says "Set the Product ID and License ID." Below this, there are three sections, each with a title and a text input field:

- Product Information**: The text field contains "HDE Controller 10.0.0 Professional Edition for Linux (Release 8P02)".
- Product ID Setting**: The text field contains "A1950-XXXXX-XXXXX-XXXXX".
- License ID Setting**: The text field contains "wwwwww-XXXXXXXX-YYYYYYY-ZZZZZZZ".

Complete the configuration by clicking the “Configure” button.

6. Uninstalling HDE Controller

To uninstall this Product from your computer, please follow the steps as listed below.

Login to the Linux server as root (administrator).

If you are using the graphical login screen, press Ctrl+Alt+F2 key to bring up the console login screen.

```
login:
```

Enter "root" as the login name and enter your password.

```
login: root
password:
```

Insert the Product CD-ROM into the CD-ROM drive.

Enter the following line of command and press ENTER.

```
# mount -t iso9660 /dev/cdrom /media
```



If the CD-ROM device path is different on your computer, please enter the path in accordance with the path of your CD-ROM device.

Enter the following line of command to move to the directory containing the uninstall scripts.

```
# cd /media/HDE_Controller_10.0//
```

Execute the uninstall script.

```
# ./lc-uninstall
```

A confirmation message should appear on your screen. Clicking the "OK" button will delete the package and complete the uninstall process.



Please note that user data and server setting data included in the OS will not be deleted upon uninstalling HDE Controller. All application data added by the HDE Controller will be deleted.

HDE Controller X

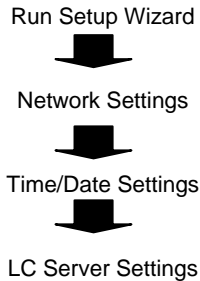
Chapter 4 Initial Server Settings

1. About initial Server Settings

■ Summary of the Initialization Setting Method

After installing HDE Controller, users must initialize their server settings.

This manual will lead users through the following outline for configuring initial server settings.



Users will still be able to make changes to the configurations fixed in the Setup Wizard under each setting menus after the initialization setup.

Please configure any detailed settings under each setting menus after you have completed the initialization.



After OS installation, only minimum numbers of ports on iptables are open; however, by executing initialization setup of HDE Controller, the necessary ports will be opened. Please be sure to execute the "Setup Wizard" after installation.

Please note that the ports on iptables setting will remain closed or may not function correctly if the "Setup Wizard" was not completed.

2. Setup Wizard

■ What is the Setup Wizard?

The Setup Wizard is a setup tool that provides users with step-by-step wizard-format instructions regarding the setting up of their network and servers.

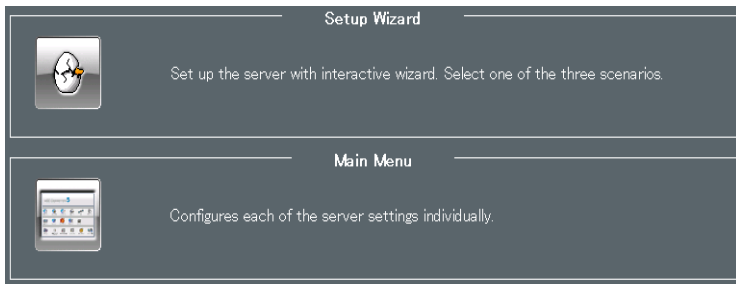
Although the configurations completed through the wizard may also be done manually under each of the setting menus in the Main Menu screen, the Setup Wizard serves as an easy, yet integrated tool in setting up your server.

Users who are new to HDE Controller are recommended to configure their initial server settings via the Setup Wizard.

■ Starting the Setup Wizard

After installing and logging onto HDE Controller for the first time, a window will appear to allow users to select between executing the Setup Wizard and entering directly to the Main Menu screen.

The wizard will begin once the Setup Wizard icon is clicked.



You may also start the Setup Wizard from the Main Menu screen by clicking the "Setup Wizard" icon.

■ LC Server SSL Settings

LC Server SSL Settings

To enable SSL connection to the management screen, publishing private/public keys and the certification are required. Enter the information accurately according to example.

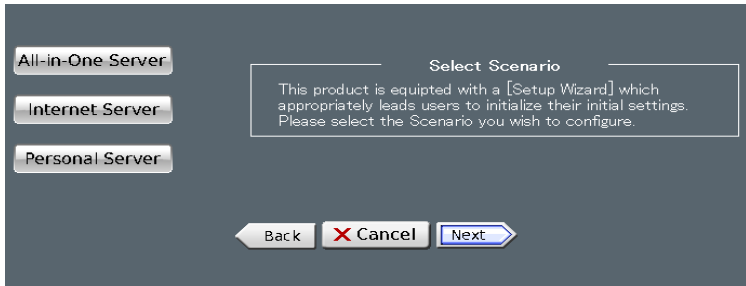
⚠ The settings will be enabled after reboot.

		Example
Country Name	<input type="text" value="JP"/>	JP
State or Province Name	<input type="text" value="Tokyo"/>	Tokyo
Locality Name	<input type="text" value="Shibuya-ku"/>	Shibuya-ku
Organization Name	<input type="text" value="HDE"/>	HDE
Organization Unit Name	<input type="text" value="HDE TEST CERTIFICATE PUBLISHER"/>	Development
Common Name	<input type="text" value="vmtaizo8.prd.local.hde.co.jp"/>	vmtaizo8.prd.local.hde.co.jp
E-mail Address	<input type="text" value="root@prd.local.hde.co.jp"/>	root@prd.local.hde.co.jp

⚠ Please be aware that the shown example is just a 'sample'. Web browsers could show warning messages if you enter these values as it is. However, even if the warning appears, the connection between your web browser and the management screen will still be encrypted.

This configuration is done to set an encryption on the connection between the browser and the HDE Controller. After entering each field, click "Next" to continue.

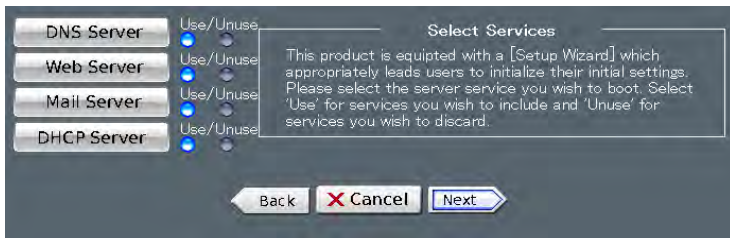
■ Scenario Settings



Please choose from the shown 3 scenarios. The summary of each scenario are shown as below.

All-in-One Server	A scenario for constructing a wide variety of server types from Internet servers to Intranet servers on a single computer.
Internet Server	A scenario for constructing an Internet server such as E-mail and Web servers.
Personal Server	A scenario for constructing a server to serve as an Internet gateway as well as to provide other types of services in an at-home or small-scale office environment.

■ Server Selection



Please select the server you wish to use. Note that only the setting options associated with the scenario selected on the previous menu will appear on this screen.

■ Network Settings ▪ Network Card Settings

Configure your Network information.

It is important that users enter accurate network information in each corresponding fields. Failure to do so may result in termination of all services offered by this Product.

Basic Settings

Configures the host name and the domain name of the server. A host name is a label that is assigned to this server, such as "host-01". A domain name is a label that is assigned to a computer network where this server belongs to, such as "hde.co.jp".

⚠ You must reboot this server for the changes to take effect.

Host Name	vmtaizo8
Domain Name	vmtaizo8.prd.local.hde.co.jp
DNS Server 1 <small>?</small>	192.168.x.x
DNS Server 2 <small>?</small>	192.168.x.x
DNS Server 3 <small>?</small>	
Search Domain List <small>?</small>	prd.local.hde.co.jp

← Back✖ CancelNext →

By default, the network information configured during OS installation will appear in the fields.

● Host Name

Enter the host name of your server. Do not write in FQDN format (format which includes the domain name). Please be sure to fill in this field correctly as it cannot be omitted.

● Domain Name

Enter the domain name of your server. Please specify in a format which includes one or more dots "." (e.g. example.com). Improper domain names such as "com" or "example" cannot be used.

Please be sure to fill in this field correctly as it cannot be omitted.

- **DNS Server 1**

Please specify the IP address of the packet-receivable name server from this server. This configuration will allow users to inquire the name server specified by name resolution.

Set the loop-back address to 127.0.0.1 if this server itself serves as the name server.

Please be sure to fill in this field correctly as it cannot be omitted.

- **DNS Server 2, DNS Server 3**

You may configure name server 2 and name server 3 in case server 1 does not respond to inquiries. Inquiries will be sent to name server 2 then name server 3 respectively.

These fields may be omitted.

- **Search Domain List**


Create a list of domain names associated with the host names upon host search. To input multiple domain names, separate each domain name with a space. You may specify up to a maximum of 6 domain names.


Please be sure to fill in this field correctly as it cannot be omitted.




Users may make changes to this setting from "Basic Setting" under the "Network" menu in the Main Menu.

Network Card Settings

Specify the IP address of the network card.
Press the [Edit] button to be configured.

 You must reboot this server for the changes to take effect.

Network Interface Card	IP Address	Action
eth0	192.168. x. x	 Edit

Once the correct IP address is displayed, click “Next” to continue.

■ Gateway Settings

Gateway Settings

A gateway is a network point which acts as an entrance to another/external network. The gateway address must be reachable on a locally connected network. Please contact your network administrator for more information.
⚠ You must reboot this server for the changes to take effect.

Gateway Device	<input type="text" value="eth0"/>
Gateway Address (IPv4)	<input type="text" value="192.168.x.x"/>
IP Forwarding	<input type="checkbox"/> Disabled
IP Masquerade	<input type="checkbox"/> Disabled
IPv6	<input type="checkbox"/> Disabled
Accept Router Advertisement Packets	<input type="checkbox"/> Enabled
Configure Link-local Address Automatically	<input type="checkbox"/> Enabled

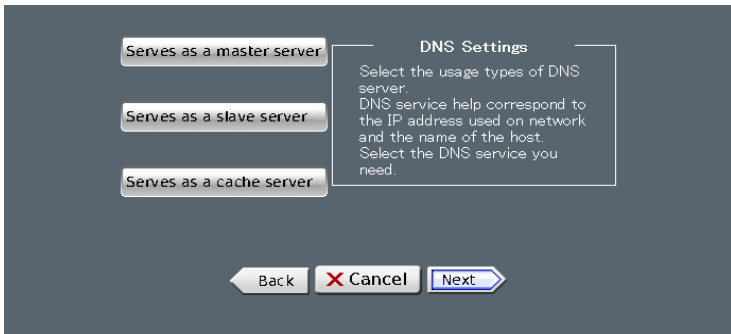
If you are using IPv6, please also enable “IPv6”, “Accept Router Advertisement Packets”, and “Configure Link-local Address Automatically”.

This setting can also be configured from "Basic Setting" under the "Network" menu in the Main Menu.

■ DNS Server Settings

This screen will only appear if the user selected to "Utilize" DNS servers in the "Server Selection" screen.

Configure the DNS Server.



There are three types of DNS servers as listed below. Please choose a type corresponding to your purpose. After selecting a DNS server type, click the "Next" button to proceed to adding the DNS server.

● What is a Master Server?

A Master Server is a regular server which contains the server information of the domain.

● What is a Slave Server?

A Slave Server is a server which periodically copies server information from the master server and assists in providing DNS service.

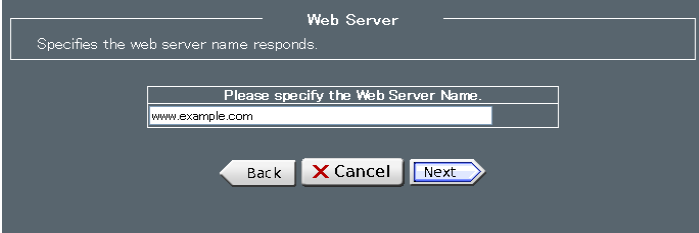
● What is a Cache Server?

A Cache Server is a server which stores DNS inquiries into the cache. It does not perform any domain management.

These settings can also be configured from the "DNS Server" menu in the Main Menu.

■ Web Server Settings

This screen will only appear if the user has selected to "Utilize" Web Server on the "Server Selection" screen.



Web Server

Specifies the web server name responds.

Please specify the Web Server Name.

www.example.com

Back Cancel Next

Configures basic settings for the Web server. Enter the public name for the Web server.

Please note that the Initialization Setup Wizard will not allow users to configure detailed settings for the Web server. To configure such settings, please go to the "Web server" menu in the Main menu after the completion of this wizard.

This setting can also be configured in the "Web Server" menu in the Main menu.

■ Mail Server Settings

This screen will only appear if the user has chosen "Utilize" Mail Server on the "Server Selection" screen.



Enter the domain name for the Mail Server. A domain name can be added by pressing the "Add" button. Users may enter multiple domain names.

This setting can also be configured in the "Mail Server" menu in the Main menu.

■ DHCP Server Settings

Configure basic settings for the DHCP server.

Select Interface

Specifies the network addresses to provide DHCP services. Information will be distributed to computers on the specified network.

Network Address 192.168.0.0(eth0)

Back Cancel Next

Configure the setting for the interface. Please select the interface on the LAN side.

Click the “Next” button to proceed to the next screen.

Range of the DHCP Leases

Specifies the range of IP addresses available for assignment. Addresses used here must not be currently in use. Configure such that they will not overlap IP addresses assigned manually.

⚠ Specifies the IP Addresses within the range below [192.168.0.1 - 192.168.255.254]

The Lowest IP Address	192.168.0.128
The Highest IP Address	192.168.0.192

Back Cancel Next

Configure the range of the network and distribution addresses which will provide the DNS service.

Please be sure that the address range does not overlap with any manually-set IP address range such as those set by routers.


This setting can also be configured in the "DHCP Server" menu in the Main menu.


■ Disk Quota Settings

Partition with Quotas Enabled

Select the partitions to activate the quota limitation.

Partition	Available Size	Current Usage	Enable Quota(userquota)
/home	3862 MB	4%	<input checked="" type="checkbox"/> Quota Enabled

 NB: Disk partitions with quotas enabled will have a slower processing speed than normal, and it may require a larger disk space as it creates a large number of quota control files. Therefore, it is recommended users keep the number of partitions with quota to a minimum.

 You must restart your machine to apply the changes.

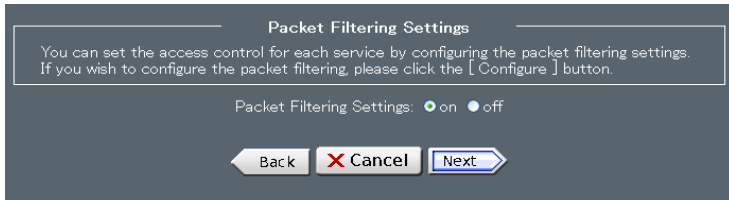
Configures the partition on which the user would like to set a disk quota restriction. Any partitions set as "Restricted" in this setting menu will enable you to set disk quota restriction per user.

This setting can also be configured in "Partition Setting" under the "Disk Management" menu in the Main menu.



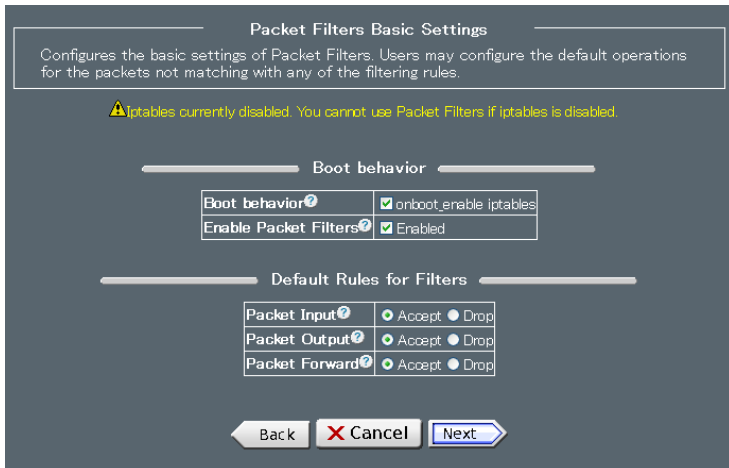
Please note that the disk quota control setting will not be applied until you reboot your computer.

■ Packet Filtering Settings



Configure the setting for packet filtering.

Please be sure to set packet filtering for external public servers.

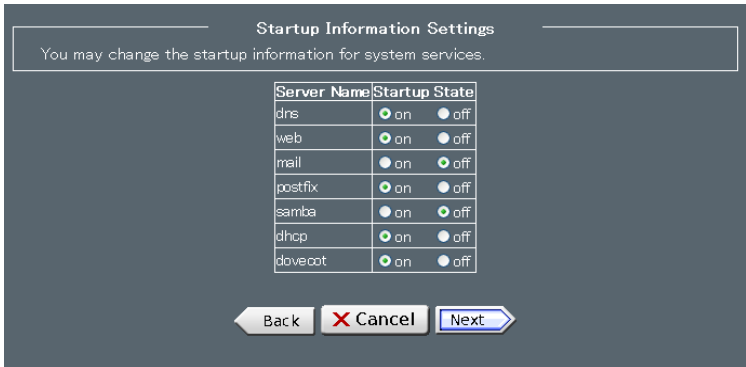


Configures the server settings on servers providing Internet service such that it would not disclose any unnecessary service to the public.

However, please note that the server will not be able to provide any service if you set the necessary services to "Do not disclose".

This setting can also be configured in the "Firewall" menu in the Main menu.

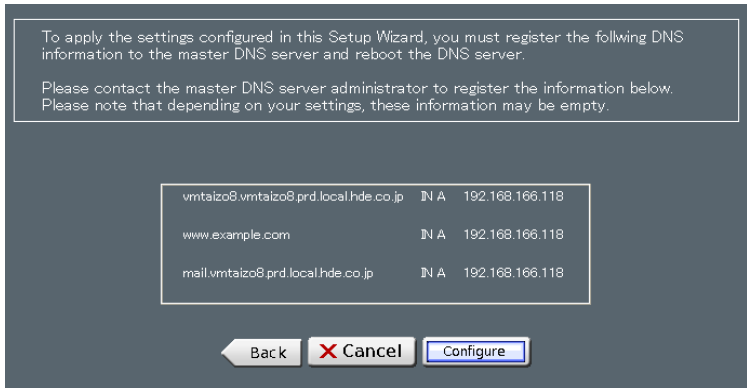
■ Startup Information Settings



Select the service you would like to boot when you start up your system.

This setting can also be configured in "Server Status" under the "Server Status" menu in the Main menu.

■ Settings Regarding Other Servers



If you have selected any secondary servers, the records directed to the primary DNS server will be displayed on this screen.

Please keep a record of this screen for applying the configuration on to other servers (primary DNS server, etc.).

■ Restarting the System



Network settings and partition setting for disk quota restriction will not be applied until you restart your system. Please make sure to reboot your computer upon the completion of the Initialization Setup Wizard.

You can also restart your system from the "Shutdown Computer" option in the "Server Status" menu.

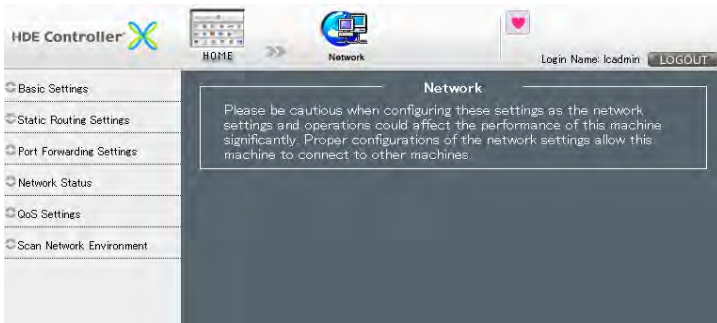
3. Network Settings

The server will not be able to communicate with other machines, even when they are physically connected, if the configuration for the Network settings, such as IP address setting, is not setup correctly.

Furthermore, faulty network settings may cause negative influences on the existing network. Hence it is crucial that the network setting is configured correctly.

This section will provide instructions and explanation regarding the proper configuration of your network settings. Please be sure to apply the network configurations in accordance with your operating environment.

Click the "Network" menu on the Main Menu screen.



■ Basic Settings

Double click the "Network Basic Setting" tab and enter the appropriate values in each of the text fields.

Host Name	<input type="text" value="vmtaizo8"/>
Domain Name	<input type="text" value="vmtaizo8.prd.local.hde.co.jp"/>
DNS Server 1	<input type="text" value="192.168.0.4"/>
DNS Server 2	<input type="text"/>
DNS Server 3	<input type="text"/>
Search Domain List	<input type="text" value="prd.local.hde.co.jp"/>

- **Host Name**

Enter the host name of your server. Do not write in FQDN format (format which includes the domain name). Please be sure to fill in this field correctly as it cannot be omitted.

- **Domain Name**

Enter the domain name of your server. Please specify in a format which includes one or more dots "." (e.g. example.com). Improper domain names such as "com" or "example" cannot be used.

Please be sure to fill in this field correctly as it cannot be omitted.

- **DNS Server 1**

Please specify the IP address of the packet-receivable DNS server from this server. This configuration will allow users to inquire the DNS server specified by name resolution.

Set the loop-back address to 127.0.0.1 if this server itself serves as a DNS server.

Please be sure to fill in this field correctly as it cannot be omitted.

- **DNS Server 2, DNS Server 3**

You may configure DNS server 2 and DNS server 3 in case server 1 does not respond to inquiries. Inquiries will be sent to DNS server 2 then DNS server 3 respectively.

This field may be omitted.

- **Search Domain List**

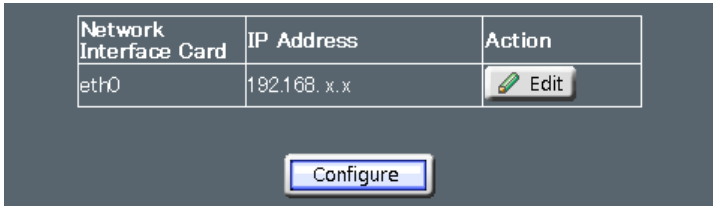
Create a list of domain names associated with the host names upon host search. To input multiple domain names, separate each domain name with a space. You may specify up to a maximum of 6 domain names.

Please be sure to fill in this field correctly as it cannot be omitted.

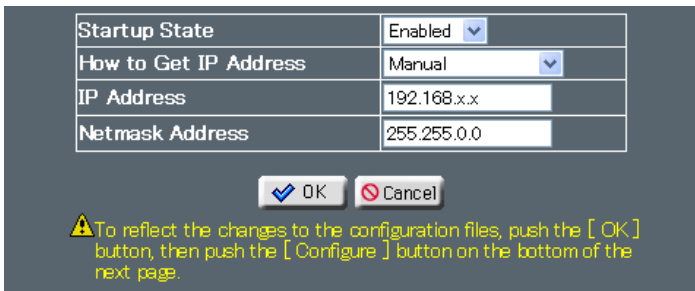
Users may make changes to this setting from "Basic Setting" within the "Network" menu in the Main Menu.

■ Network Card Settings

Open a list of all recognizable network cards by double clicking the "Network Card Setting" tab.



Users can move to the configuration menu and enter the IP address and netmask of a particular network card by selecting the network card and clicking on the "Edit" button.



● Startup State

Configure whether to enable this network card upon server boot-up. Select "Enabled" in case for performing server maintenance.

● How to Get IP Address

Selects the method in which you wish to obtain the IP address granted to the selected network card.

● IP Address

Enter the IP address granted to the selected network card. For Intranet servers, set the IP address to a private address range as the server is located within LAN.

Please disregard this configuration if you have selected the "Set Manually" option in the "How to Get IP" screen.



What is a private address?

Private addresses refer to the address space that will never be used on the Internet defined by RFC-1918. Organizations are free to assign the following address within its community.

Class A	10.0.0.0~10.255.255.255
Class B	172.16.0.0~172.31.255.255
Class C	192.168.0.0~192.168.255.255

● Netmask

Enter the netmask corresponding to the IP address specified above. Please disregard this configuration if you have selected the "Manual" option in the "How to get IP Address" item. Please consult your network administrator if you do not know your netmask or network length.



What is netmask?

A Netmask refers to the value used to separate the network ID and host ID within an IP address. Netmasks contain a series of binary numbers (Network ID is set as 1 and Host ID is set as 0) written in decimal format, where each 8 bit is separated by a dot, similar to that of an IP address.














Network length refers to the number of consecutive 1's (network ID) when the netmask is written in binary format.

Network length and corresponding netmask

Network Length	Netmask
8	255.0.0.0
16	255.255.0.0
24	255.255.255.0
25	255.255.255.128
26	255.255.255.192
27	255.255.255.224
28	255.255.255.240

■ Gateway Settings

Click the "Gateway Settings" tab and enter the appropriate values into each field.

Gateway Device	 eth0 
Gateway Address (IPv4)	 192.168.0.1
IP Forwarding	 Disabled 
IP Masquerade	 Disabled 
IPv6	 Disabled 
Accept Router Advertisement Packets	 Enabled 
Configure Link-local Address Automatically	 Enabled 

● Gateway Address

Enter the IP address of the gateway machine (or router) in the network placed on the server machine.

After confirming that you have entered the correct address, click the "Configure" button on the bottom of the screen.

Please note that incorrect configuration of this setting may result in issues such as unable to access the server or cause negative influences on other hosts on the same network.

In order to apply the changes you must restart your server machine after making the changes to the configuration.



What is a gateway?

A gateway refers to the server which relays the access to hosts on another segment of the network. By setting the gateway properly, you will be able to access other networks such as the Internet.

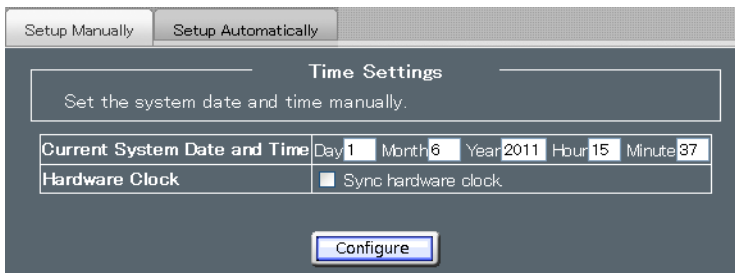
4. Time and Date Settings

Configures the time and date settings of the server machine. This configuration will allow users to synchronize the OS clock with the hardware clock.

Click "Main Menu" - "Option Setting" - "Time Setting".

Please note that if you configure the time setting only on the OS and if the time is not synchronized with the hardware clock, the OS time will be adjusted to the hardware time upon rebooting the server machine.

■ Setup Manually



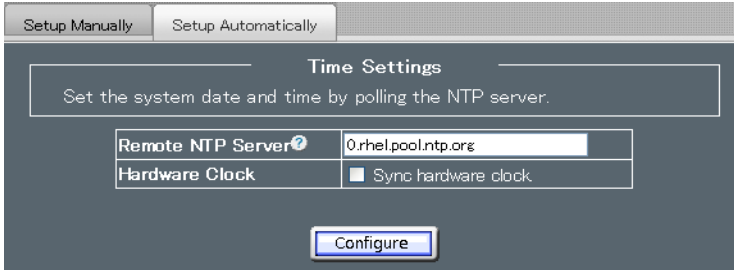
The screenshot shows a window titled "Time Settings" with two tabs: "Setup Manually" (selected) and "Setup Automatically". Below the tabs is a text box with the instruction "Set the system date and time manually." Below this are two rows of input fields. The first row is labeled "Current System Date and Time" and contains five fields: "Day" with value "1", "Month" with value "6", "Year" with value "2011", "Hour" with value "15", and "Minute" with value "37". The second row is labeled "Hardware Clock" and contains a checkbox labeled "Sync hardware clock" which is currently unchecked. At the bottom center of the dialog is a "Configure" button.

"Setup Manually" allows users to make direct changes to the current system clock. Please check the "Sync hardware clock" box if you would like to apply the same settings on the hardware clock.

If you have completed the above settings, click the "Configure" button. You should get a brief message saying "Please wait a moment". Your settings will be applied when you see a dialogue with the message "Configuration Complete".

■ Setup Automatically

"Setup Automatically" allows users to retrieve and apply time settings from a public remote/NTP server.



Time Settings	
Set the system date and time by polling the NTP server.	
Remote NTP Server	0.rhel.pool.ntp.org
Hardware Clock	<input checked="" type="checkbox"/> Sync hardware clock
<input type="button" value="Configure"/>	



To use this configuration option, TCP port number 123 must be enabled.

Enter the IP address or the FQDN of the server you would like to retrieve the time information from into the Remote NTP Server field.

If you have completed the above settings, click the "Configure" button. You should get a brief message saying "Please wait a moment". Your settings will be applied when you see a dialogue with the message "Configuration Complete".

■ NTP Server Settings

Select the "NTP Server" – "NTP Server Settings" menu from the HDE Controller Main Menu..

Basic Settings	
Specifies the server to synchronize time with. Clicking the [Configure] button will (re)start the NTP Server.	
NTP Server	Server 1 0.rhel.pool.ntp.org
	Server 2 1.rhel.pool.ntp.org
	Server 3 2.rhel.pool.ntp.org
Drift	<input checked="" type="checkbox"/> Use Drift

Configure

This configuration will allow users to synchronize their clock with the Remote NTP server and maintain an accurate time display. Enter the IP address or FQDN of the server you would like to retrieve the time information from into the Server 1-3 fields. Server load can be reduced by checking the "Use Drift" box.

If you have completed the above settings, click the "Configure" button. You should get a brief message saying "Please wait a moment". Your settings will be applied when you see a dialogue with the message "The configuration process completed successfully.".

■ NTP Server Access Control Settings

Configure the access control setting for the NTP server.

The screenshot shows a web-based configuration interface for NTP server access control. At the top, there are two tabs: "Basic Settings" and "Access Control Settings", with the latter being selected. Below the tabs is a header "Access Control Settings" followed by a descriptive paragraph: "Configures basic policy of access restriction in [Global Settings]. Configures clients who are allowed to access this NTP server in [Detailed Settings]." A yellow warning icon is present with the text: "⚠ The host information specified as the NTP server in [Basic Settings] will be added automatically into the [Detailed Settings]."

Under the "Global Settings" section, there is a checkbox labeled "Deny all clients." which is currently unchecked. A yellow warning icon is next to it with the text: "⚠ Unchecking this will disable [Detailed Settings], and allow all access."

The "Detailed Settings" section features a table with the following structure:

Network?	
<input type="text"/>	<input type="button" value="Add"/>
125.206.198.58/32	<input type="button" value="Delete"/>
218.45.21.189/32	<input type="button" value="Delete"/>

Below the table, a yellow warning icon is shown with the text: "⚠ The IP Address specified in [NTP Server] of [Basic Settings] will be configured automatically to be allowed. 59.106.180.68, 61.206.115.3, 120.51.36.228, 131.113.63.2, 133.27.94.49, 183.177.167.6, 210.189.110.68, 219.117.196.43, 219.117.196.238"

At the bottom of the interface is a "Configure" button.

[Global Settings] refers to settings for basic policies regarding access control.

When "Deny all clients" is checked, the server will deny all client accesses other than the ones specified in the "Individual Settings". All client access will be accepted if the checkbox is unchecked.

[Detailed Settings] allows configuration of clients who can access this NTP server.

To add a client, enter the client's network address and the netmask in the text field and click the "Add" button.

To delete pre-existing client, click the "Delete" button.

To limit the access to the NTP server to only the clients specified in this setting, check the "Deny all clients" box in Global Settings.

If you have completed the above settings, click the "Configure" button. You should get a brief message saying "Please wait a moment". Your settings will be applied when you see a dialogue with the message "Configuration Complete".

5. LC Server Settings

The LC server is a server program which provides various setting function via the HDE Controller administrator screen. it executes operations such as writing to files and screen outputs corresponding to the request sent from the client browser.

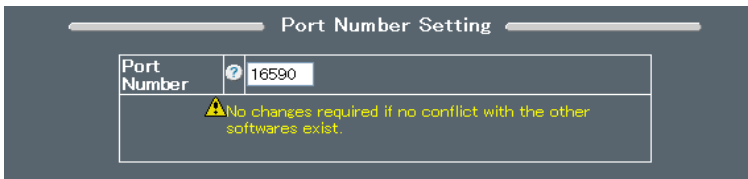
Under initial configuration, basic settings such as access policy of the server are not configured on the LC server. Please set configurations such as port numbers and access policy on the "LC Server Settings" screen if necessary.

Click on "Main Menu" - "HDE Controller Settings" - "Basic Settings"

● Port Number Settings

Configure the port number used for accessing the HDE Controller administrator screen.

Please set the port number within the Unknown port range (port numbers above 1024) and choose a port that is not used by any other service.



Port Number Setting

Port Number	16590
-------------	-------

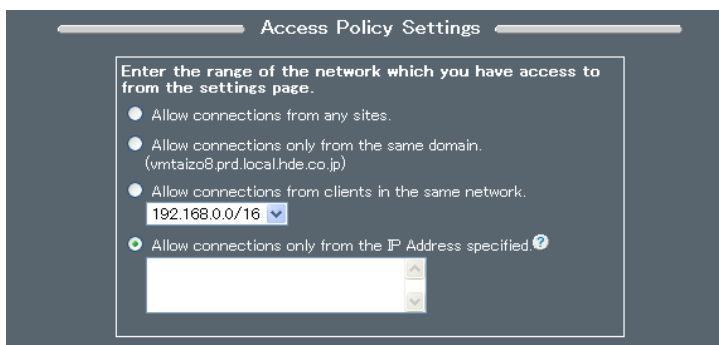
⚠ No changes required if no conflict with the other softwares exist.

● Access Policy Settings

Configures the range of client networks that may access the HDE Controller administrator screen.

Under initial settings, the option "Allow connections from any site" is selected. Please set a restriction on range of networks that may access the administrator screen.

Please be sure to enter the correct information as failure to do so may block you from accessing the administrator screen.



The screenshot shows a configuration window titled "Access Policy Settings". Inside the window, there is a text prompt: "Enter the range of the network which you have access to from the settings page." Below this prompt are four radio button options:

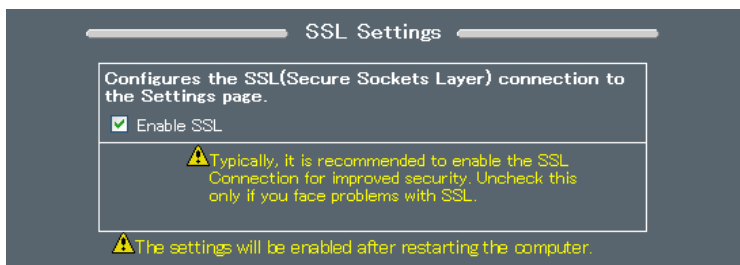
- Allow connections from any sites.
- Allow connections only from the same domain.
(vmtaizo8.prd.local.hde.co.jp)
- Allow connections from clients in the same network.
192.168.0.0/16
- Allow connections only from the IP Address specified. ?

The fourth option is selected. Below it is a text input field with up and down arrow buttons on its right side, currently empty.

● SSL Settings

Allow users to select whether they would like to use SSL (Secure Sockets Layer) when connecting to the HDE Controller administrator screen. Normally, we recommend enabling SSL for the connection for security improvement purposes.

When SSL is enabled, URLs that appears upon connection will begin with https://. URLs will appear as http:// if SSL is disabled.



To apply the LC server settings, you must restart your computer.

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