NTT DATA
Global IT Innovator

Introduction of “Hinemos”
an Open Source Integrated System Management Software

NTT DATA Intellilink Corporation
IT Operations Management Business Unit
2017/7/1

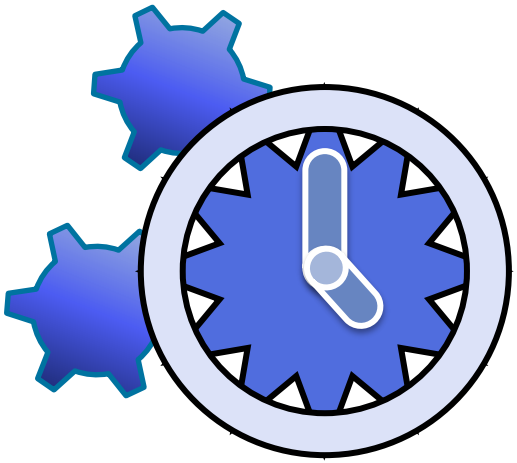
I N D E X

What is Hinemos?

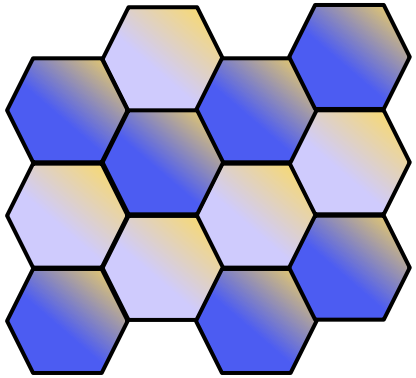
What is Hinemos?

Hinemos

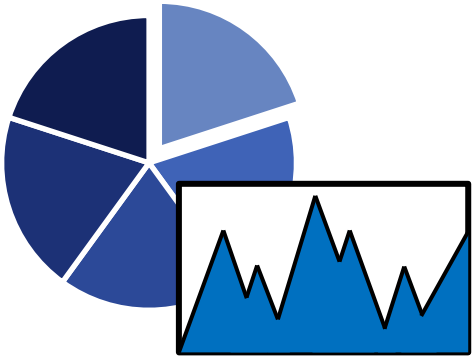
Integrated System Operation Management Software



Job Operation Management (&RBA)

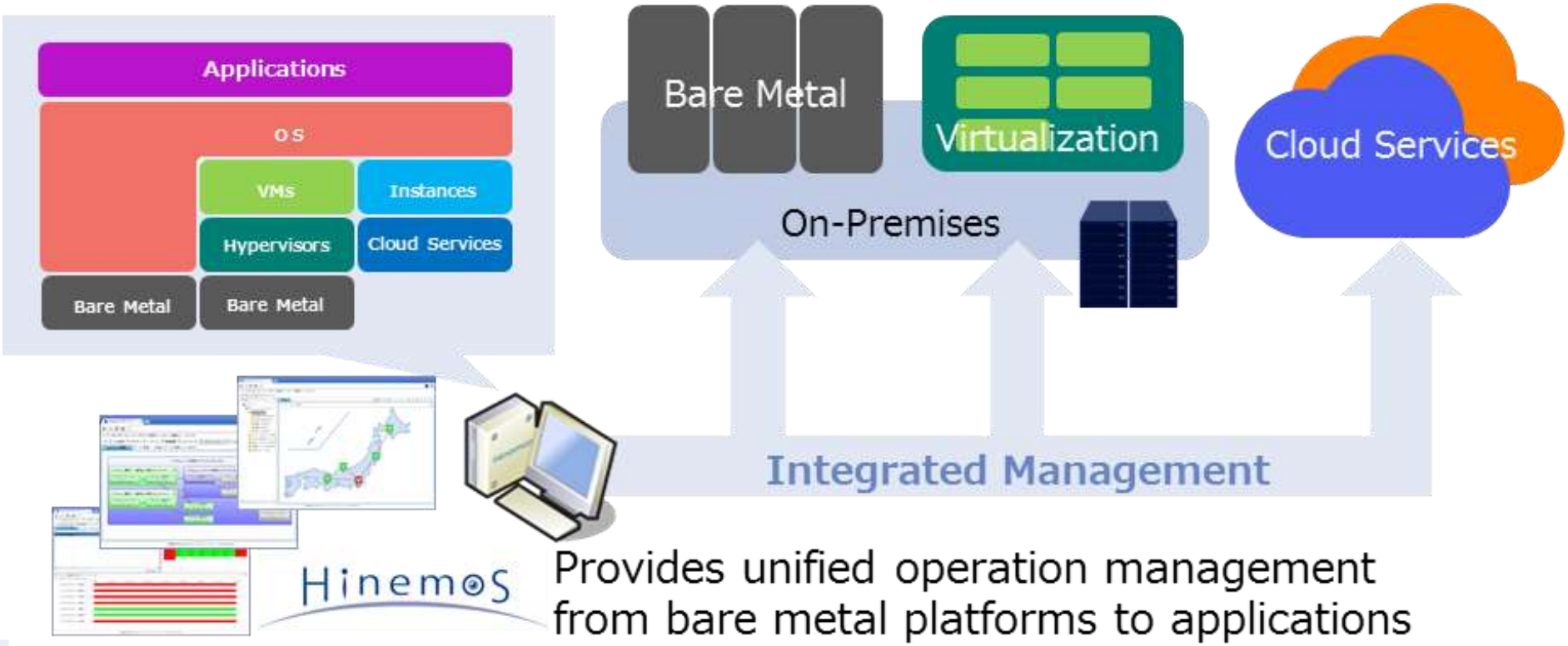


Infrastructure Management



Monitoring Management

Hinemos provides simple & unified operation management features of complicated system



Release History of Hinemos

Hinemos ver.1.0 released

Enhancement of Monitoring Features
Expansions of manageable target

Enhancement of Visualization
Enhancement of features to manage Large-scale systems

Enhancement of Cloud Management and Job Management Features

+Infra Management Feature and Web Client

ver.1
2005.08

ver.2
2006.03

ver.3
2008.10

ver.4
2012.04

ver.5
2015.5

ver.6

Evolved to meet the strict requirements of enterprise systems, used in numbers of large-scale, mission-critical systems

Utilization of Hinemos

(Jan.13 2017)

- **598,616 + Downloads from OSDN**

(former Sourcefoge.JP)

- **700+ Systems**

Used in various scales and types of systems, in various sectors consisted from 1 to 10000 servers and equipment.


Public offices and Local governments

Financial and Stock Securities


Manufacturing


Retails and Distributions


Public Utilities
(Electric Power, Gas, Water)


Entertainment


Cloud Services


Data Centers


Telecommunications

Adoptions of Hinemos in Major Systems

SPOTY 2007
Software Product Of The Year 2007

2005 ver.1.0 **First Hinemos Released**

Green DATA CENTER グリーンデータセンタ®

2008 ver.3.0 **Green DataCenter**

2010 ver.3.2 **NTT Data In-House Common Platform**

(Virtualization Aggregation of In-House Systems including the business critical systems)

ITpro EXPO AWARD 2011

2011 ver.3.2 **Credit Card Payment Service**

BizXaaS®

2013 ver.4.0 **BizXaaS Multi-Cloud Control Service**

ITpro EXPO AWARD 2014

2014 ver.4.1 **Vatican Library Digital Archive**

2015 ver.5.0 **ECONO-CREA**

ECONO-CREA

2016 ver.5.0 **Multi-Cloud Monitoring Services**

Implemented for the management of wide range of mission-critical systems and services of NTT Data. Evolving to be a High Reliable, High Performance Operation Management Software

Use cases outside Japan

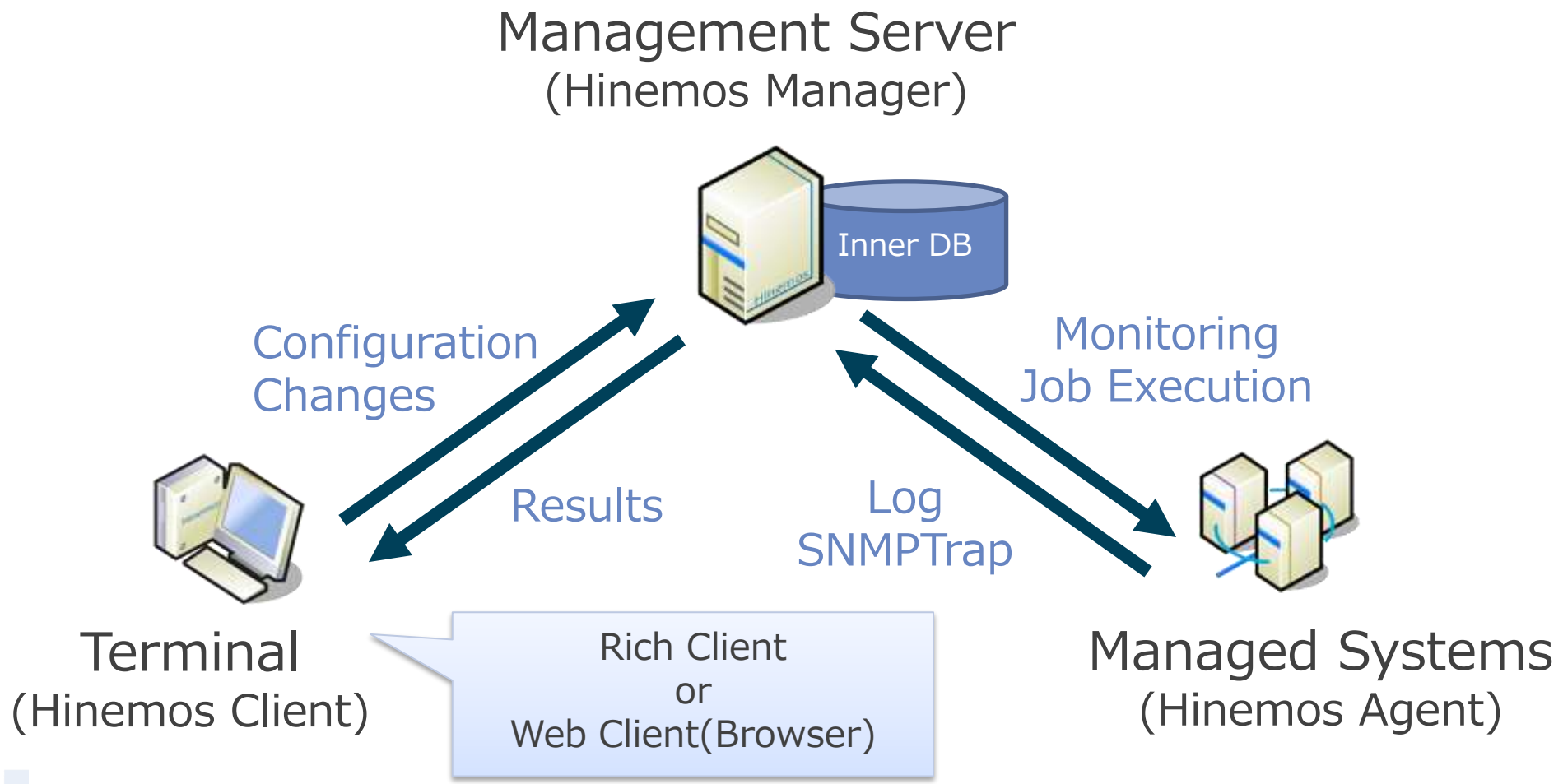
- Vatican Library Digital Archive
  - -System to archive hand written documents and manuscripts in Vatican Library in Digital Format
  - -Hinemos is used to monitor this system, and also to automatically control and schedule batch executions needed for daily system operations.

- Indonesia NSDI System
  - - System to provide National Spatial Data Infrastructure
  - - Provides data for various government agencies
  - - Hinemos is used to monitor system availability, and also to automatically control and schedule batch executions needed for daily system operations.

and much more...

Feature Overview of Hinemos

3 basic components of Hinemos



Supported OSs

- Hinemos Manager
  - RHEL/CentOS 7
  - RHEL/CentOS 6
  - Windows Server 2012R2, 2012, 2016
- Hinemos Agent
  - RHEL/CentOS/OracleLinux 7,6,5
  - Windows Server 2016, 2012R2, 2012, 2008R2, 2008
  - Windows 10, 8.1, 8, 7
  - Amazon Linux
  - SLES 12, 11
  - Ubuntu 16.04 LTS
  - Android
- Hinemos Client (Rich Client)
  - Windows Server 2016, 2012R2, 2012, 2008R2, 2008
  - Windows 10, 8.1, 8, 7
- Hinemos Client (Web Client)
  - Internet Explorer, Firefox, Chrome

Installation

Manager and Web Client can be installed in one line command

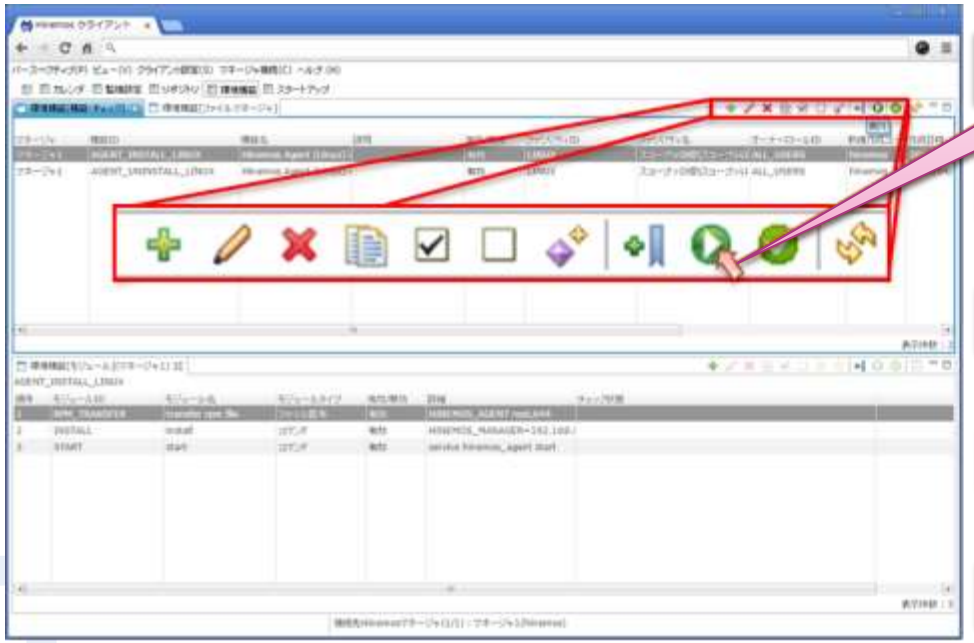
```
# rpm –ivh   hinemos-6.0-manager-6.0.0-1.el7.x86_64.rpm
```

Hinemos Manager

```
# rpm –ivh hinemos-6.0-web-6.0.0-1.el7.x86_64.rpm
```

WEB Client

Agents can be installed by one click



Click

Package Deployment

Execute Installation Command

Edit Configuration Files

Start Agent Service

Managed Systems

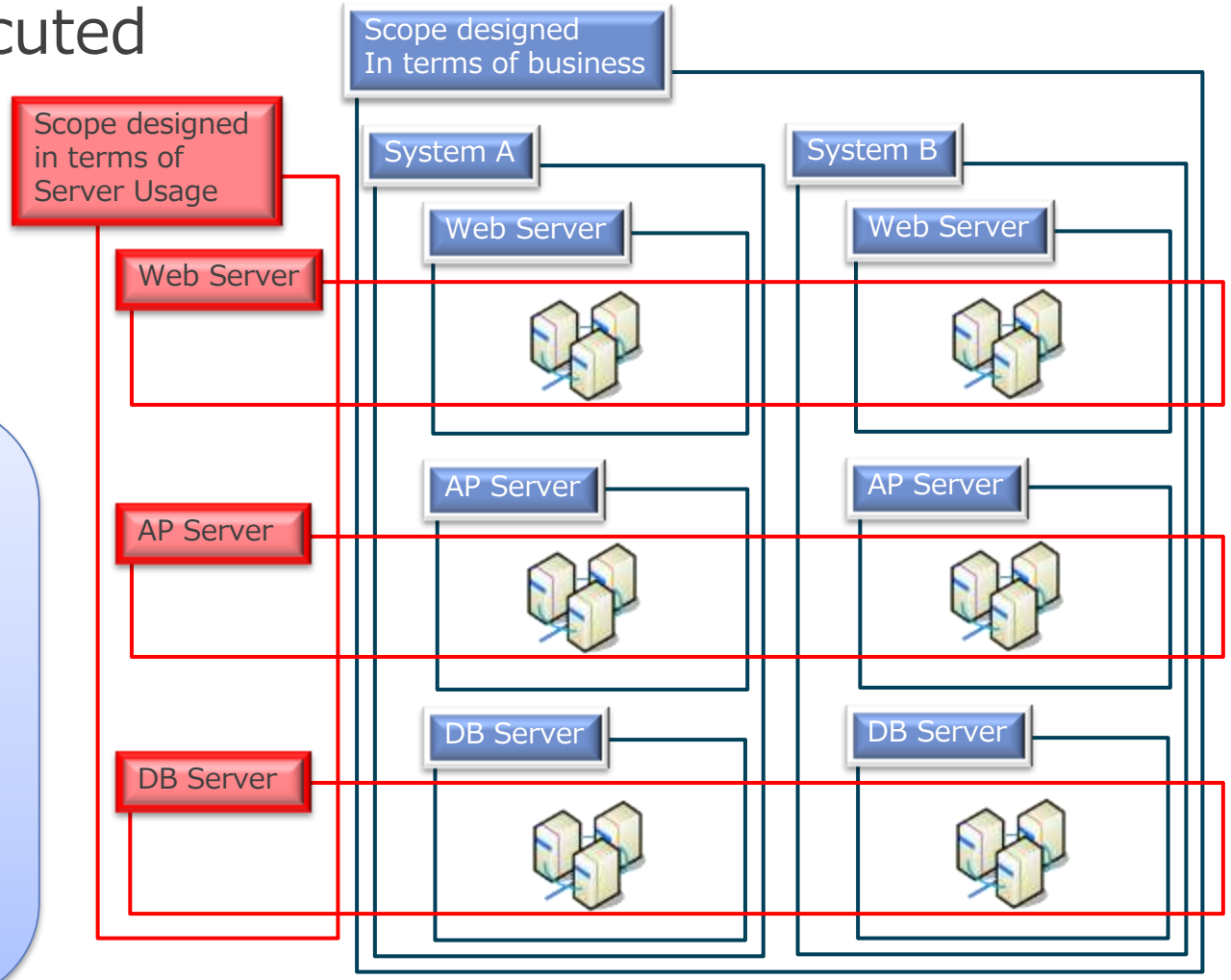
Easy!

NTT DATA

High efficiency

Managed IT equipment can be grouped in terms of usage, monitoring methods, interrelationship, etc.

Settings are set and executed in units of “Scope”



Advantages of using the idea of “Scope”

Problems can be easily found by drilling down the scope

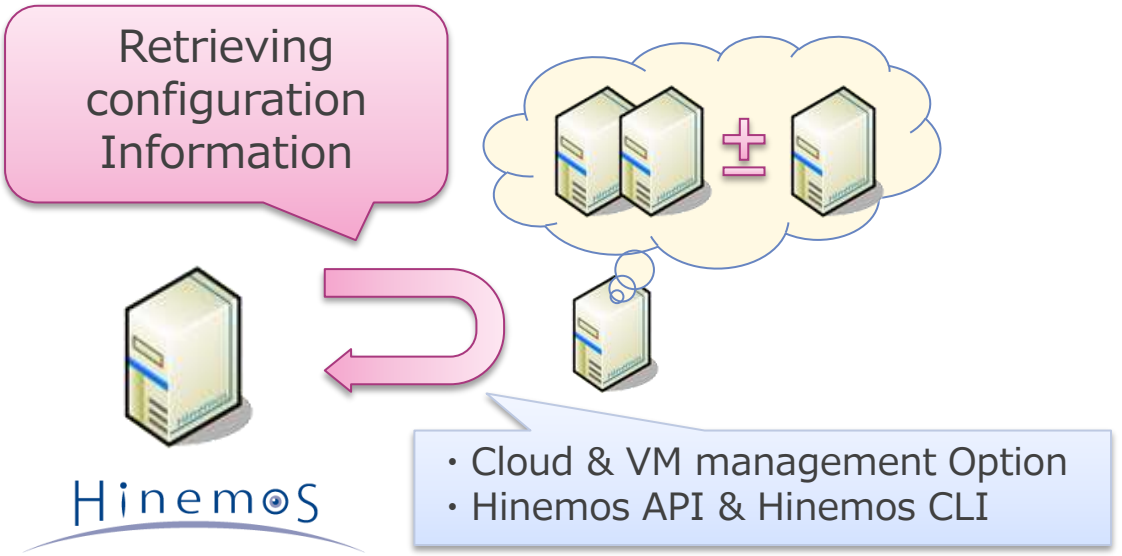
Same requirement can be fulfilled with fewer settings, by using scopes

Adaptability to dynamic changes of systems

Detecting Changes

Configuration changes of managed targets can be detected by snmp, and other APIs

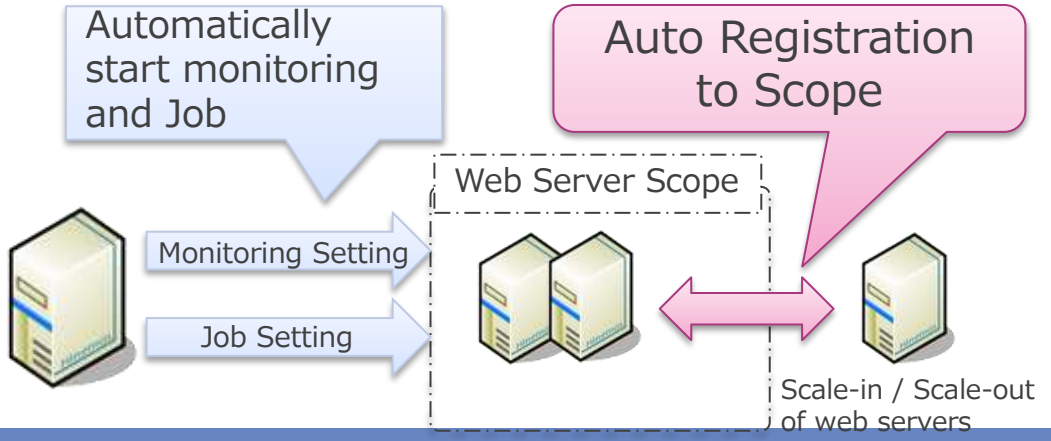
Retrieved data of configuration changes can be taken in to Hinemos



Start operations automatically

Using the architecture of scope, operations such as starting monitoring and job management , can be automated

(ex. Scale-in, Scale-out of web servers)

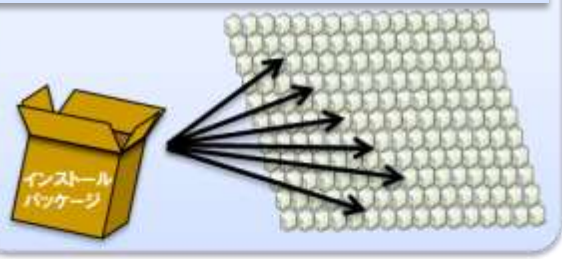


Infrastructure Management

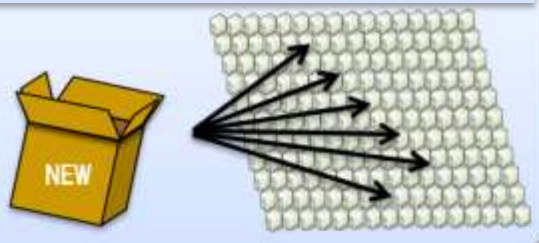
Stylize multiple Operations to multiple targets, with one click operations, using ssh/WinRM.

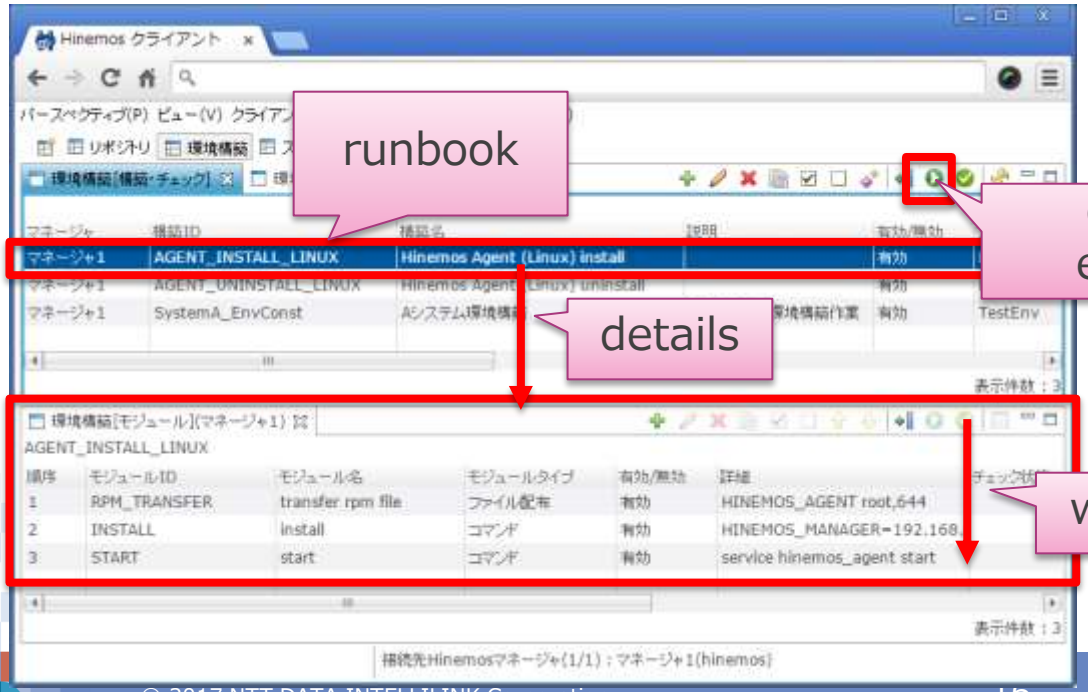
ex) creating http servers

Installations of packages



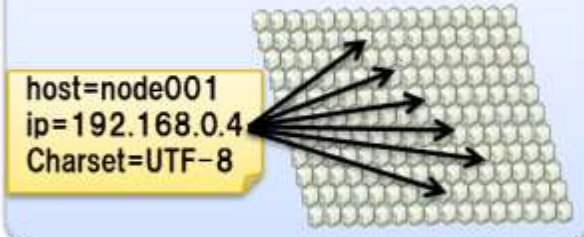
Version ups of packages



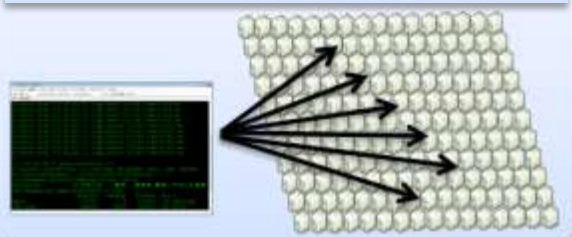


one click execution

Deploy and replace Config Files



Start Components



NTT DATA

Monitoring Management

Provides features to monitor system status, in layers such as Hardwares, Operation Systems, and Applications.

Monitoring Types	Feature Overview
PING Monitoring	Monitor ping response from monitored targets
Process Monitoring	Monitor number of running processes on monitored targets
Resource Monitoring	Monitor resource usages of monitored targets
Service・Port Monitoring	Monitor response time of designated services and ports
Windows Service Monitoring	Monitor statuses of designated Windows Service
Hinemos Agent Monitoring	Monitor statuses of Hinemos Agent
HTTP Monitoring	Monitor HTTP Server statuses by response time and responded contents.
HTTP Scenario Monitoring	Monitor HTTP Servers by accessing and checking response time and responded contents, one by one from multiple URL's based on designated scenario
SQL Monitoring	Monitor DB Servers response time and contents retrieved by execution of designated SQL
SNMPTRAP Monitoring	Monitor contents of SNMPTRAP sent to Hinemos Manager
System Log Monitoring	Monitor system logs on monitored targets
Log File Monitoring	Monitor messages logged on designated log files in monitored targets
Windows Event Monitoring	Monitor Windows Events on monitored targets
SNMP Monitoring	Monitor SNMP Responses
JMX Monitoring	Monitor Java Applications status, such as heap memory size.
Custom Monitoring	Monitor the execution result(standard outputs) of user defined commands
CustomTrap Monitoring	Monitor JSON format data sent from managed target

Monitoring Management

Monitored results can be processed in various ways

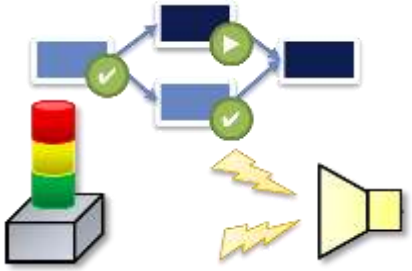
Hinemos

Monitor

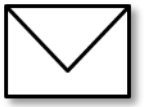
Managed System

View the result on Hinemos Client

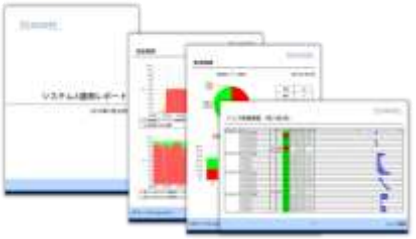
Execute commands



Escalate information via e-mail and Syslog

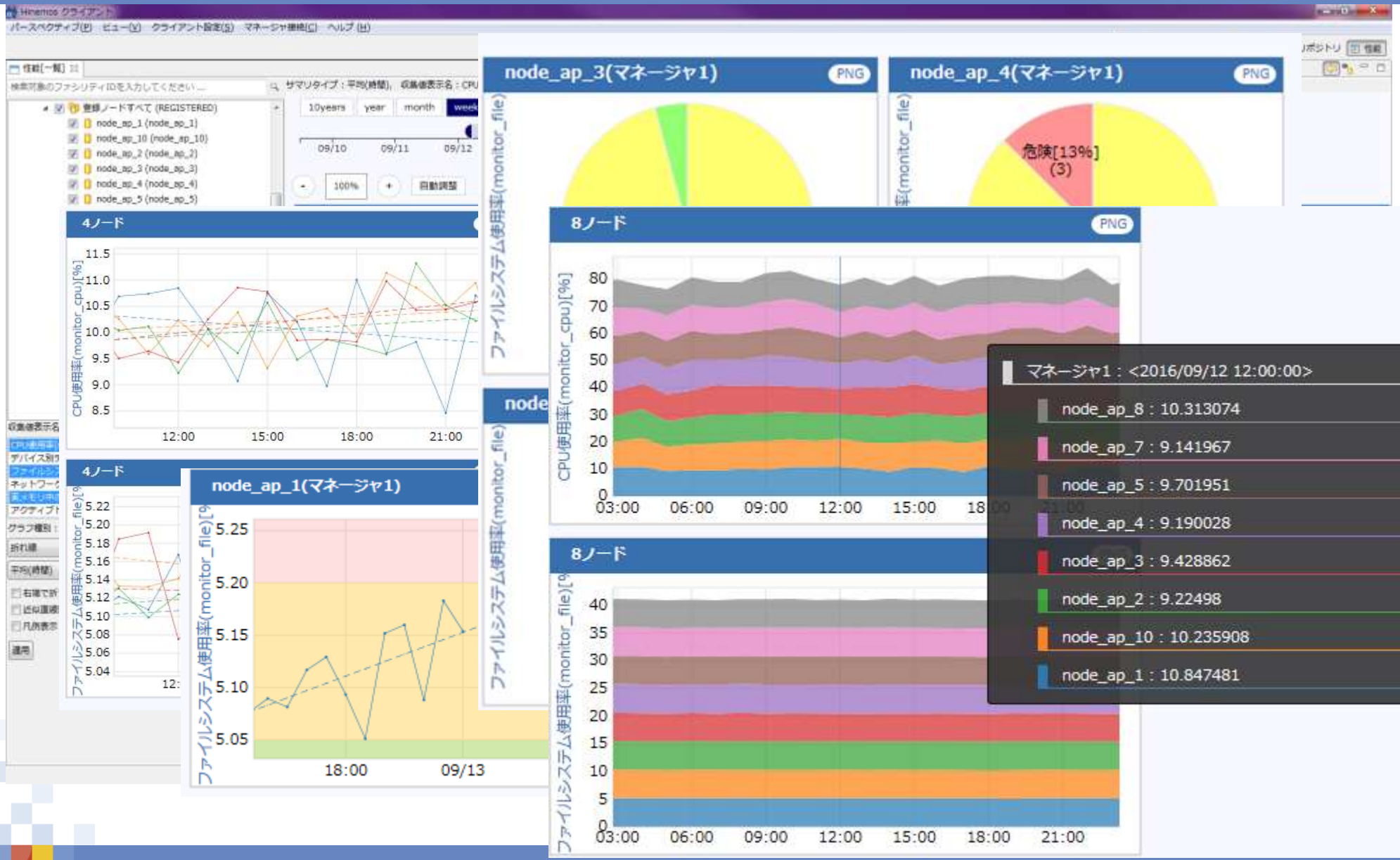


Create Report



NTT DATA

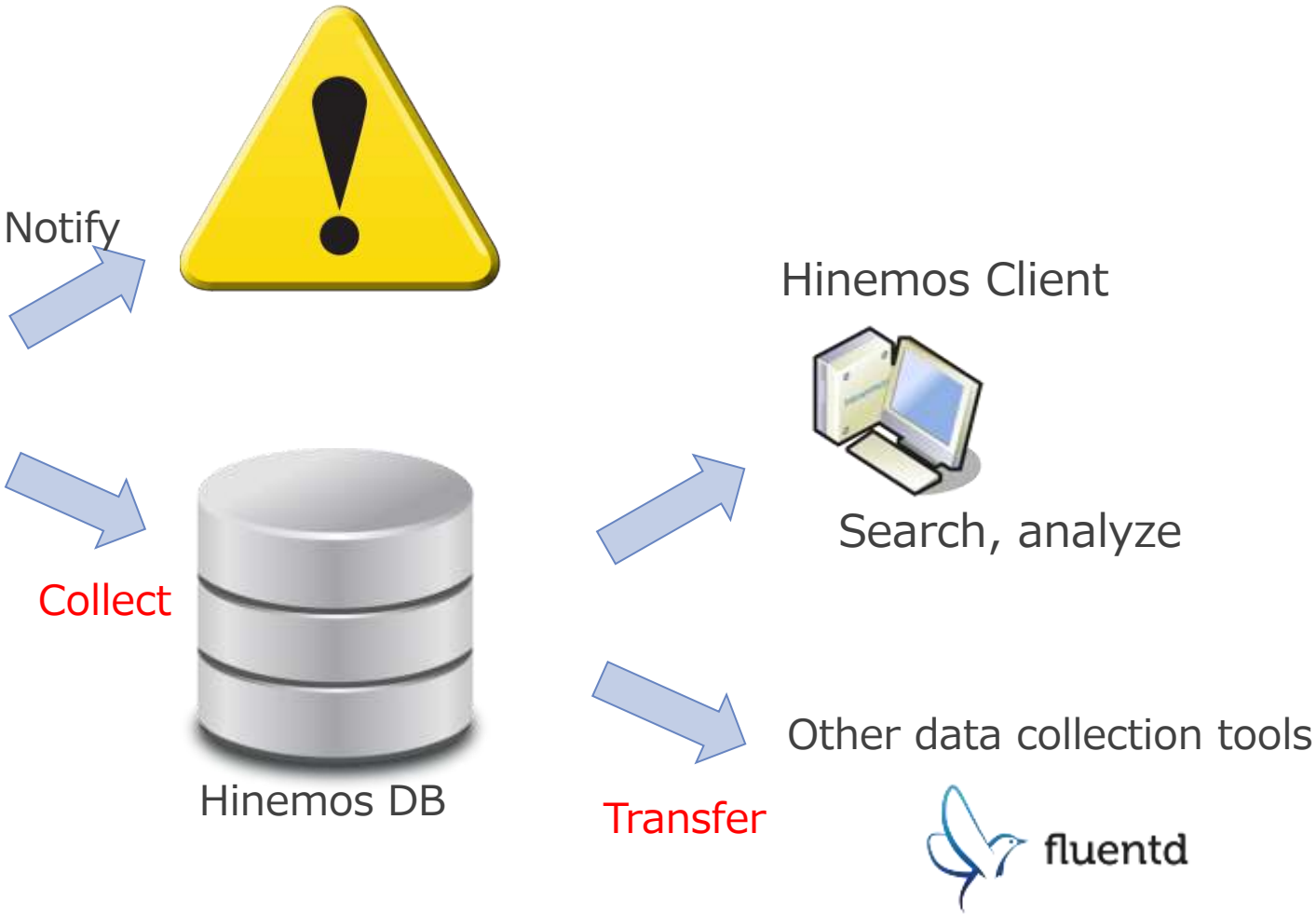
Visualization and Analysis



NTT DATA

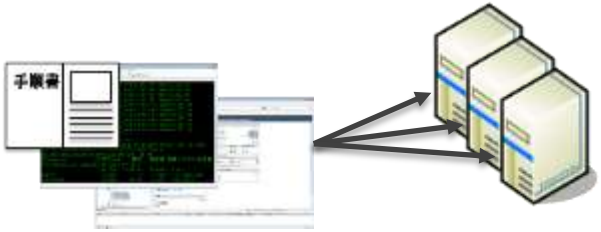
Data Hub Feature

PING Monitoring
Process Monitoring
Resource Monitoring
Service・Port Monitoring
Windows Service Monitoring
Hinemos Agent Monitoring
HTTP Monitoring
HTTP Scenario Monitoring
SQL Monitoring
SNMPTRAP Monitoring
System Log Monitoring
Log File Monitoring
Windows Event Monitoring
SNMP Monitoring
JMX Monitoring
Custom Monitoring
Custom Trap Monitoring
Android Monitoring

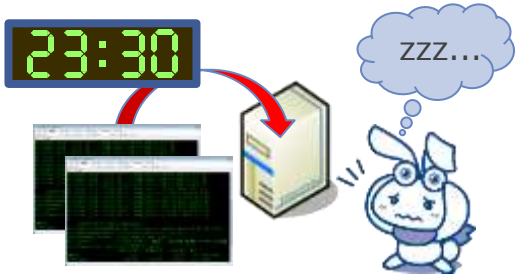


Job Operation Management

Stylize and Automate Routine Operations needed for system



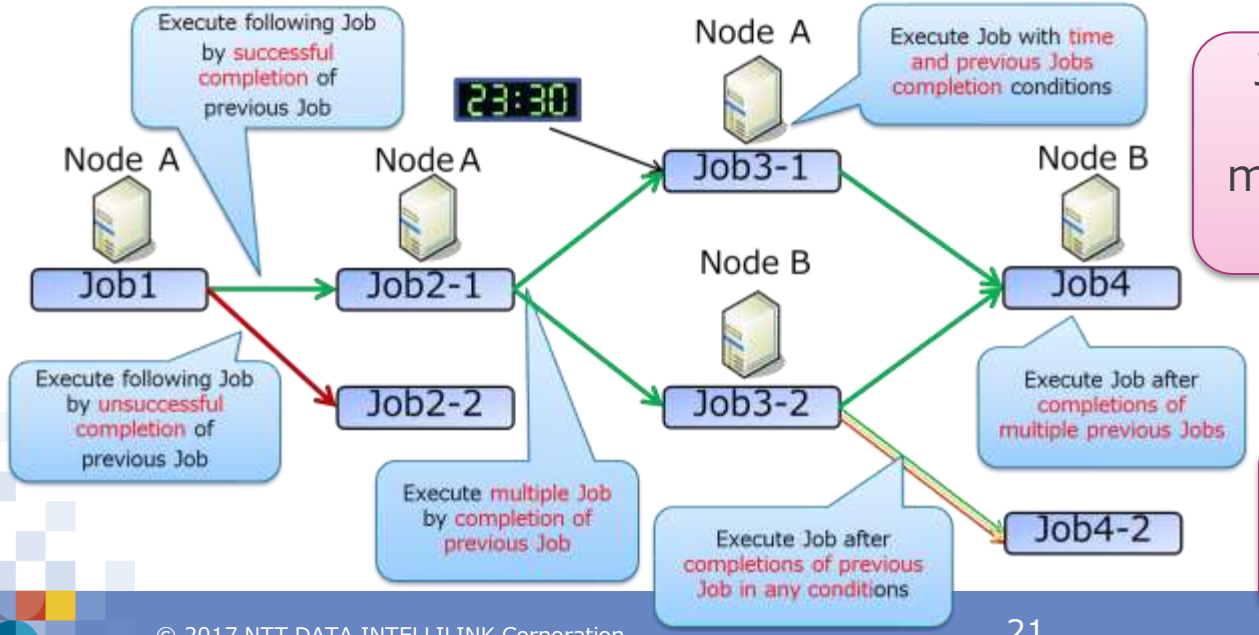
Configuration Changes



Batch operations

Troubleshooting

Complicated Job operation management can be stylized and operated.
Executed Job History can be managed with ease.



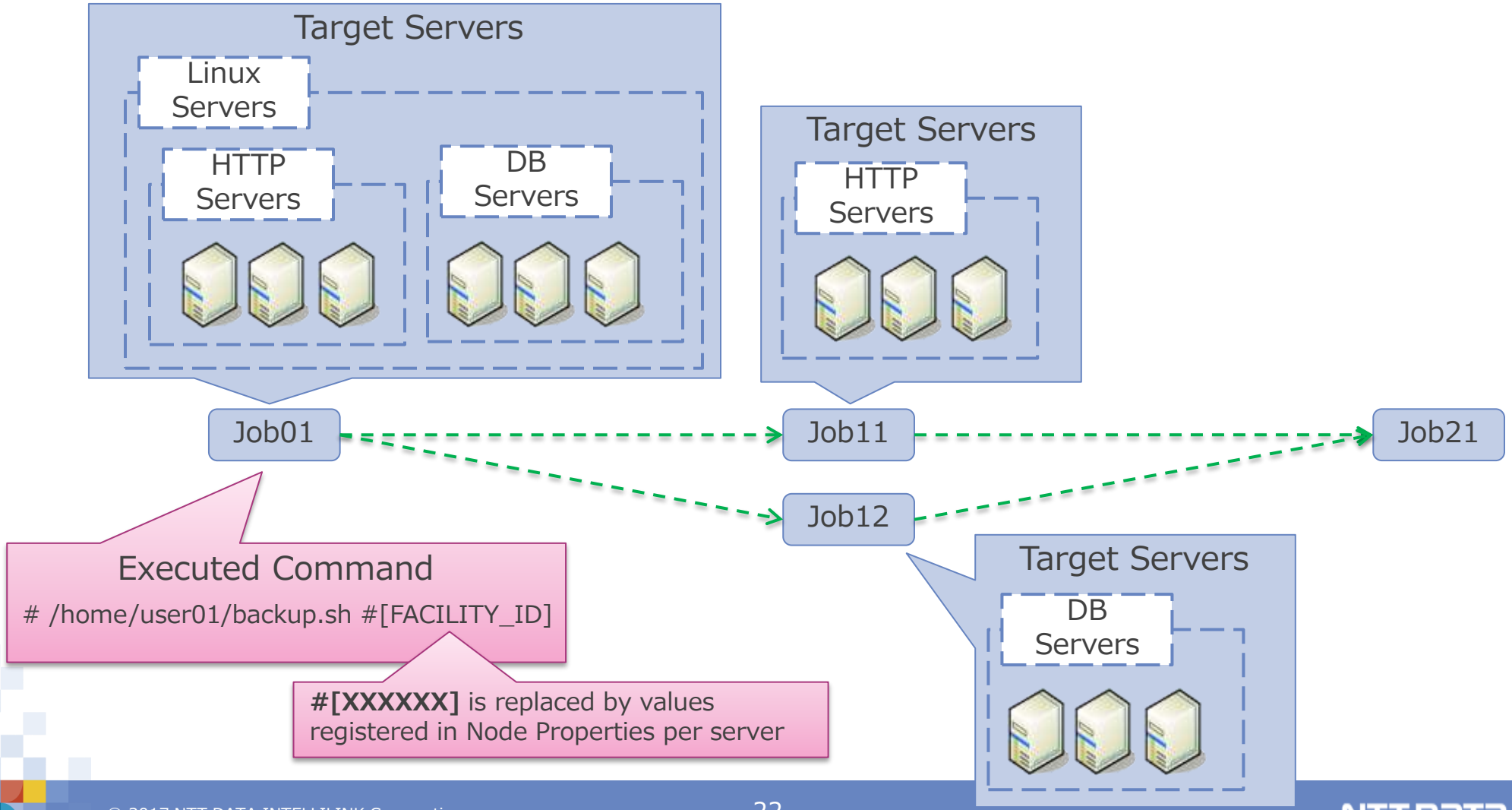
Job executions can be scheduled, branched by calendars. Delays, multiple executions can be detected and controlled.

Execution History can also be managed from Hinemos

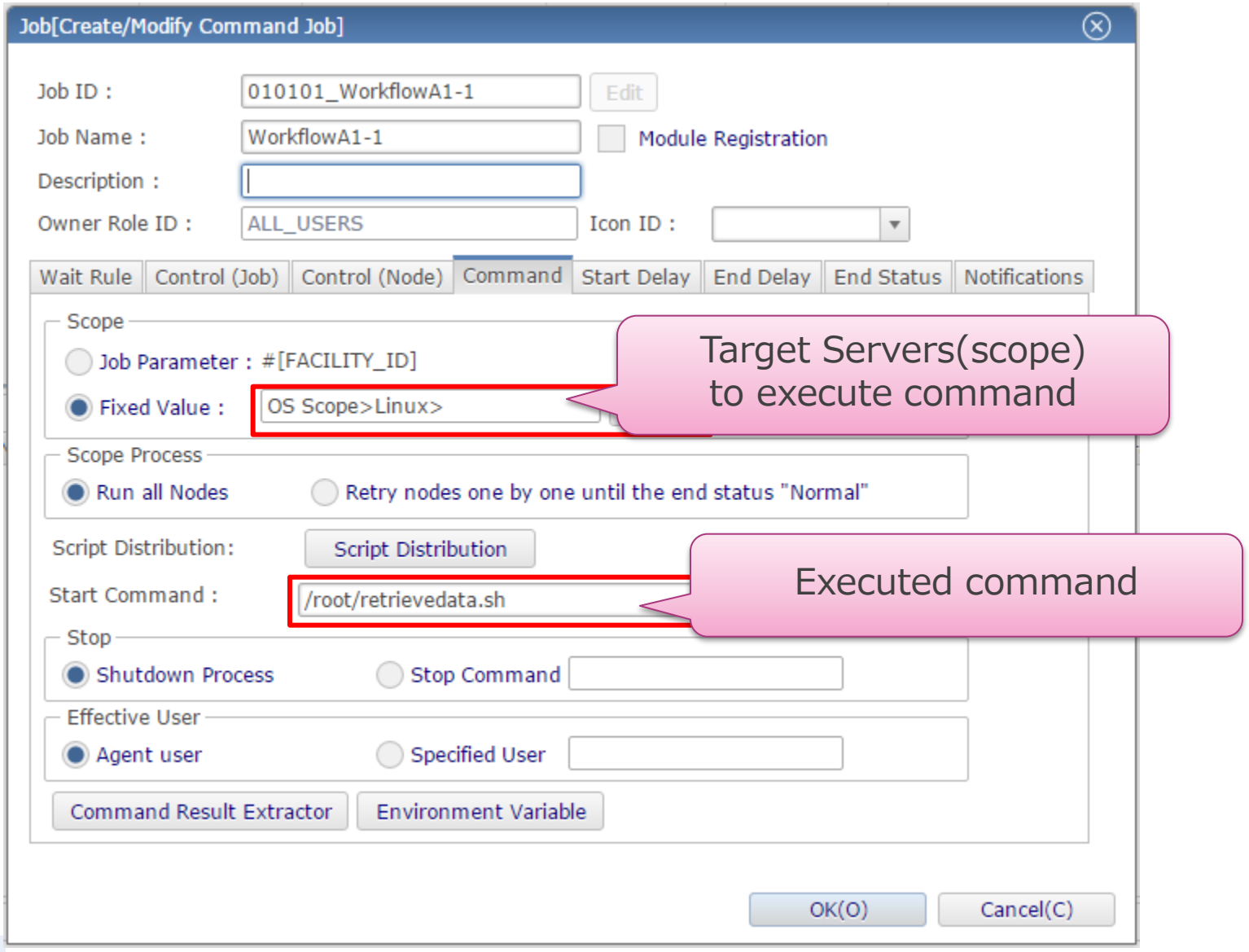
NTT DATA

Job Operations to multiple servers

Execution of same command to multiple servers can be integrated as a single “Job”

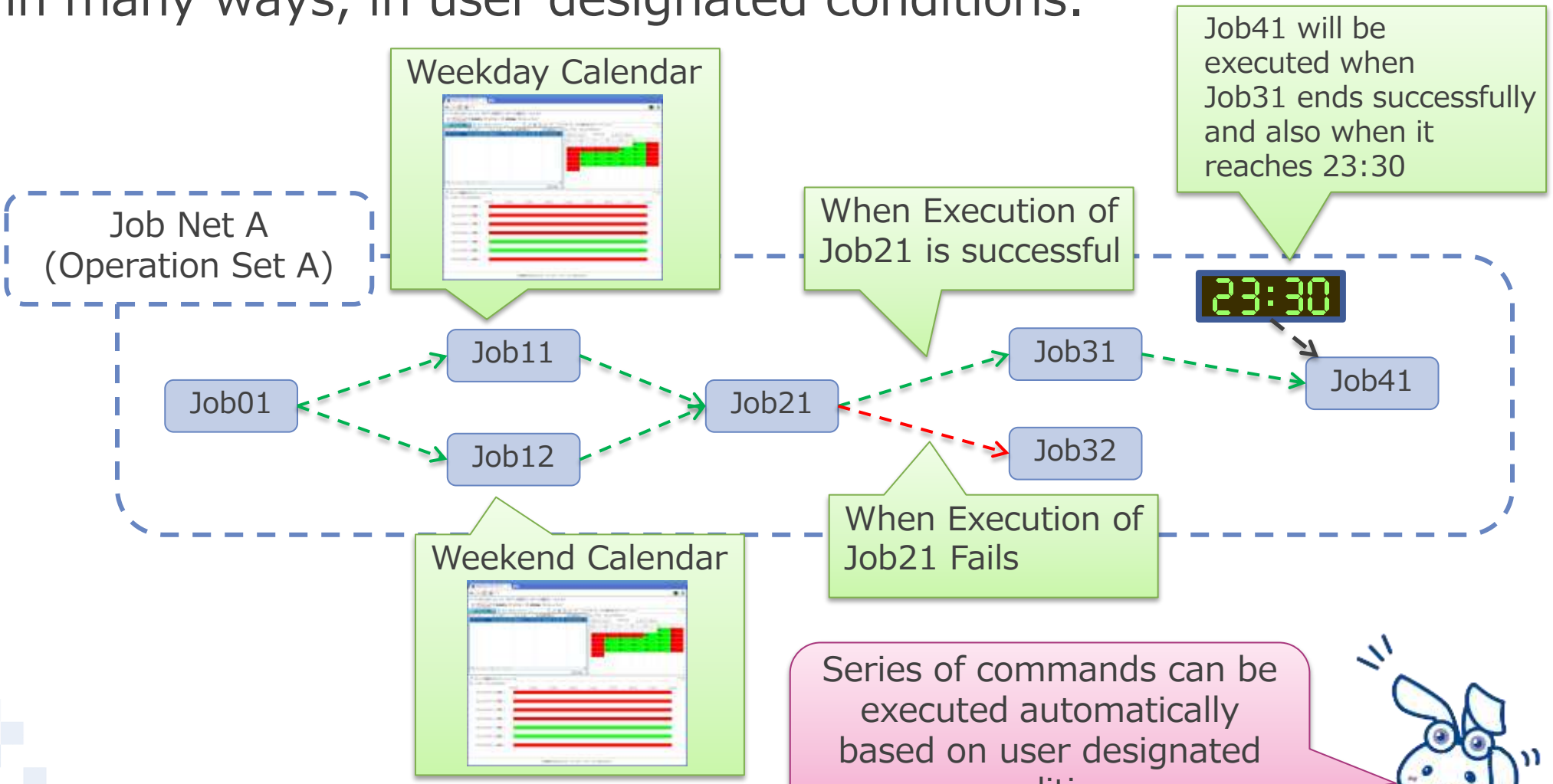


Job Operations to multiple servers



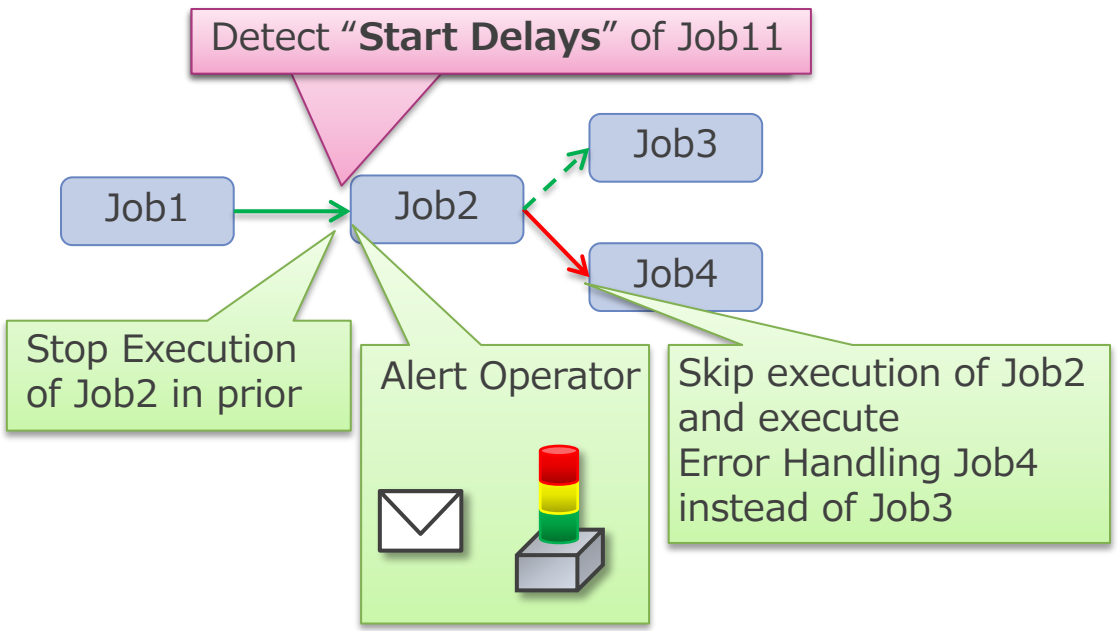
Branching of Job Operations

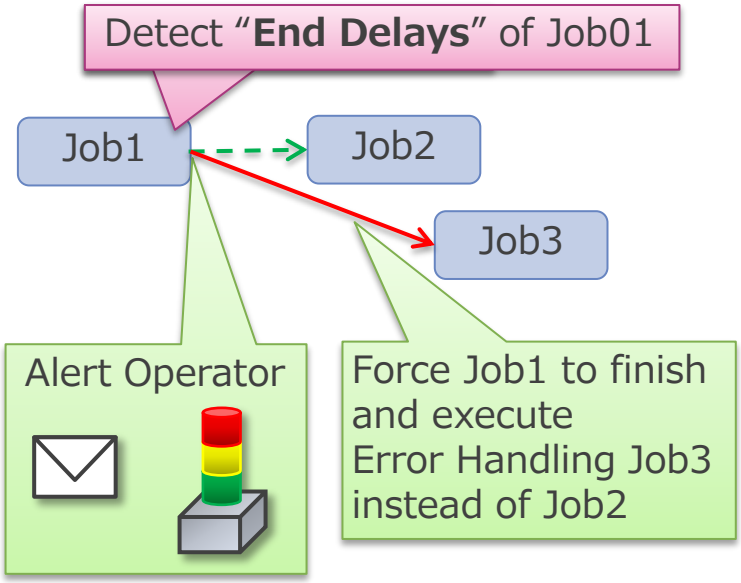
Series of Jobs (command executions) can be branched in many ways, in user designated conditions.



Execution Control of Job Operations

Delays of Scheduled Job Operations could be detected

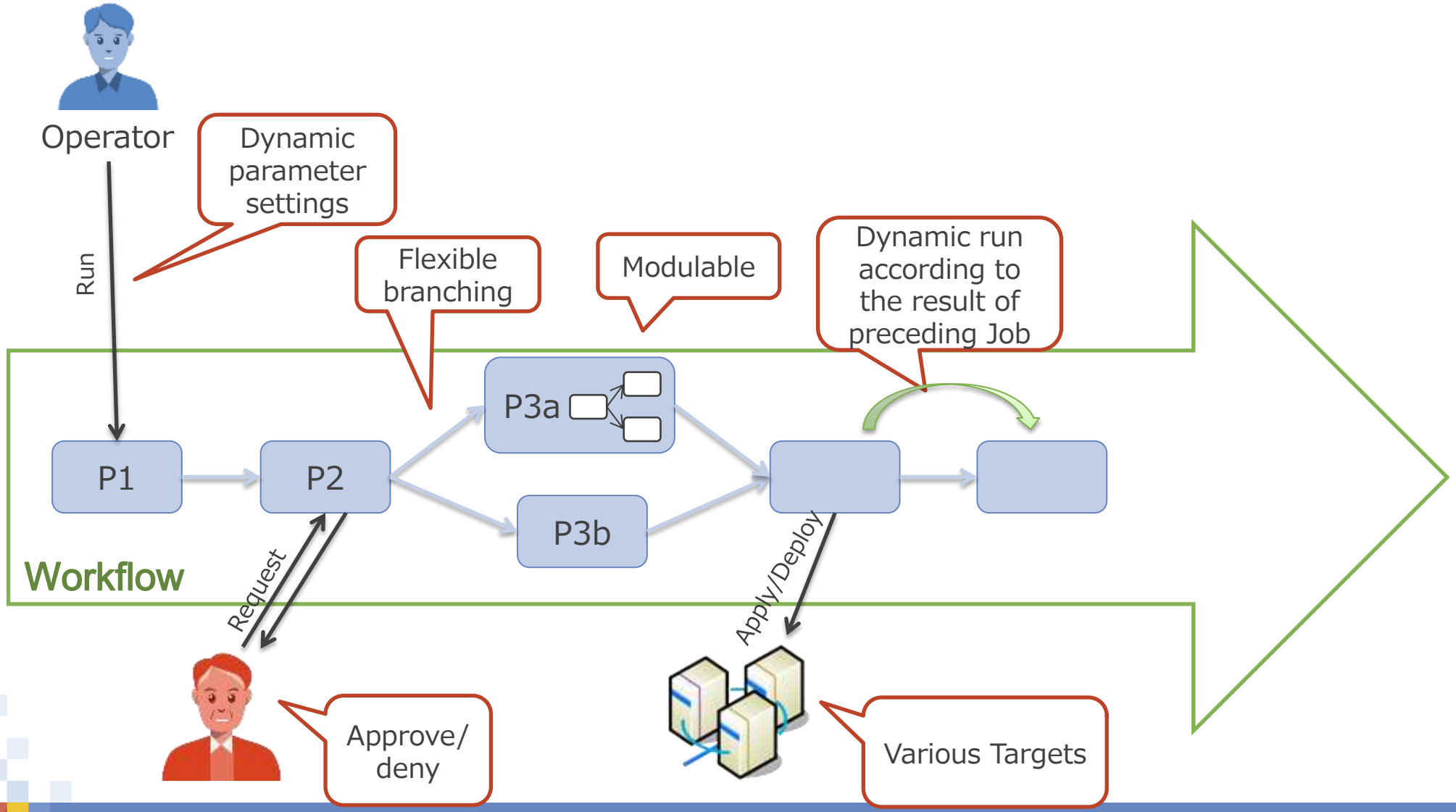




Operations could be automated in patterns when delays are detected

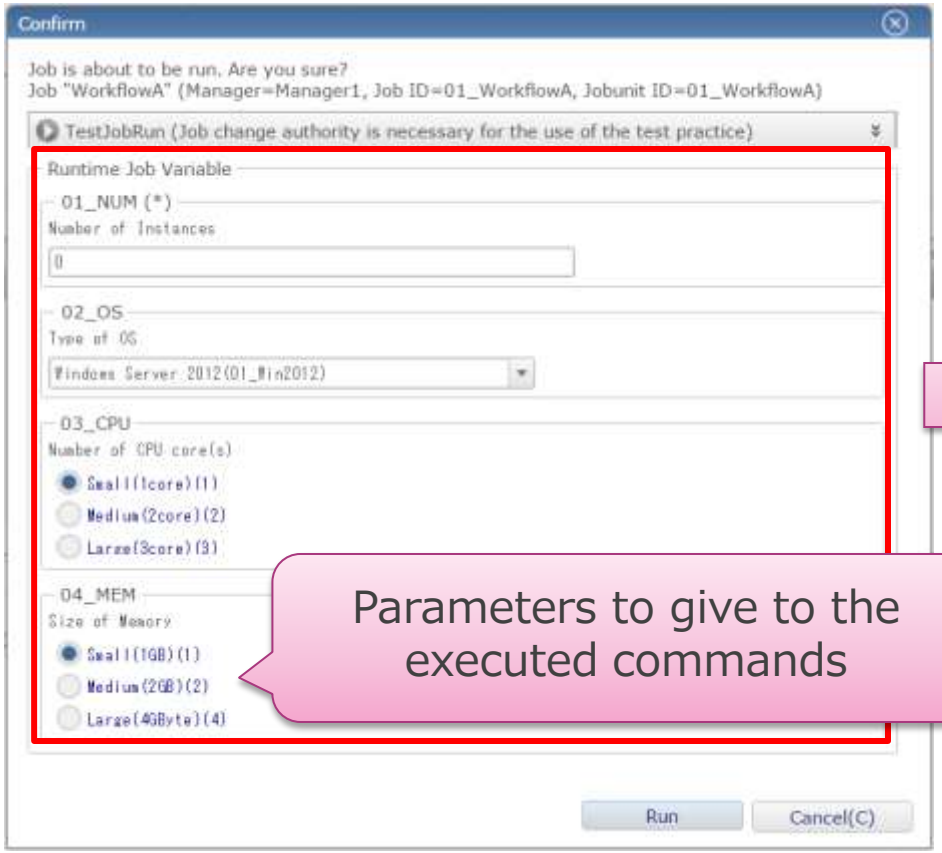
Runbook Automation

Job feature can be used to create workflow



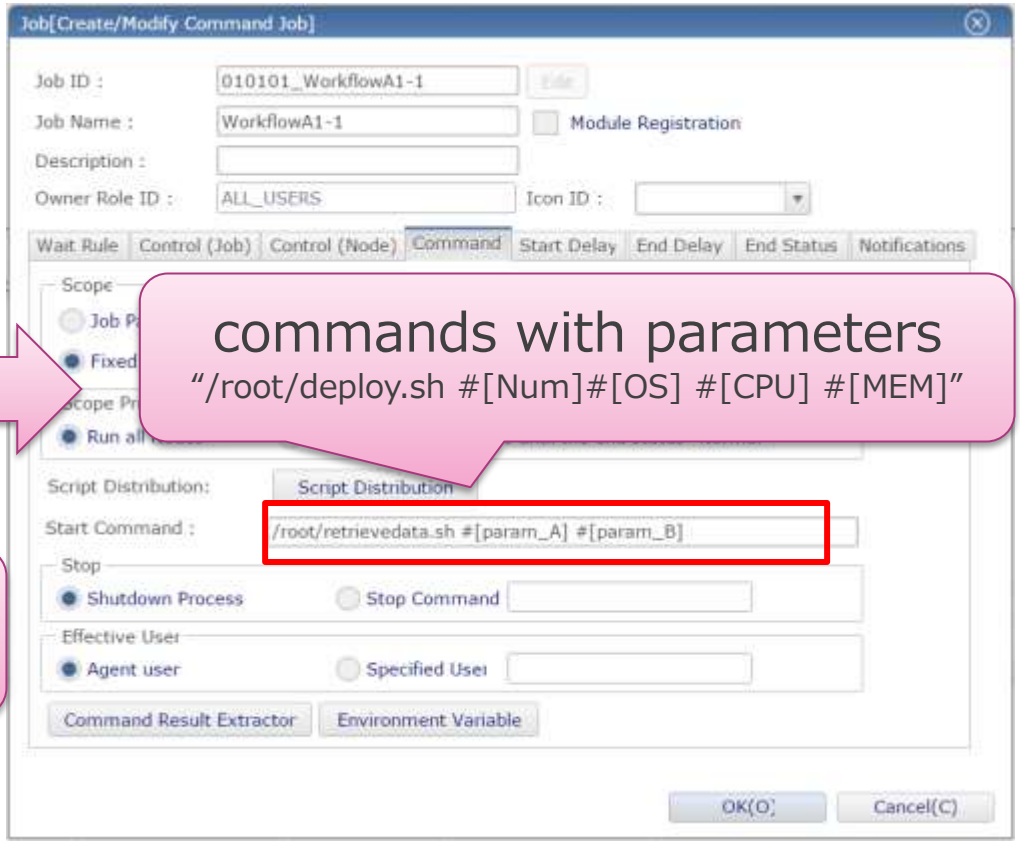
Dynamic Parameter

Parameters in executed commands can be designated when it is executed



Parameters to give to the executed commands

Dialog to manually execute Job(s)

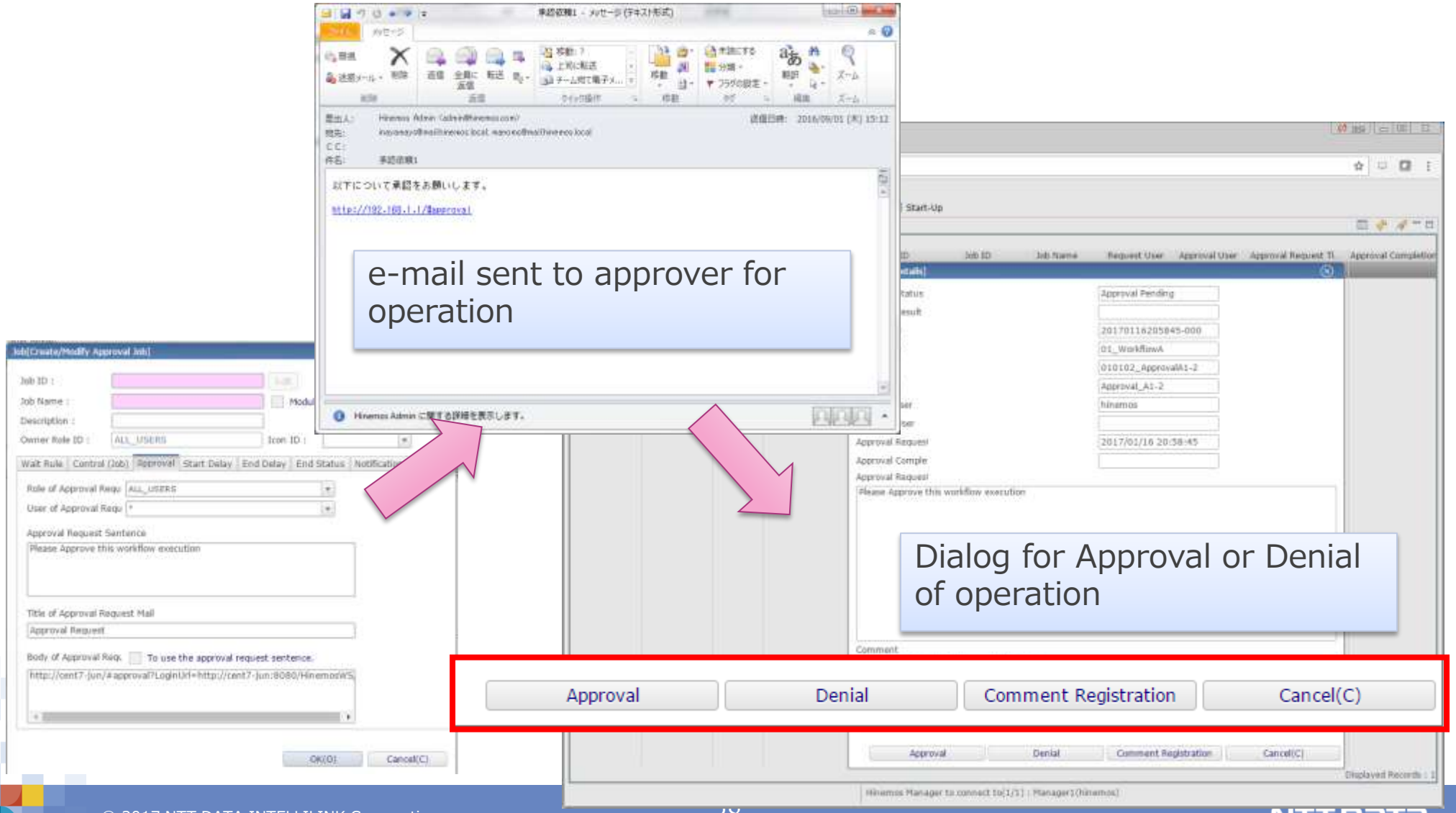


commands with parameters
"/root/deploy.sh #[Num]#[OS] #[CPU] #[MEM]"

Configurations of executed command

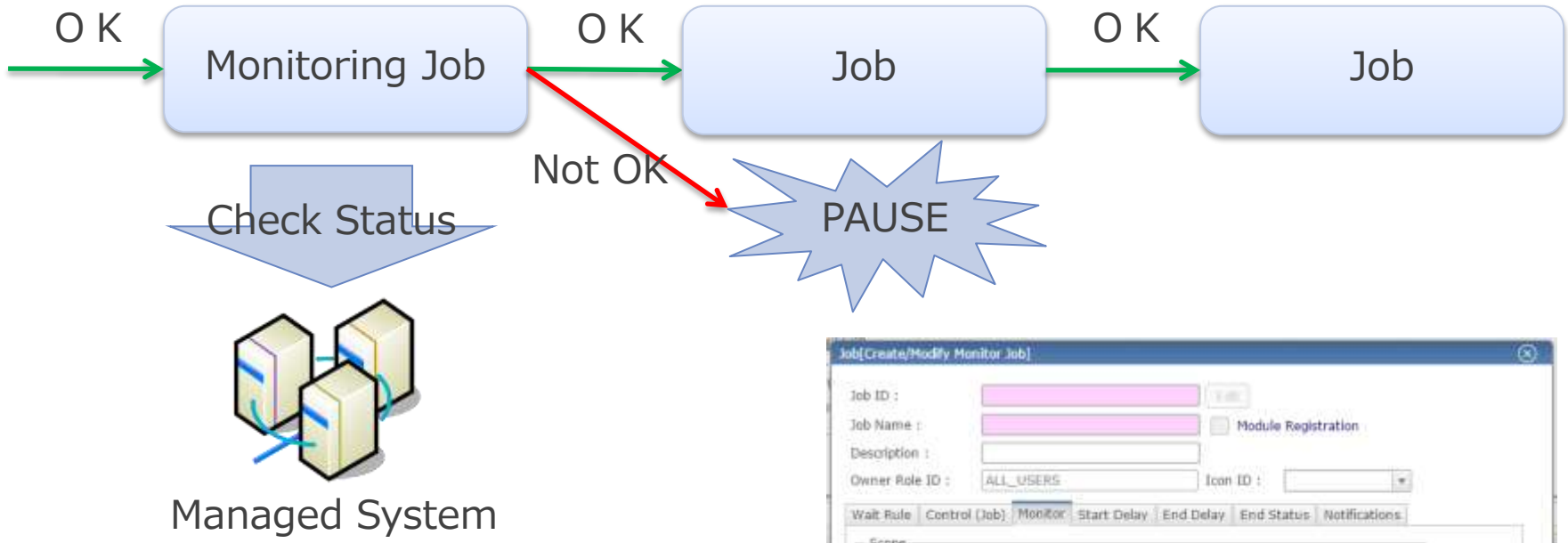
Approval of executions

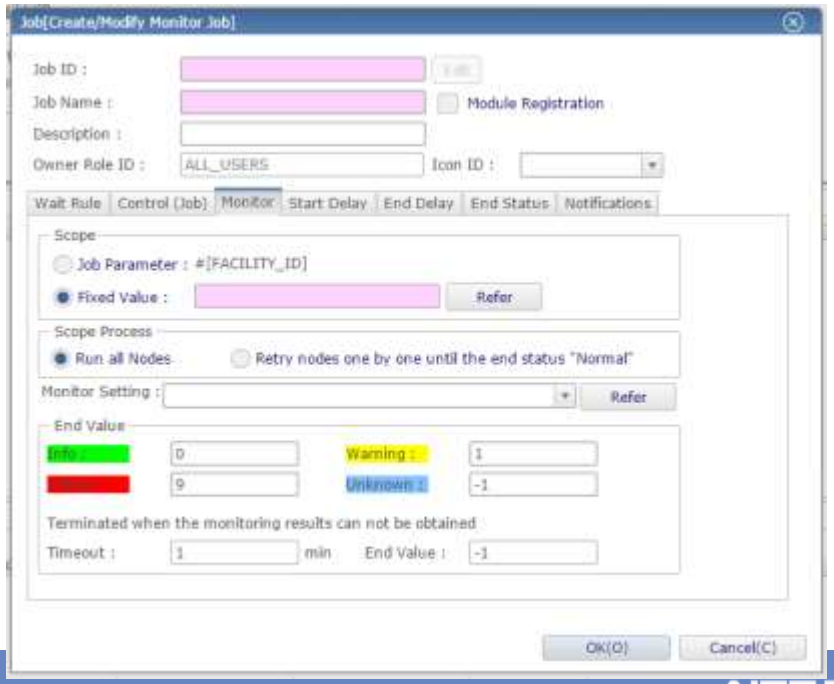
Human decisions can be included in the workflow



Checking the status

Checking the system status can be included in the workflow

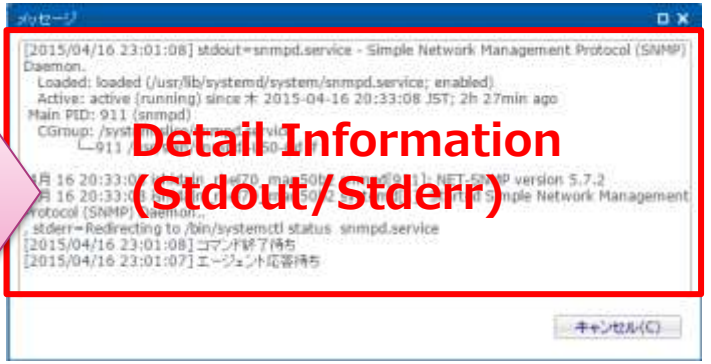




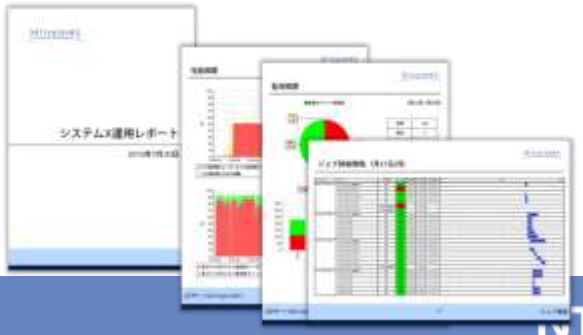
History management of Job Operations

Job Execution status and results could be checked visually with JobMap

Job Execution History and details could be checked from GUI



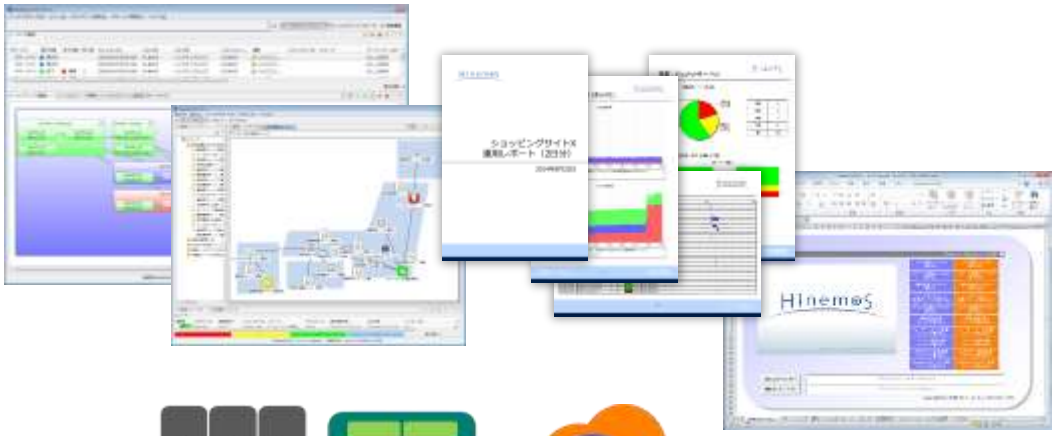
Job Execution History can be seen in Operation Report format



Optional Feature

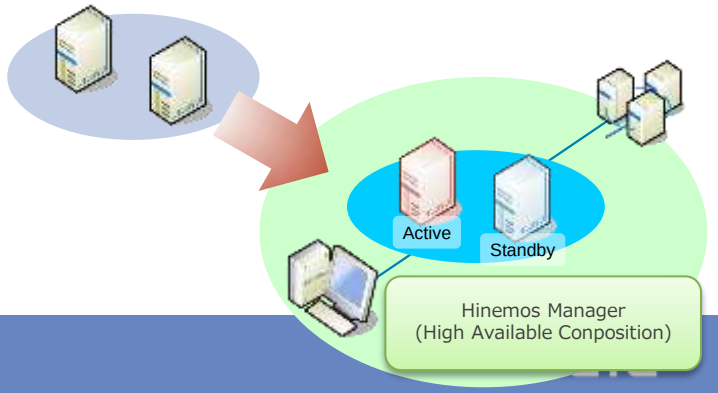
Optional features to be added when needed

Enterprise Option



Cloud & Virtualization Option

MissionCritical Option



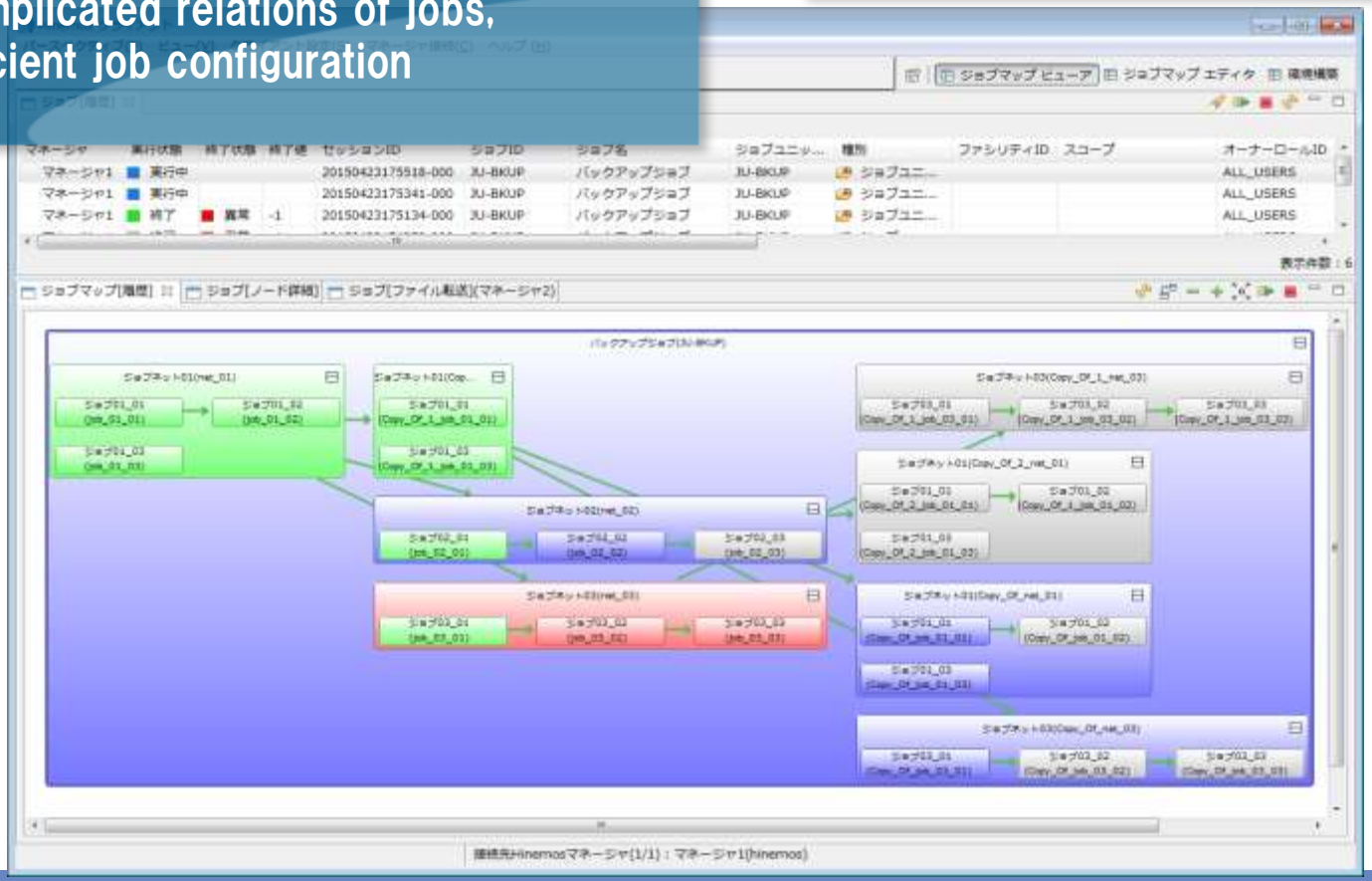
Enterprise Option (JobMap)

Status Visualization

Status of executed jobs, and jobs which are to be executed can be defined easily.

Efficient Job Configuration

Visualize complicated relations of jobs, enabling efficient job configuration



Enterprise Option (NodeMap)

Visualized Monitoring

Visualize managed target and occurred incidents more in easy to understand interface

Operate more easily

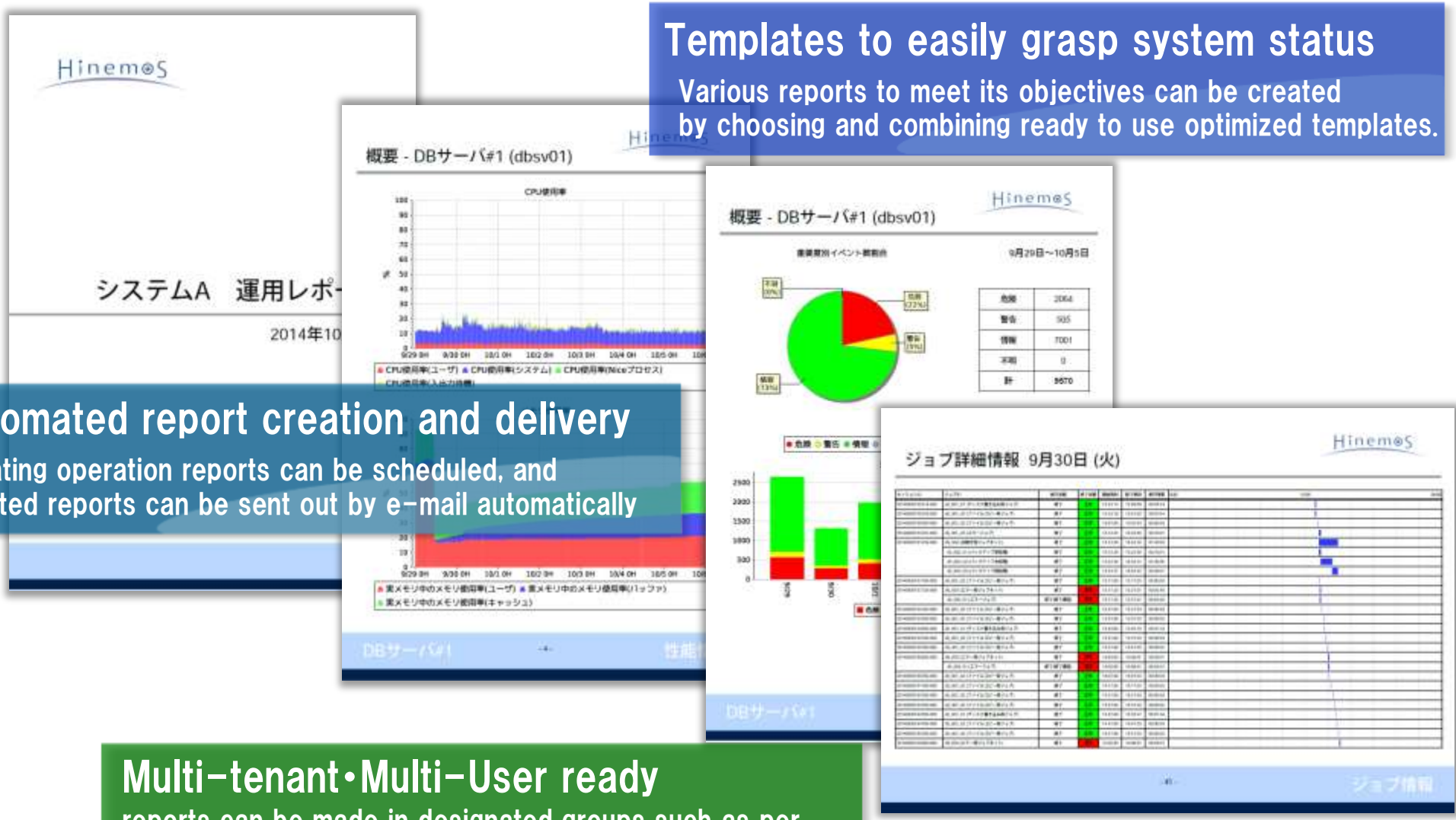
Makes daily operation of complicated systems more easily

Efficient management of targets

Relations of Managed targets and occurred incidents can be visualized and checked in unified interface

NTT DATA

Enterprise Option (Reporting)



Templates to easily grasp system status

Various reports to meet its objectives can be created by choosing and combining ready to use optimized templates.

Automated report creation and delivery

Creating operation reports can be scheduled, and created reports can be sent out by e-mail automatically

Multi-tenant・Multi-User ready

reports can be made in designated groups such as per system, per sub-systems, even if it is managed by single Hinemos Manager Server

NTT DATA

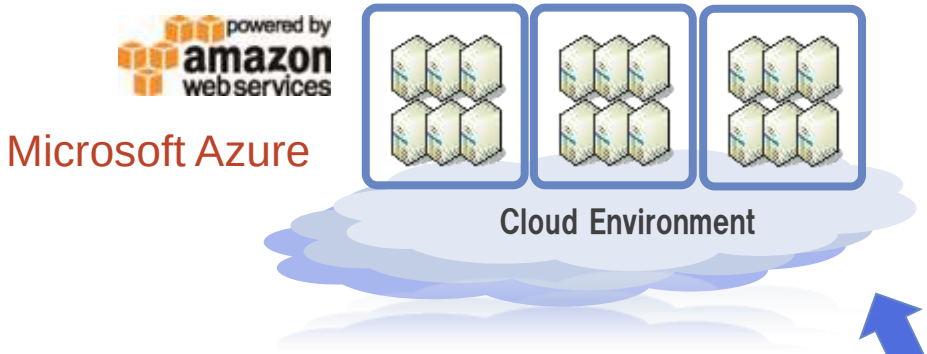
Cloud & Virtualization Option

Automated Management of Cloud Resources

Capable to manage Dynamic Changes of Servers and Storage resources

Hybrid-Cloud Ready

Various system configuration can be selected using both cloud and virtualized environment making use of its characteristics



Pay-per-use cost management

Easy to analyze and grasp and analyze where unnecessary cost and resources are used in the managed environment

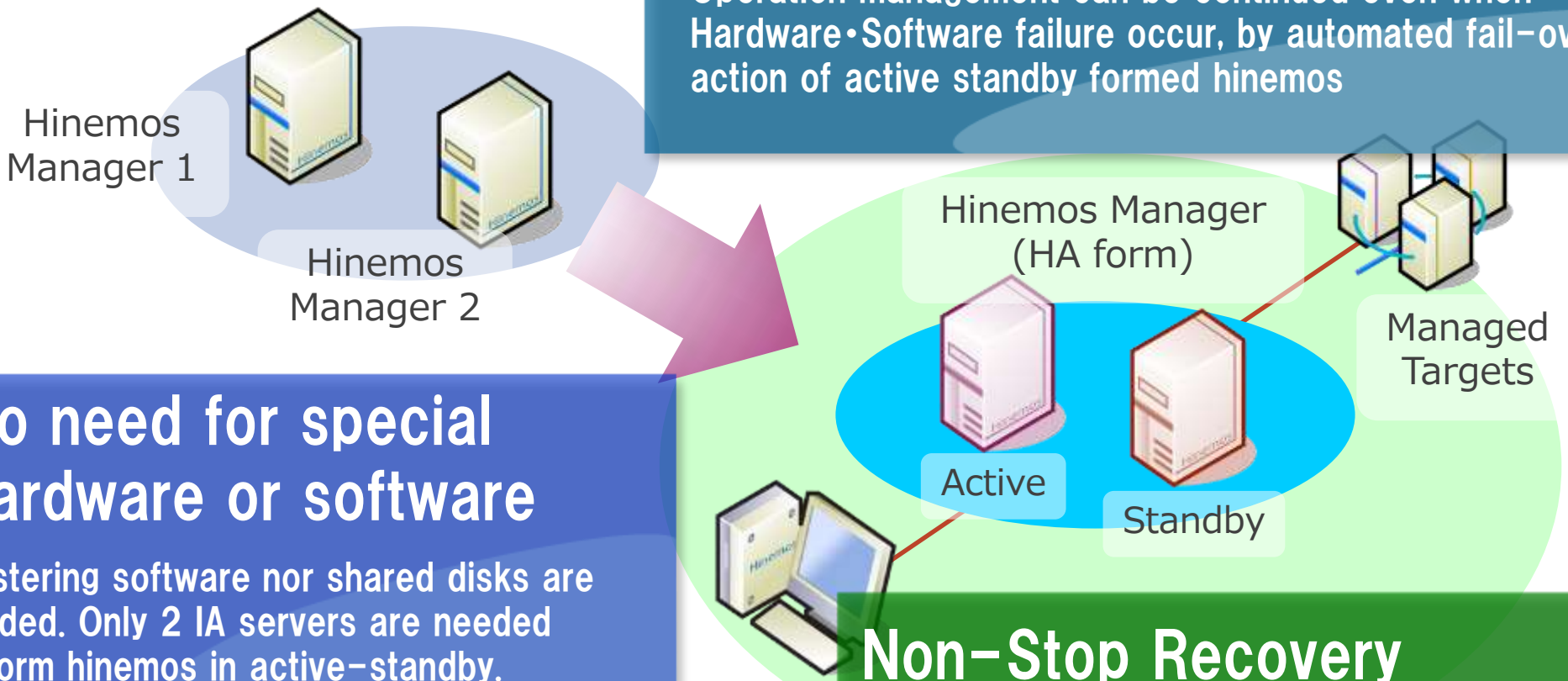
- Environment specific monitoring
- Usage Fee Management
- Job & Batch Operation Management
- Operation Automation

NTT DATA

Mission Critical Option

Continuous operation management

Operation management can be continued even when Hardware・Software failure occur, by automated fail-over action of active standby formed hinemos



No need for special hardware or software

Clustering software nor shared disks are needed. Only 2 IA servers are needed to form hinemos in active-standby.

Non-Stop Recovery

Failures are notified to users automatically, and can be recoverd in active standby form without stopping operation.

Included in All Optional product (Hinemos Utility)

Easy operation to register large scale settings, in and out from Excel files

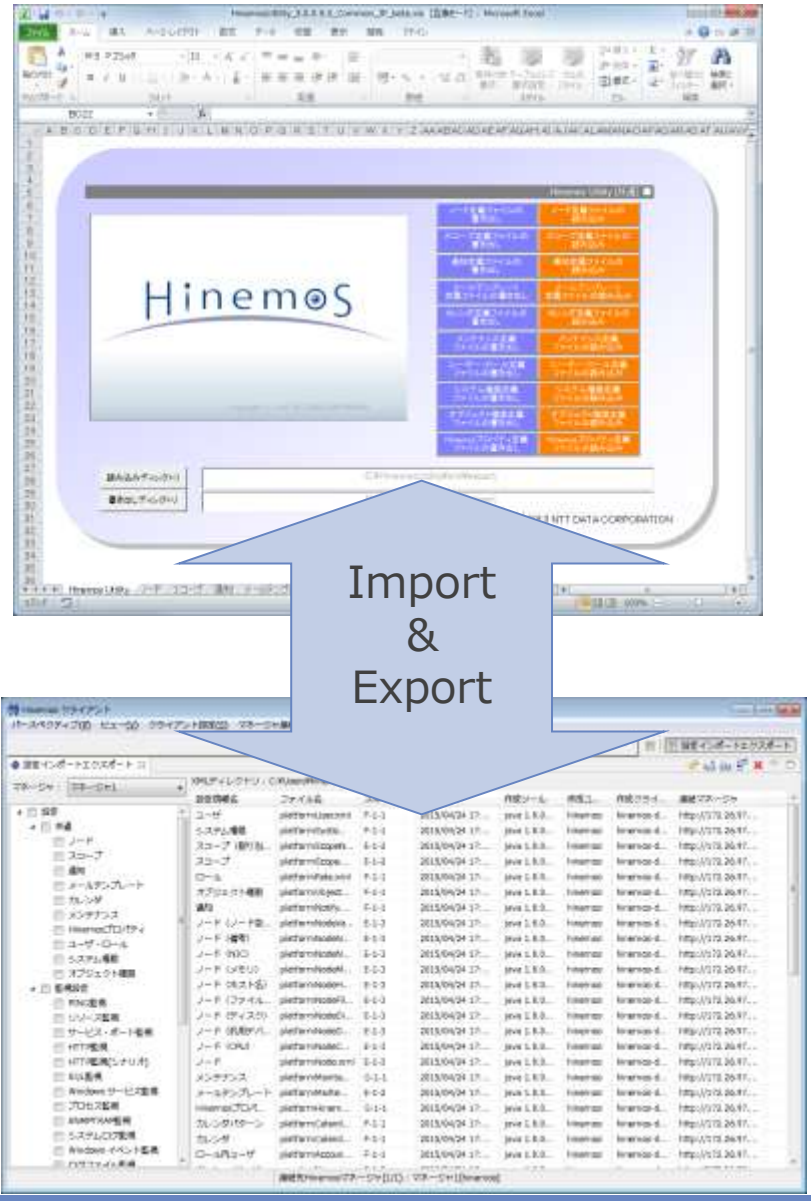
Operation of configuring settings for large scale environment can be managed easily. Creating documentation and generation management can also be done in efficient way

Flexible customization of resource monitoring

Information collected for resource monitoring can be freely added and customized.

MIB-import feature to make SNMPTRAP monitoring result easy to understand

MIB files can be imported to make SNMPTRAP monitoring message easy to understand.



Subscription

Hinemos Subscription

Hinemos Subscription includes the following

Software

Includes basic software packages of Hinemos and additional software for Enterprise Use

Updates

Version up tools, patches, and e-mail announcements for updates

Support Desk

Provides download pages for software, patches, and documents, and support desks for QA’s

Software

Basic software included in the subscription

Hinemos Manager
RHEL6, RHEL7
Windows Server 2012, 2016

Hinemos Client
GUI Client, Web Client

Hinemos Agent
RHEL6, RHEL7, Windows
Android, Solaris, HP-UX, AIX

Enterprise Option
Job Map, Node Map
Excel import-export, Reporting

Utility Tool
Command line tool
Export Script

Features and Software written in Red are only provided with Subscription

Subscription + 1

Additional features which can be added

VM Management	Provides feature to manage Virtual Environment (VMware, Hyper-V)
Cloud Management	Provides feature to manage Cloud Environment (AWS, Azure)
Mission Critical	Provides feature to form Hinemos Manager in high-availability form

Price List (Hinemos Subscription for Linux)

List	Price per unit (without tax)
Hinemos Subscription Single (Linux)	¥800,000/Year
Hinemos Subscription Single・VM Management (Linux) for VMware	¥1,000,000/Year
Hinemos Subscription Single・VM Management (Linux) for Hyper-V ※3	¥1,000,000/Year
Hinemos Subscription Single・Cloud Management (Linux) for AWS	¥1,000,000/Year
Hinemos Subscription Single・Cloud Management (Linux) for Azure ※3	¥1,000,000/Year

型番	Price per unit (without tax)
Hinemos Subscription Mission Critical (Linux)	¥1,600,000/Year
Hinemos Subscription Mission Critical・VM Management (Linux) for VMware	¥1,800,000/Year
Hinemos Subscription Mission Critical・VM Management (Linux) for Hyper-V ※3	¥1,800,000/Year
Hinemos Subscription Mission Critical・Cloud Management (Linux) for AWS版	¥1,800,000/Year
Hinemos Subscription Mission Critical・Cloud Management (Linux) for Azure版 ※3	¥1,800,000/Year

※1 : Provided from 6/1/2017
※2 : Provided from 8/1/2017
※3 : Provided from 9/1/2017

Price List (Hinemos Subscription for Windows)

List	Price per unit (without tax)
Hinemos Subscription Single (Windows)	¥800,000/Year
Hinemos Subscription Single・VM Management (Windows) for VMware	¥1,000,000/Year
Hinemos Subscription Single・VM Management (Windows) for Hyper-V ※3	¥1,000,000/Year
Hinemos Subscription Single・Cloud Management (Windows) for AWS	¥1,000,000/Year
Hinemos Subscription Single・Cloud Management (Windows) for Azure ※3	¥1,000,000/Year

型番	Price per unit (without tax)
Hinemos Subscription Mission Critical (Windows)	¥1,600,000/Year
Hinemos Subscription Mission Critical・VM Management (Windows) for VMware	¥1,800,000/Year
Hinemos Subscription Mission Critical・VM Management (Windows) for Hyper-V ※3	¥1,800,000/Year
Hinemos Subscription Mission Critical・Cloud Management (Windows) for AWS版	¥1,800,000/Year
Hinemos Subscription Mission Critical・Cloud Management (Windows) for Azure版 ※3	¥1,800,000/Year

※1 : Provided from 6/1/2017
※2 : Provided from 8/1/2017
※3 : Provided from 9/1/2017

MS SQL Server needed separately

Contact Us

NTT DATA INTELLILINK CORPORATION
E-Mail: hinemos-inquery-en@intellilink.co.jp

NTT DATA

Global IT Innovator