# Chap.1

## Product Outline of NEC ESMPRO Manager and Agent

1.1 Detection and Rapid Handling of Server Failure
1.2 Prevention of Server Failure
1.3 Assured Report of Server Failure
1.4 Management of Server Operation Status
1.5 Collective Management of Distributed Servers

NEC ESMPRO Manager and Agent are server management software aiming at stable operation and efficient system operation of server system. By managing configuration information of server resource and operating status, detecting server failure and reporting it to system administrator, it can prevent the server failure and rapidly handle it without fail.

## Importance of Server Management

In distributed system, stable operation of server is indispensable. In addition, in order to guarantee the stable operation, it is necessary to reduce the load of server management.

- Stable Operation of Server

  The shutdown of server that is our customers' core part of distribution system means loss of business opportunity and profit of the customers.
  Therefore, server must be always operating in excellent condition Should server failure happen, we have to know it as soon as possible, investigate the cause and cope with it The shorter the time of accrual of failure to recovery is, the smaller the loss of profit (cost) is.

- Load Reduction of Server Management

  To manage server on the distributed system need a lot of work, especially, large scale distributed system and server on remote site. To reduce the load of server management means cost saving (profit of customer.

## Server Management of NEC Express5800 Series

### How should the customers who use NEC Express5800 Series do for server management ?

In response to the customers' request server management software,

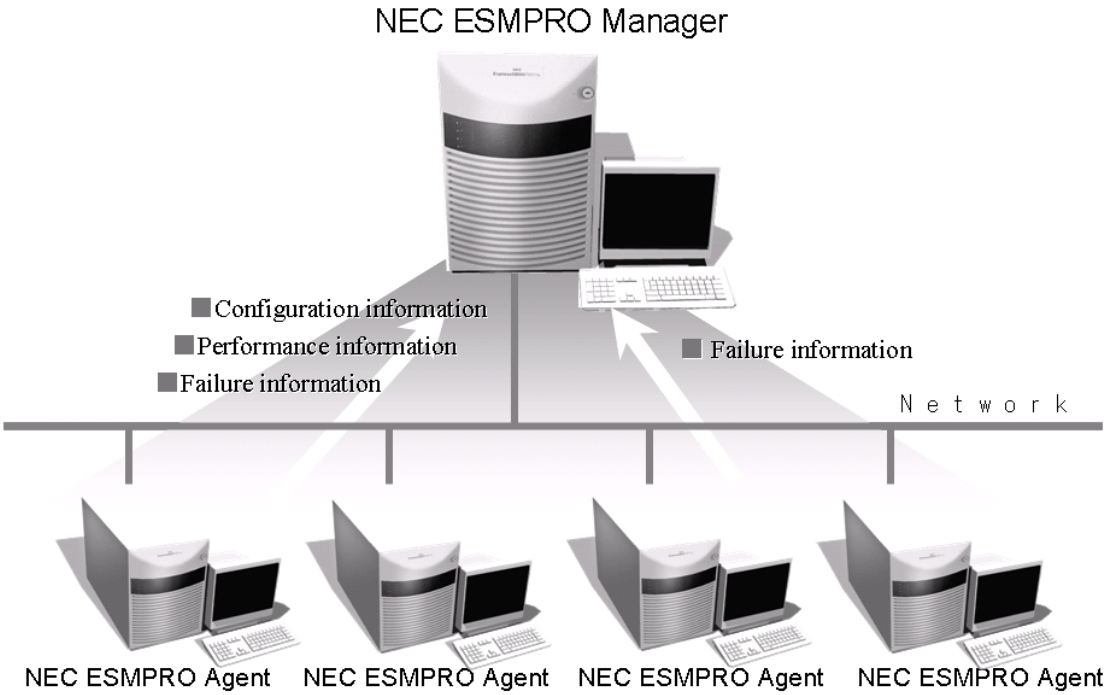
"NEC ESMPRO Manager and Agent"

is bundled with NEC Express5800 Series as standard. (Excl. some models)

By utilizing NEC ESMPRO Manager and Agent, the customers can easily manage servers

# What are NEC ESMPRO Manager and Agent?

NEC ESMPRO Manager and Agent are server management software aiming at managing and monitoring servers on network. By introducing this product, you can get, manage and monitor the configuration, performance, failure information in real time and know accrual of failure by Alert Report Function.



# Usage Effect of NEC ESMPRO Manager and Agent

NEC ESMPRO Manager and Agent exercise sufficient effect on various needs in diversified and complicated system environment.

## ● Detection and Rapid Handling of Server Failure

NEC ESMPRO Agent gathers various failures information of servers and determines malfunction. In case server detects the malfunction, it reports alert to NEC ESMPRO Manager.
→ Refer to P.10

## ● Prevention of Server Failure

NEC ESMPRO Agent supports preventive support function predicting failure in advance as a countermeasure for failure. It can detect temperature rise in chassis, free area of file system and hard disk deterioration.
→ Refer to P.12

## ● Assured Report of Server Failure

Address of alert report is not only NEC ESMPRO Manager but also internet mail and others can be selected.
→ Refer to P.13

## ● Management of Server Operation Status

NEC ESMPRO Agent can get the detailed hardware configuration and performance information of servers. The information you got can be referred through NEC ESMPRO Manager anywhere.
→ Refer to P.14

## ● Collective Management of Distributed Servers

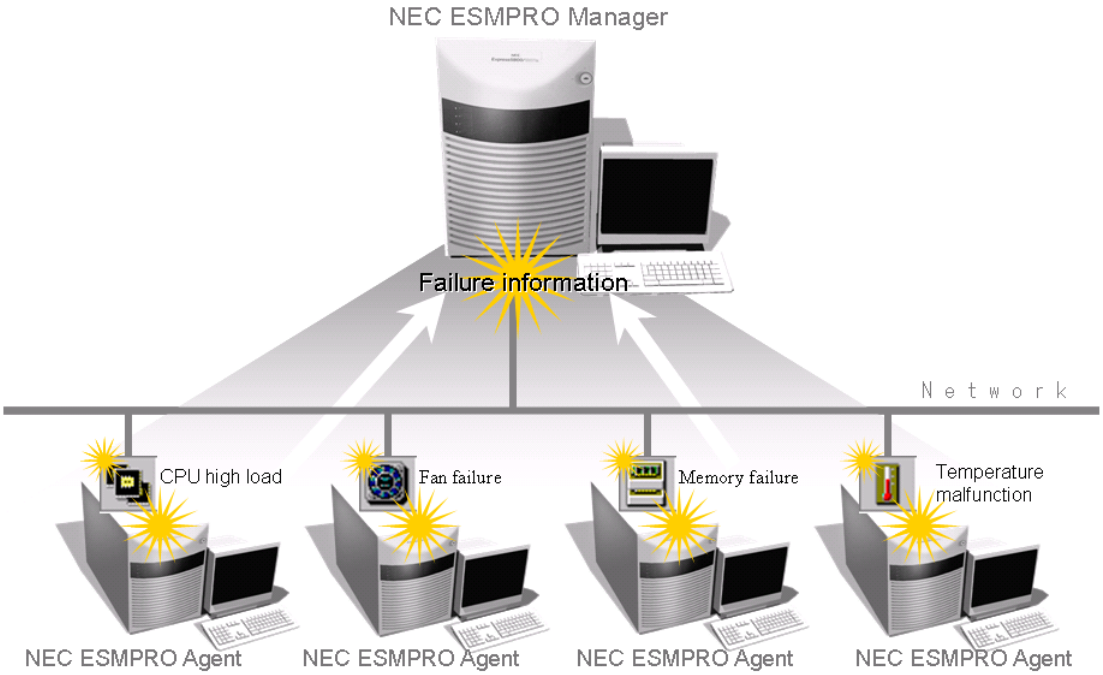
NEC ESMPRO Manager provides GUI interface that can efficiently manage distributed servers on network.
→ Refer to P.15

# 1.1 Detection and Rapid Handling of Server Failure

NEC ESMPRO Manager and Agent detects malfunction related to failure at an early stage and reports its information to administrator in real time.

## Detection of malfunction at an early stage

If failure should happens, NEC ESMPRO Agent detects the failure and it reports it to NEC ESMPRO Manager (Alert Report). NEC ESMPRO Manager receives Alert and change the status color of server having failure and component of server. By utilizing NEC ESMPRO Manager. as you can easily check contents of failure, failure point, and countermeasure for it, you can rapidly cope with failure arisen in server.



# Types of failure alerted

The failures reported by NEC ESMPRO Agent are as follows:

| Alert Classification | Alert Contents |
|---|---|
| CPU | ・CPU Threshold Over<br>・CPU Degeneracy etc. |
| Memory | ・Unmodifiable Error Detection etc. |
| Power Supply | ・Power Supply Failure etc. |
| Temperature | ・Temperature Rise in Chassis etc. |
| Fan | ・Fan Failure (Deterioration of number of rotations) |
| Power Voltage | ・Deterioration of Power Voltage |
| Water-Cooled Unit | ・Water Leakage of Water-Cooled Unit etc. |
| Storage | ・Free Area of File System<br>・Deterioration of Hard Disk |
| Display | ・Hard Disk Failure<br>・Deterioration of Hard Disk |
| LAN | ・Line Failure<br>・Transmission Retry/Abort Threshold Over etc. |
| Event Log | ・Optional Event Log |

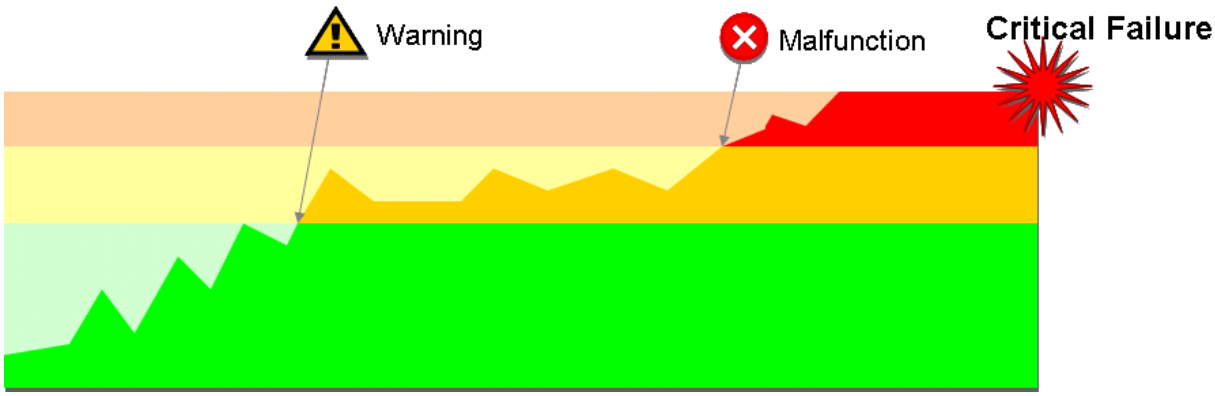
The above are not all the failures reported as alert by NEC ESMPRO Agent. As for the failures of alert report, please refer to Chap.3.

# 1.2 Prevention of Server Failure

NEC ESMPRO Agent supports preventive maintenance function predicting failure in advance as a preventive countermeasure to failure.

## Preventive Maintenance

NEC ESMPRO Manager and Agent can set threshold of each resource of server. In case set threshold exceeds, NEC ESMPRO Agent reports alert to NEC ESMPRO Manager.
The preventive maintenance function can set watch list such as hard disk, CPU utilization and others.

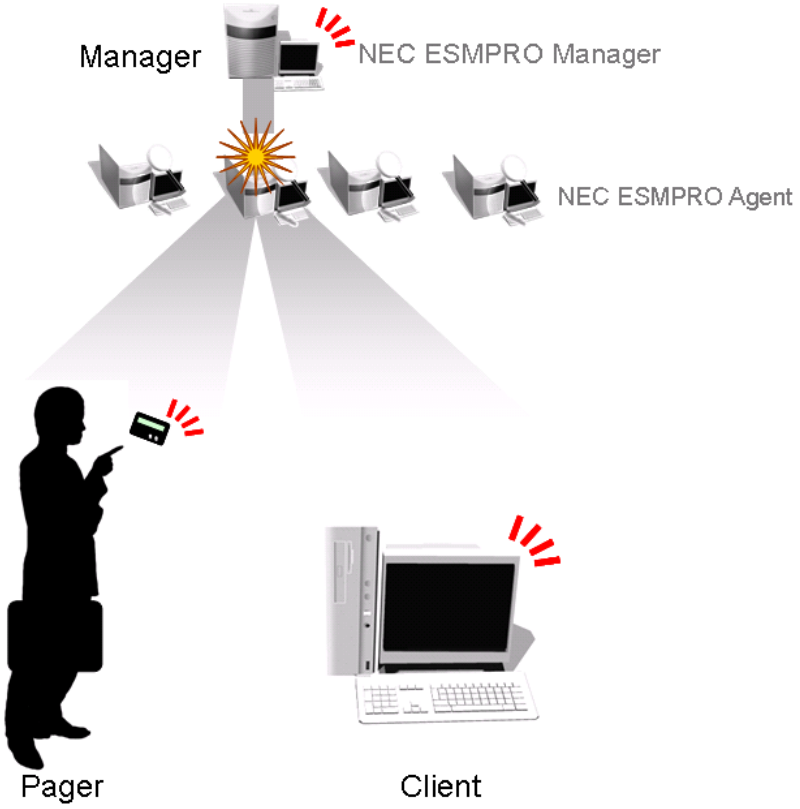


# 1.3 Assured Report of Server Failure

Address of failure report can be selected not only by NEC ESMPRO Manager, but also by internet mail.

## Report Method to Server Administrator

The report function of NEC ESMPRO Agent can report to server administrator by various methods.




NEC ESMPRO Agent provides the following report methods and the report method suitable to operating environment can be selected.

・Manager Report
reports to AlertViewer of NEC ESMPRO Manager
・ Internet Mail Report
reports by sending mail using SMTP.
・Mail
reports by sending mail using MAPI.
Available Server is before Exchange Server 5.x.
・ Run Command
runs designated command.
Command must be executable by command prompt.
・Write File
outputs the content of alert to test file.
・ Pager
calls pager (pocket bell)
* It not supports since Ver4.0.
・Pop-up Message
reports by pop-up message about alert.

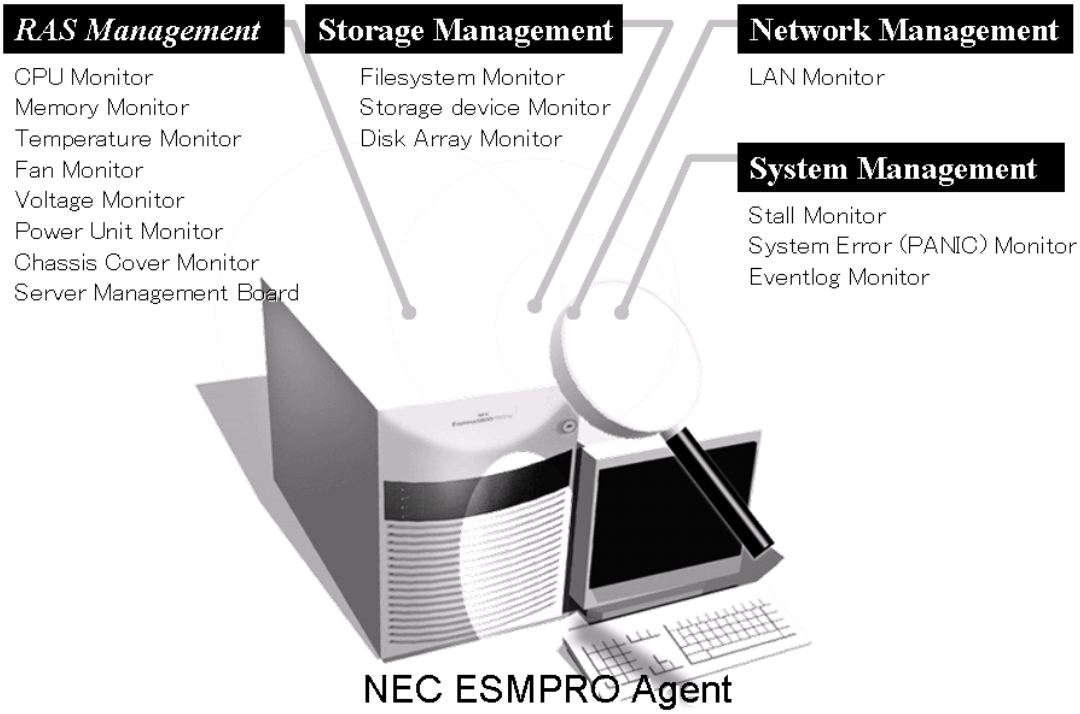
・Report to Client
reports to Clients that are in the same domain at the same time using messenger service.

# 1.4 Management of Server Operation Status

NEC ESMPRO Agent manages and monitors various component of server. You can refer to the information NEC ESMPRO Agent manages and monitors by DataViewer of NEC ESMPRO Manager.

## Detailed Management of Server Configuration

NEC ESMPRO Agent manages and monitors all the necessary things to maintain high level of reliability of server such as hard disk, display, CPU, memory, fan, power supply and temperature.




KEYWORD

**RAS**
Reliability, Availability and Serviceability
Reliability means low rate of failure, Availability means short failure time and Serviceability means easiness of repair in case of failure. This is used as an important measuring stick for evaluation of computer system.

# 1.5 Collective Management of Distributed Servers

By the excellent GUI provided by NEC ESMPRO Manager, you can manage all the servers on network. By management screen displaying each component of server hierarchically, you can manage server efficiently.

## Management of all the servers at the same time

NEC ESMPRO Manager manages server using the following GUI.

**Operation Window**

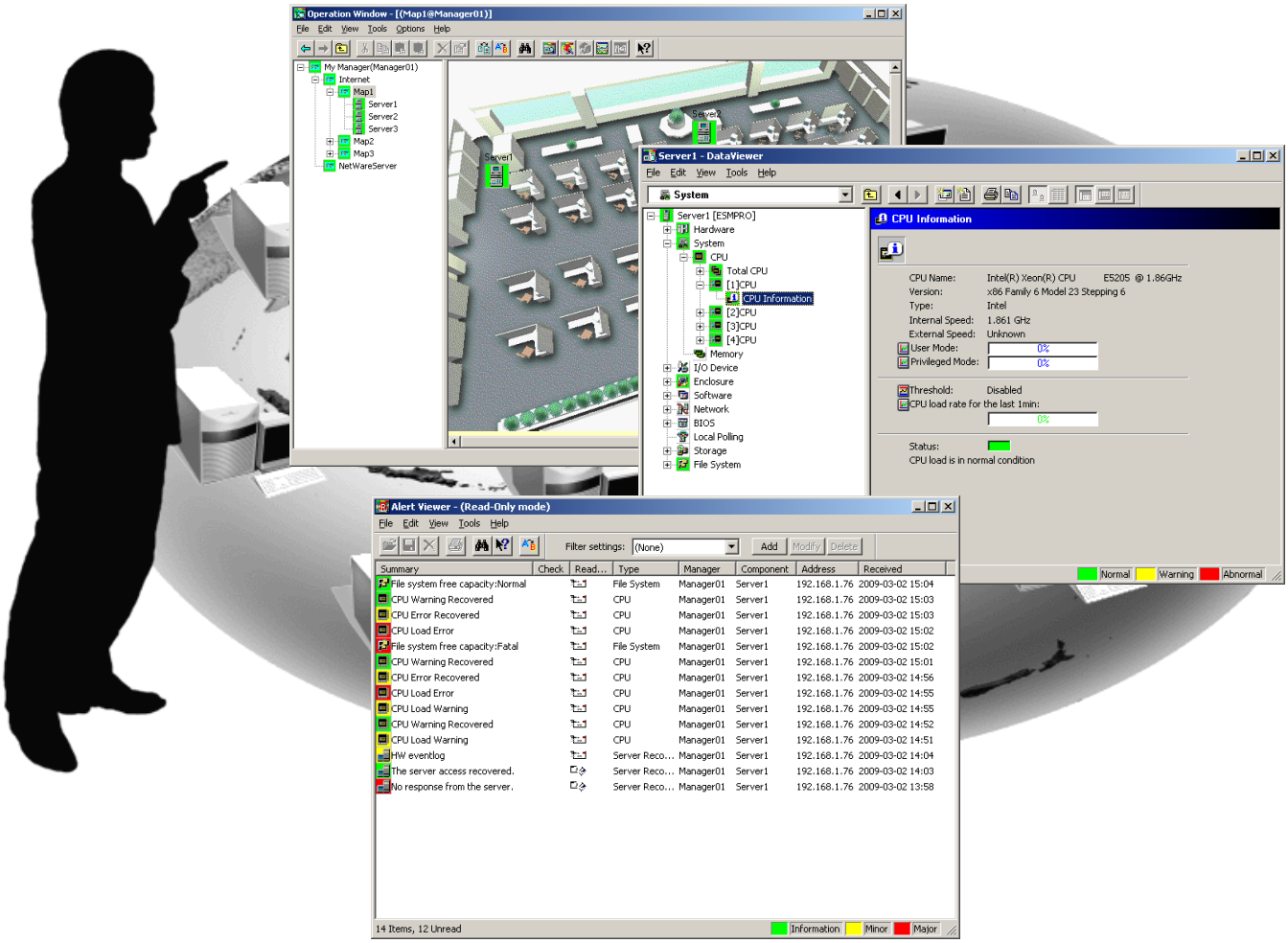
Generates map of server on network and manage it. The map can be stratified by installation site, organization and aim.

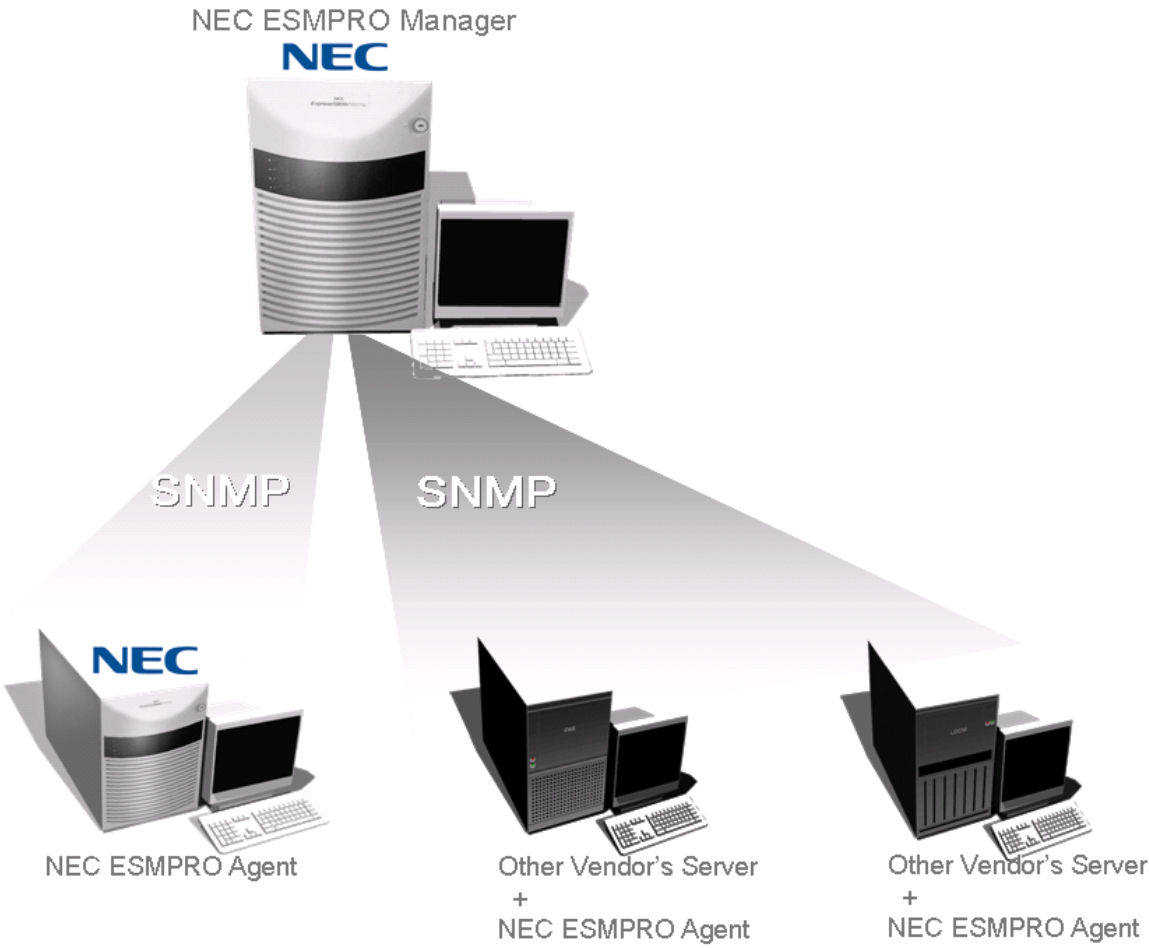
**DataViewer**

Stratifies component of server resource and display it. Moreover, by changing status color of server component which became malfunction, you can easily identify the location of failure.

**AlertViewer**

Unifies management of failure report of each server. The failure of server is immediately reported to AlertViewer. Administrator can promptly recognize all the failures on network.



# Management of Mixed Environment including Other Vendor's Server

NEC ESMPRO Manager collects information of server by SNMP interface. By installing NEC ESMPRO Agent for other vendor's server, you can also manage the other vendor's server. NEC ESMPRO Agent for other vendor's server is to be separately handled.