NEC

NEC DianaScope

Installation Manual for ft Server

Document Rev.1.03

Contents

Trademarks

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About This Document

This document introduces remote management for ft Server by using the server management utility “NEC DianaScope” and explains the procedures from installation to managed server’s setup. The document mainly explains the difference between a standard server and ft Server.

Before attempting to operate the server management utility NEC DianaScope, read this document with “NEC DianaScope Installation Manual” that is explained about generally managed server.

■ Notes

This document is intended for persons who are familiar with the operating system’s functions and operations and the network’s functions and setup. For operations and inquiries about the operating system, see its online help information.

Names used with screen images in this document are fictitious. They are unrelated to existing product names, names of organizations, or individual names. The setting values on the screen images are shown as examples, so setting values such as IP addresses on screen images are not guaranteed for operation.

In this document, “¥” expresses back slash.

■ About Symbols in This Document

The following explains three symbols that are used in this document:

IMPORTANT:	Points or particular notes you must follow when handling software of servers.
CHECK:	Points or notes you need to check when handling software or servers.
TIPS:	Useful information.

Chapter1 Difference between ft Server and a standard server

The chapter explains the main difference between ft Server and a standard server.

1.1 Connection Types

The connection via LAN (Ethernet) is supported between the DianaScope server and the managed server.

1.2 Functions

The functions of DianaScope for ft Server have some features:

- **Information collection**
  -- Server Status
  STATUS lamp state, LCD state and Powers on hours are displayed about each CPU/IO module.
  FT status lamp is also displayed while DianaScope Agent service runs on the managed server.
  -- IPMI Information
  System Event Log (SEL) list shows “Module No” of each record. “Module No” indicates which CPU/IO module registers the record.

- **Power control**
  ft Server does not support Power Off, Power Cycle and Reset from DianaScope.
  In case of emergency, you can execute Power Off or Power Cycle by exclusive commands of DianaScope command line interface.
  See “DianaScope Command Line Interface”.

- **Operation through the command line**
  DianaScope has some exclusive commands or options for ft Server like Power Off, Power Cycle and getting FT status lamp state.
  . See “DianaScope Command Line Interface”.

- **BMC configuration on the managed server with network booting**
  This function uses the DianaScope PXE Service to set BMC configuration information on the managed server through the DianaScope server for managed server operation via the LAN from the DianaScope Manager.

- **Other information**
  DianaScope PXE Service does not support BMC configuration for ft Server.

Chapter2 System Requirements

TIPS:
- See “DianaScope Installation Manual” for DianaScope modules.
- Please Use DianaScope Manager Ver.1.05.05 and above, and DianaScope Agent Ver.2.04.00 and above for management of ft Server.

2.1 Managed server

This section explains conditions for ft Server to be managed by the DianaScope Manager.

- **Hardware**

  -- ft Server that contains ft Remote Management Cards [N8815-001] conforming to IPMI Ver.2.0.

CHECK:
- See “NEC DianaScope Managed Servers Summary”.
- ft Remote Management Card has similar function with Advances Remote Management Card.

2.2 Requirements for Connection between the DianaScope Server and Managed Server

The connection via LAN (Ethernet) is supported between the DianaScope server and the managed server.
See “DianaScope Installation Manual” for notes on managed servers and network devices

- **LAN port for BMC**

  BMC uses the Management LAN port on ft Remote management Card.

CHECK:
- Be sure to connect both Management LAN port of CPU/IO modules #0 and #1.

Chapter3 Setup for ft Server (for LAN connection)

This chapter explains the setup procedure for the DianaScope Manager to manage the BMC and DianaScope Agent on a managed server remotely via LAN connection.

3.1 Setup Flow (for LAN connection)

Perform the following setup procedure:

(1) Connects the DianaScope server and the managed server on the same network.
See Chapter2 “System Requirements”.

(2) Configure BMC on the managed server.

(3) Register the managed server on the DianaScope Manager

3.2 Configure BMC on Managed Server (for LAN connection)

Configure BMC of the managed server at first.

TIPS:

- This section explains about the minimum setting that is necessary for connection the DianaScope Manger with the managed server. For details of BMC configuration for ft Remote Management Card, see Chapter4 “BMC Configuration Information ”.

Here is a method for configuring the BMC on ft Server for LAN connection.

- **Configuration with DianaScope Agent or “System Management” tool of NEC EXPRESSBUILDER CD-ROM**
  This document explains the configuration procedure using the DianaScope Agent for Windows.

CHECK:

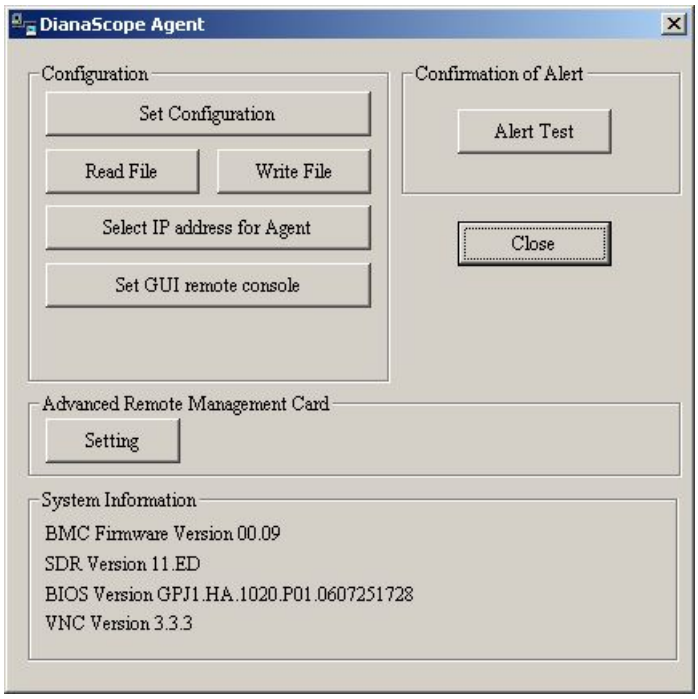
- Configuration with DianaScope PXE Service and configuration with NEC EXPRESSBUILDER DOS based with remote console feature are not available for ft Server.

3.2.1 Configuration with DianaScope Agent (for LAN connection)

This document explains the configuration procedure using the DianaScope Agent for Windows.

(1) After booting Windows on the managed server, click Windows [start] and start the BMC configuration function of DianaScope Agent.

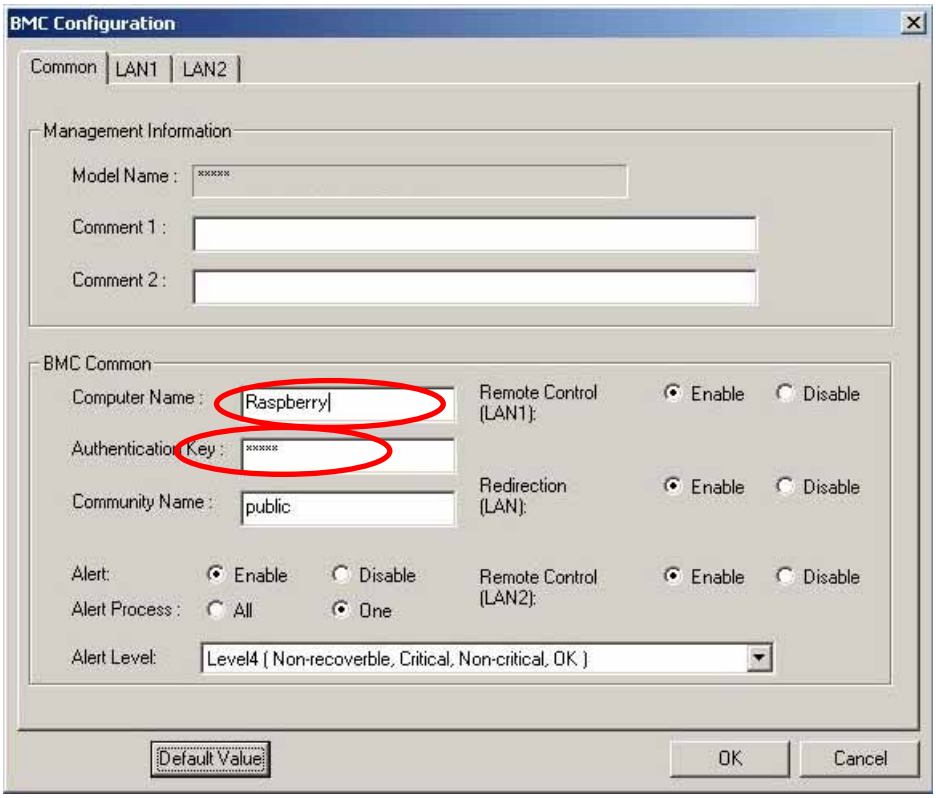
(2) The main dialog box will be appeared.
Click [Set Configuration]. When a confirmation message is displayed, click [OK].



(3) “BMC Configuration” dialog box will be display. Click “Common” tab page.

Be sure to set the below item. The other items can be used with the default values.
-- ”Computer Name”
Enter a unique name for each managed server.
-- “Authentication Key”

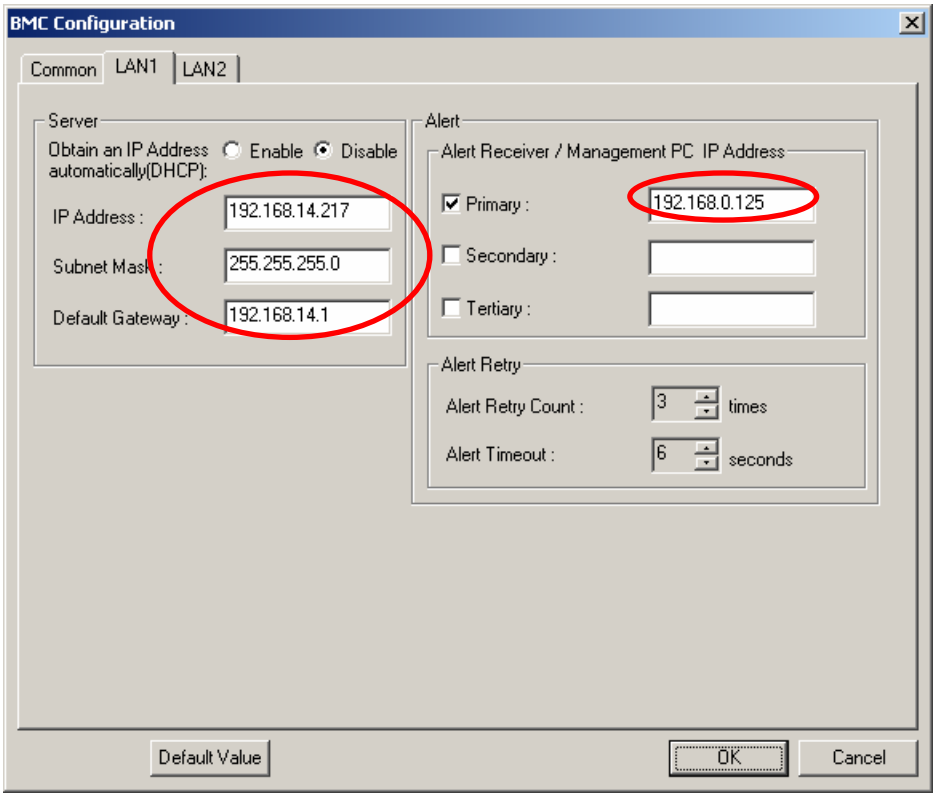
The following screen is shown an example.



(4) Select “LAN1” tab page
Set values the Management LAN port of CPU/IO module #0 on ft Server.
Be sure to set the below items. The other items can be used with the default values.

-- ”Obtain an IP Address automatically (DHCP)”
Determine whether to dynamically obtain an IP address for the Management LAN port of CPU/IO module #0 from a DHCP server.
If the item is set enable and registered, the BMC set the value obtained from DHCP server on “IP Address”, “Subnet Mask” and “Default Gateway”.
You can set enable on the item only if the BMC supports this capability.
-- ”IP Address”
Enter the IP address for the Management LAN port of CPU/IO module #0.
-- ”Subnet Mask”
Enter the subnet mask for IP address for the Management LAN port of CPU/IO module #0.
-- ”Default Gateway”
Enter the default gateway only if the managed server connects to DianaScope Server via any gateway
-- ”Management PC IP Address”
Enter the IP address of DianaScope server.

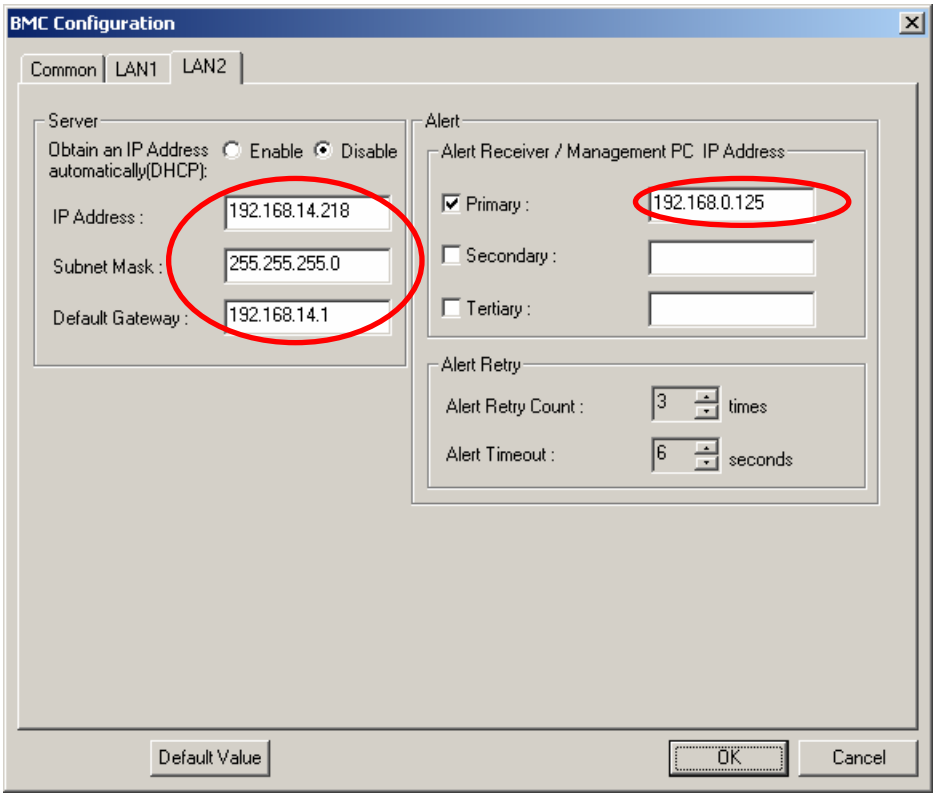
The following screen is shown an example.



(5) Select “LAN2” tab page
Set values the Management LAN port of CPU/IO module #1 on ft Server.
Be sure to set the below items. The other items can be used with the default values.

-- ”Obtain an IP Address automatically (DHCP)”
Determine whether to dynamically obtain an IP address for the Management LAN port of CPU/IO module #1 from a DHCP server.
If the item is set enable and registered, the BMC set the value obtained from DHCP server on “IP Address”, “Subnet Mask” and “Default Gateway”.
You can set enable on the item only if the BMC supports this capability.
-- ”IP Address”
Enter the IP address for the Management LAN port of CPU/IO module #1.
-- ”Subnet Mask”
Enter the subnet mask for IP address for the Management LAN port of CPU/IO module #1.
-- ”Default Gateway”
Enter the default gateway only if the managed server connects to DianaScope Server via any gateway
-- ”Management PC IP Address”
Enter the IP address of DianaScope server.

The following screen is shown an example.



(6) If you set “Default Gateway”, please connect the managed server via LAN port used by BMC and the gateway to network.
If you set “Alert Receiver / Management PC IP Address” on same network with the managed server, please connect the managed server via LAN port used by BMC and the alert receiver/management PC to network.

(7) Click [Register].
The configuration information will be set in the BMC. The MAC addresses of the gateway and the alert receivers will be also set in the BMC.

3.3 Register a managed server on DianaScope Manager (for LAN connection)

To register the managed server on the DianaScope Manager, login to the DianaScope Manager and perform in the following order:
(1) Add the group to which the managed server belongs.

(2) Register a managed server.

3.3.1 Add Group which the managed server belongs

(1) Click “Add Group” on the “Group List” screen.

(2) Enter the group name, and click [Add].

The added group will be displayed on the “Groups List” screen.

3.3.2 Register the Managed Server (for LAN connection)

Use either of the two methods to register the managed server.

- **Manual Registration**
  This method requires the operator to directly enter the managed server’s information such as the IP address of the BMC and to perform “Check Connection”.
- **Auto Registration**
  This method automatically searches the network for managed servers that are not registered yet on the DianaScope Manager, and registers the managed servers. This method is available only when LAN connection is used.

3.3.2.1 Manual Registration

(1) Click the managed server’s “Group name” on the “Group List”.

(2) Click the “Add Server” on the “Server List” of the group.

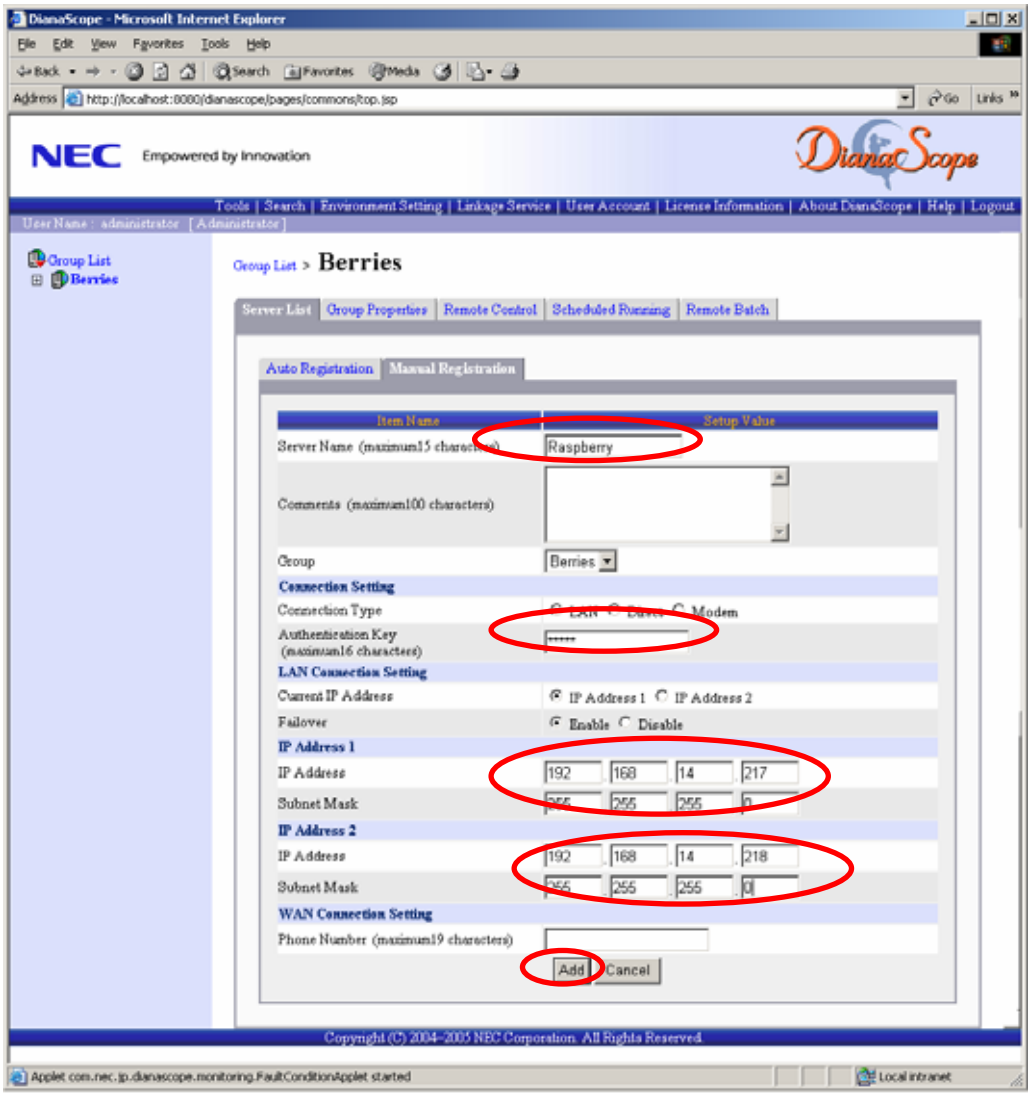
(3) Click ”Manual Registration” tab. Input the following items:

-- “Server Name”
Enter the managed server name on the DianaScope.
-- ”Authentication Key”
Enter the authentication key that is set on the BMC configuration of the managed server.
-- ”IP address 1”
Enter the IP address and subnet mask of LAN 1 that you have set in the managed server’s BMC configuration information.
If the managed server is ft Server, enter IP address and subnet mask of the Management LAN port on the CPU/IO Module #0
-- “IP address 2”
Enter another IP address and subnet mask of LAN 1 that you have set in the managed server’s BMC configuration information.
If the managed server is ft Server, enter IP address and subnet mask of the Management LAN port on the CPU/IO Module #1

CHECK:

- Be sure to set both “IP Address 1” and “IP Address 2” for ft Server.

The following screen shows an example.



TIPS:

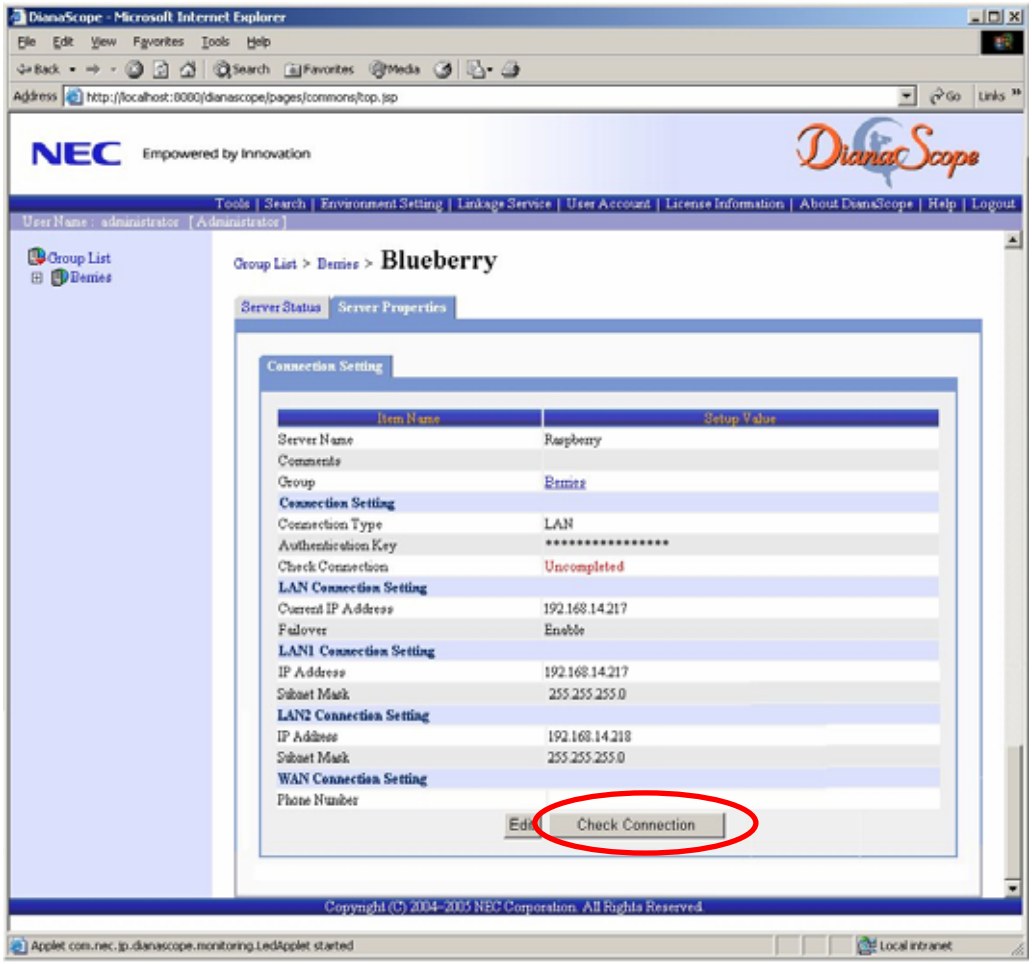
- For details of other items, see the DianaScope online help.

(4) Click [Add].

TIPS:

- A managed server cannot be controlled remotely by only registering it. Perform a “Check Connection”.

(5) Click [Check Connection] on “Connection Setting”



DianaScope Manager will execute “Check Connection” and collect the server information for the management.

When the “Check Connection” is completed, the DianaScope Manager can control the managed server.

3.3.2.2 Auto Registration

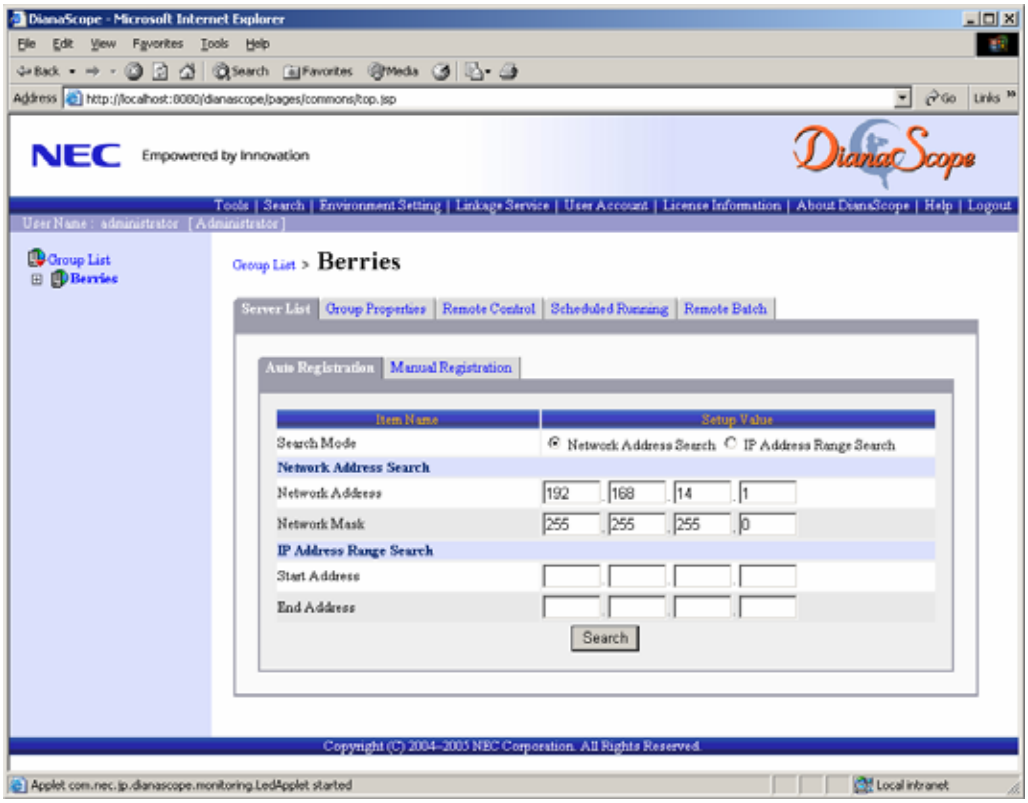
(1) Click the managed server's "Group name" on the "Group List".

(2) Click the "Add Server" on the "Server List" of the group.

(3) Select "Search Mode" on the "Auto Registration" screen.
With "Network Address Search", enter the network address and network mask.
With "IP Address Range Search", enter the "start address" and "end address" of the IP address range.
After that, click [Search].

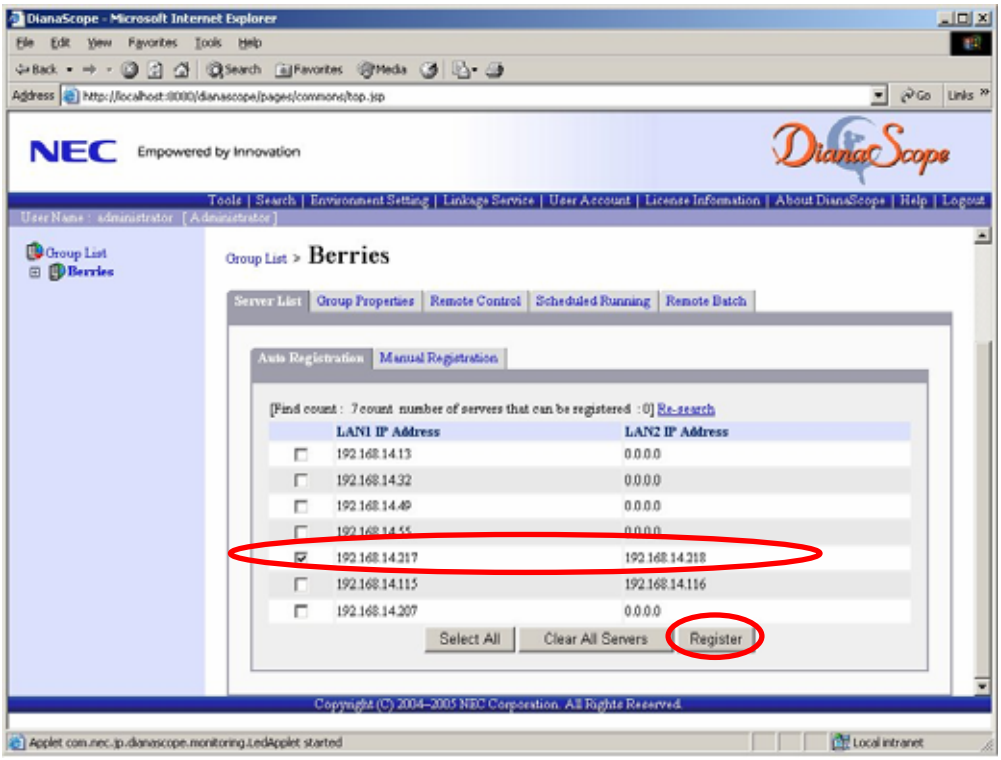
CHECK:
- Be sure to set the search range that includes IP addresses of both CPU/IO module #0 and #1.

The search for the managed servers will start.
The following screen is an example display with "Network Address Search" selected.

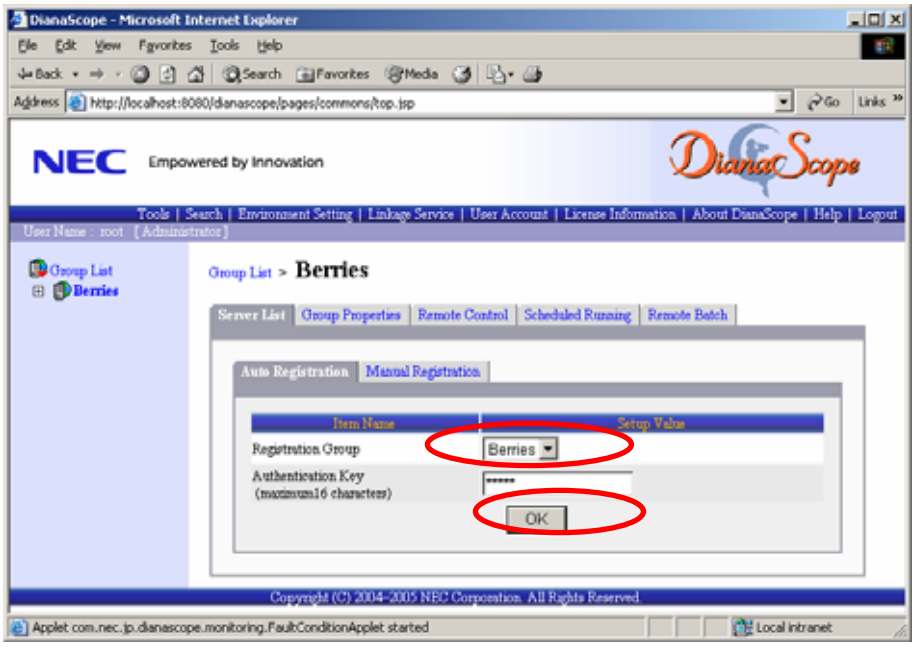


(4) The IP addresses of the found managed servers' BMCs will be listed. Select the managed server to be registered.
Click [Register].

The following screen is shown an example.



(5) Enter "Authentication Key" for the managed server and click [OK].



The DianaScope Manager will execute "Check Connection".
When the "Check Connection" is completed, the DianaScope Manager can control the managed server.

TIPS:

- When the managed server is registered by auto registration, the “Server Name” of the managed server is set to the computer name that has been set on BMC configuration for the managed server. (If the same server name has been registered, some number is added to the server name.)
  You can change the server name on “Server Properties ” – “Connection Setting”.

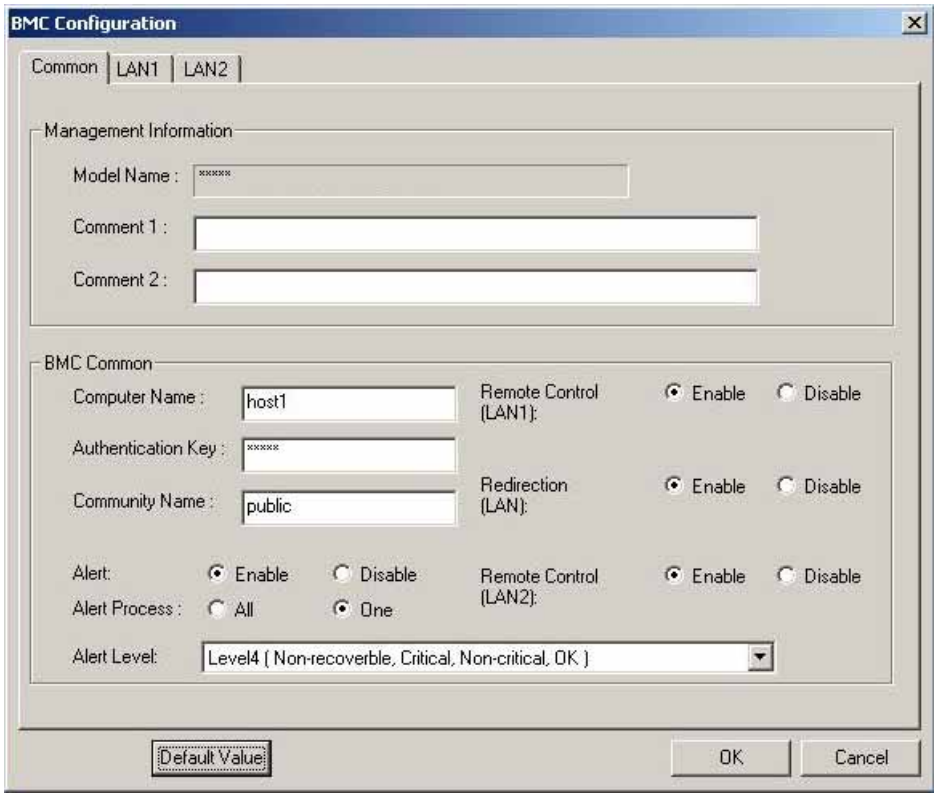
Chapter4 BMC Configuration Information Items

This chapter explains all the BMC configuration information items for ft Remote Management Card.
Items that are not mandatory can be used with the default values.

CHECK:

- Following items are not displayed for the managed server is ft Server:
  -- “Common” tab page:
  "Redirection (Modem/Direct)"
  "Remote Control (Modem/Direct)"
  "Alert Order"
  -- “WAN/Direct” tab page:
  -- “Pager” tab page.

(1) Common



Item	Description	Default Value
Management Information	Management information setting on the managed server side	
Model Name	Displays the model name of the managed server. (The model name included in the FRU information is displayed. It may be different from the official product name.)	–
Comments 1, 2	Set comments. Comments can be freely entered. (The comments cannot be viewed remotely.)	Blank
BMC Common	BMC-common setting	
Computer Name	Enter any name for managing the server on DianaScope. The computer name of each server to be managed must be unique.	host1

Item	Description	Default Value
Authentication Key	Set the authentication key for connection with the BMC.	guest
Community Name	Set the community name of the SNMP trap to be sent by the BMC. *1	public
Alert	Determine whether to enable/disable the sending of alerts. When “Disable” is selected, alerts are not to be sent to any alert receivers. When “Enable” is selected, they are sent depending on the alert process, alert level, and whether each alert receiver is enabled/disabled.	Enable
Alert Process	Select either “All Alert Receivers” or “One Alert Receiver”. When “All Alert Receivers” is selected, alerts are sent to all alert receiver media. in the following order. (1) via LAN (2) via Modem (3) pager. When “One Alert Receiver” is selected, alerts are not to be sent to the lower priority receiver medium than the alert receiver to which the alert is sent successfully. **You do not need to set the item for ft Server.**	One Alert Receiver
Alert Level	Set a level for determining whether to send alerts, depending on the importance of events which have occurred on the managed server. *2	Level 4
Remote Control (LAN1)	Determine whether to enable/disable remote control via Management LAN port of CPU/IO module #0. When “Disable” is selected, connection via Management LAN port of CPU/IO module #0 from DianaScope cannot be made.	Enable
Remote Control (LAN2)	Determine whether to enable/disable remote control via Management LAN port of CPU/IO module #1. When “Disable” is selected, connection via Management LAN port of CPU/IO module #1 from DianaScope cannot be made	Enable
Redirection (LAN)	Determine whether to enable/disable a remote console via LAN by BIOS. When “Disable” is selected, the remote console function via LAN cannot be used.	Enable

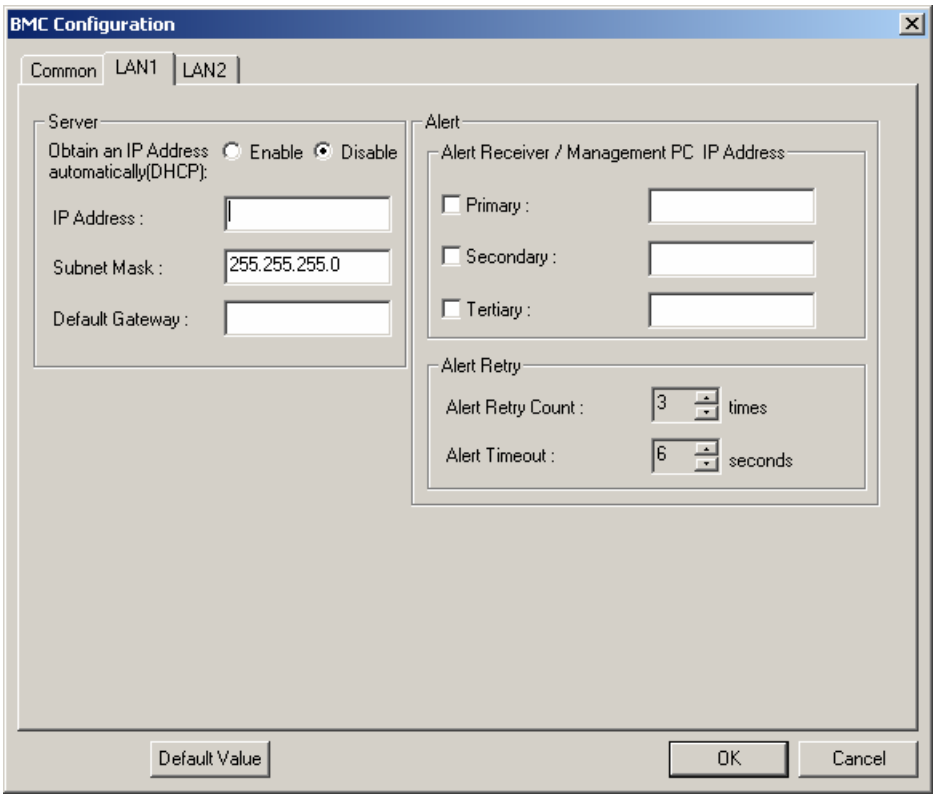
*1: When you change Community Name, please set up the community name so that the alert receiver can receive it via LAN.

*2: The alert levels are as follows:

Alert Level	Importance of Alert Event
1	Unrecoverable
2	Unrecoverable, **Error**
3	Unrecoverable, Error, **Warning**
4	Unrecoverable, Error, Warning, **Recoverable**
5	Unrecoverable, Error, Warning, Recoverable, **Notice**
6	Unrecoverable, Error, Warning, Recoverable, Notice, **Monitoring**

(2) LAN1

Be sure to set both “LAN1” and “LAN2” for ft Server.



Item	Description	Default Value
Server	**Setting for network to be used with CPU/IO module #0 of the managed server.**	
Obtain an IP Address automatically(DHCP)	**Determine whether to dynamically obtain an IP address of Management LAN port on the CPU/IO module #0 from a DHCP server.** If the item is set enable and registered, the BMC set the value obtained from DHCP server on “IP Address”, “Subnet Mask” and “Default Gateway”. You can set enable on the item only if the BMC supports this capability.	Disable
IP Address	**Set the IP address of Management LAN port on the CPU/IO module #0.**	0.0.0.0 or Blank
Subnet Mask	**Set the subnet mask of Management LAN port on the CPU/IO module #0.**	255.255.255.0
Default Gateway	**Set the IP address of the default gateway of Management LAN port on the CPU/IO module #0.** When you set the gateway for this item, please connect the managed server via LAN port used by BMC and the gateway to network before register the configuration to BMC. Do not set Default Gateway when you do not use any gateway between the DianaScope server and managed server.	Blank
Alert Receiver / Management PC	Setting of the DianaScope server that manages the server, or alert receiver that receives alerts from	

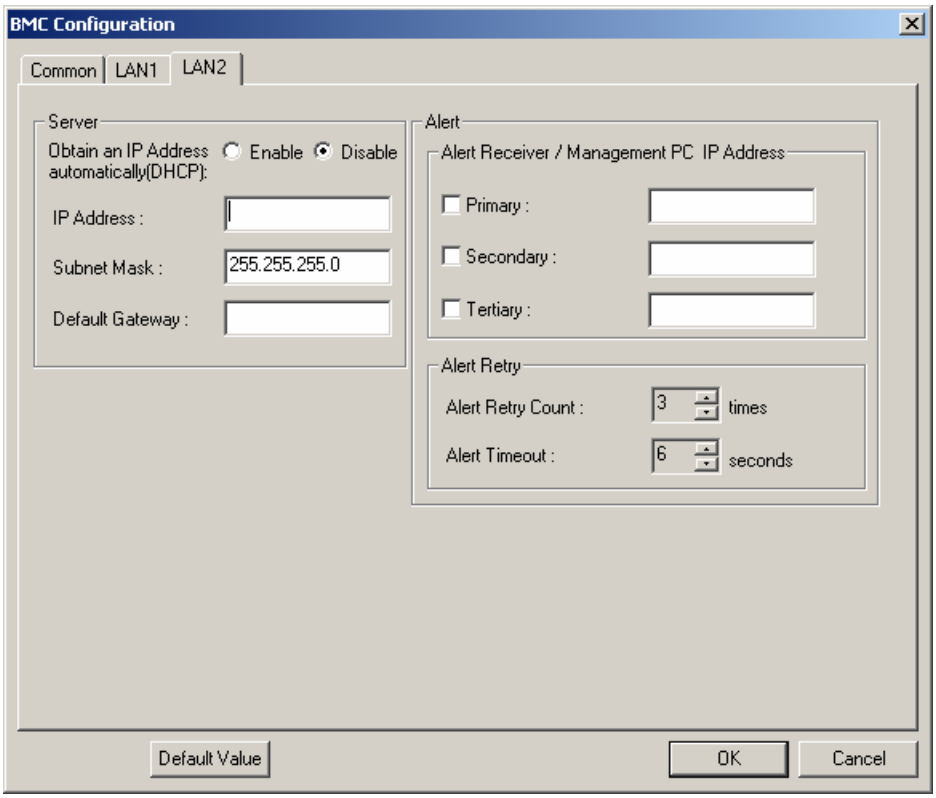
Item	Description	Default Value
	BMC.	
Alert (Check Box)	Determine whether to enable/disable the sending of alerts to the alert receiver.	Disable
IP Address	Set the IP address of the DianaScope server or the alert receiver. Please set the IP address of DianaScope server for Primary Alert Receiver / Management PC When you set alert receiver / management PC on same network with the managed server for this item, please connect the managed server via LAN port used by BMC and the alert receiver / management PC to network before register the configuration to BMC.	0.0.0.0
Alert Retry	Setting for alert retry	
Alert Retry Count	Set the number of times an alert retried.	3
Alert Timeout	Set a timeout period (seconds) for an alert.	6

CHECK:

- If the managed server has been installed ft Remote Management Card, the BMC may not immediately obtain the IP address after the BMC is configured to obtain the IP address by the DHCP. Please turn the managed server AC-OFF and AC-ON because the BMC try to obtain the IP address whenever the managed server is turned AC-ON.

(3) LAN2

Be sure to set both “LAN1” and “LAN2” for ft Server.



Item	Description	Default Value
Server	**Setting for network to be used with CPU/IO module #1 of the managed server.**	
Obtain an IP Address automatically(DHCP)	**Determine whether to dynamically obtain an IP address of Management LAN port on the CPU/IO module #1 from a DHCP server.** If the item is set enable and registered, the BMC set the value obtained from DHCP server on “IP Address”, “Subnet Mask” and “Default Gateway”. You can set enable on the item only if the BMC supports this capability.	Disable
IP Address	**Set the IP address of Management LAN port on the CPU/IO module #1.**	0.0.0.0 or Blank
Subnet Mask	**Set the subnet mask of Management LAN port on the CPU/IO module #1.**	255.255.255.0
Default Gateway	**Set the IP address of the default gateway of Management LAN port on the CPU/IO module #1.** When you set the gateway for this item, please connect the managed server via LAN port used by BMC and the gateway to network before register the configuration to BMC. Do not set Default Gateway when you do not use any gateway between the DianaScope server and managed server.	Blank

Item	Description	Default Value
Alert Receiver / Management PC	Setting of the DianaScope server that manages the server, or alert receiver that receives alerts from BMC.	
Alert (Check Box)	Determine whether to enable/disable the sending of alerts to the alert receiver.	Disable
IP Address	Set the IP address of the DianaScope server or the alert receiver. Please set the IP address of DianaScope server for Primary Alert Receiver / Management PC When you set alert receiver / management PC on same network with the managed server for this item, please connect the managed server via LAN port used by BMC and the alert receiver / management PC to network before register the configuration to BMC.	0.0.0.0
Alert Retry	Setting for alert retry	
Alert Retry Count	Set the number of times an alert retried.	3
Alert Timeout	Set a timeout period (seconds) for an alert.	6

CHECK:

- If the managed server has been installed ft Remote Management Card, the BMC may not immediately obtain the IP address after the BMC is configured to obtain the IP address by the DHCP. Please turn the managed server AC-OFF and AC-ON because the BMC try to obtain the IP address whenever the managed server is turned AC-ON.