FUJITSU
shaping tomorrow with you

Introducing Systemwalker Service Quality Coordinator V15.0

< Version 2.0 >

January 2013

FUJITSU LIMITED

Systemwalker

Table of Contents

FUJITSU

- Introduction
- V15.0 Enhanced Features
- Product Specification

FUJITSU

Introduction

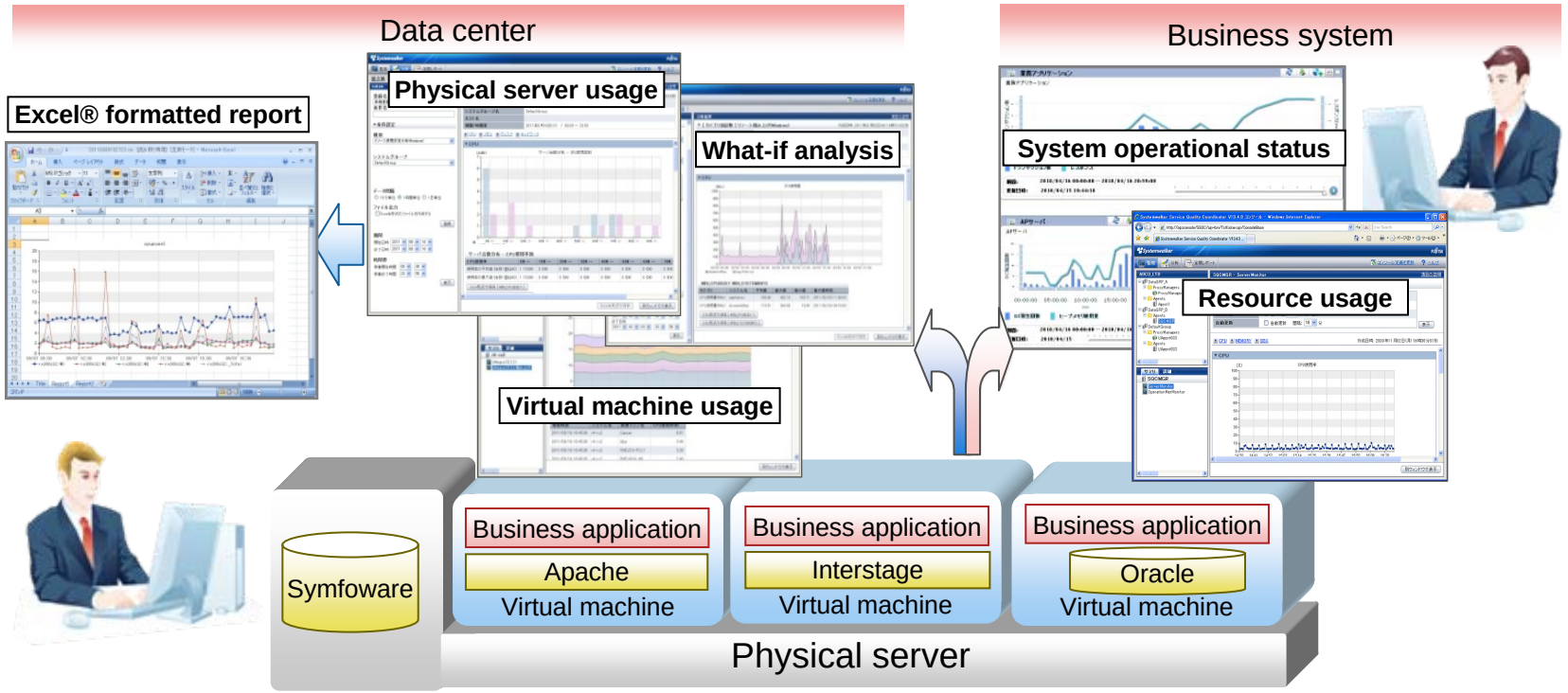
Performance Analysis and Capacity Management Software

Systemwalker

About Systemwalker Service Quality Coordinator

FUJITSU

It is a product that supports maintenance and optimization of your entire IT system with multi-angled monitoring and analysis from business service quality to virtual resources



Resource optimization for infrastructure (server, network, storage)

- Advance simulation of aggregation effect on the virtual environment
- Visualization of resource usage by the host and guests

Stable operation of business system

- Easy to check whether the business system is running normally
- When a problem occurs, resource usage can be drilled-down to, checked, and the bottleneck isolated
- Daily management can detect signs of trouble and prevent problems from occurring

Installation Points

Have problems like these?

Cannot determine the operational status of your IT system

- Want to determine the quality of service from an end user perspective
- Want to see the business throughput visually
- Want to perform scheduled reporting on operations

Have problems caused by performance degradation of your IT system

- Want to gain an understanding of deteriorating response times, and to take action
- Want to identify a bottleneck quickly, and recover
- Want to obtain investigation data when a problem occurs

Have difficulty when planning investment for your IT system

- Want to carry out effective capacity planning based on forecast demand
- Want to see the effect gained when a server is scaled out

SQC can solve them

Systemwalker Service Quality Coordinator is sometimes referred to as SQC

(1) Business Service Quality visualization

(2) Maintain the Level of Service with Monitoring and Drill-Down

(3) Investment Optimization Based on Analysis and Predictions

(1) Business Service Quality Visualization

FUJITSU

Until now

Performance data obtained by each tool

Tool A

Tool B

Tool C

Very time-consuming and costly tasks

Data sorting

Data processing

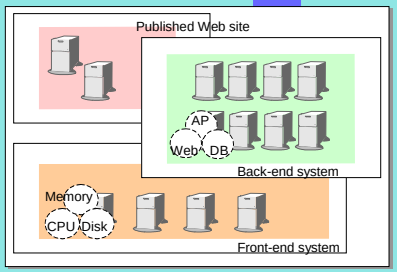
Operational status cannot be understood in a timely manner

Reporting

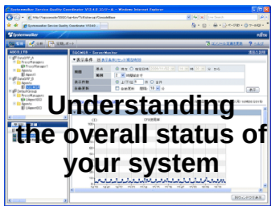
After applying SQC

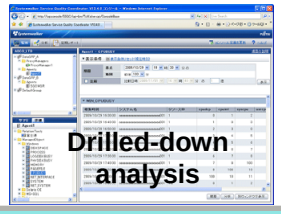
OS
Web/AP/DB
Storage

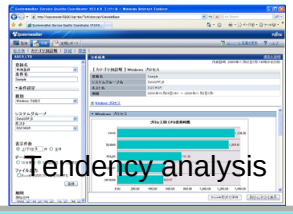
SQC



Everything from user response times through to Web/AP/DB/storage is collectively managed by SQC







Timely visualization of the operational status of the entire system!

(1) Application Example: Timely Visualization of the Entire System

FUJITSU

Normal operations can be confirmed at a glance by collecting several pieces of important information

Confirming each piece of information that indicates the normal status takes effort

- Timely display of operational status
- Narrow down to problem locations on the Analysis window

Dashboard: Displays important information on one window

Number of processed jobs, response times

Application server performance

Database performance

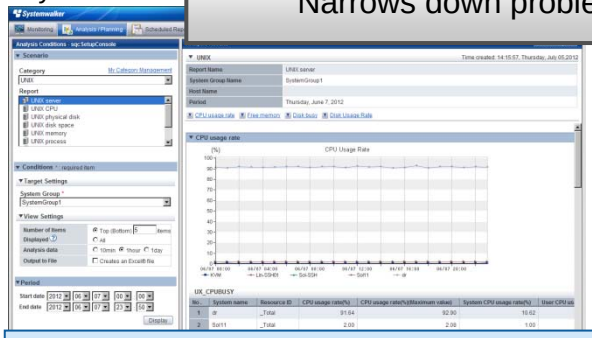
Confirm deterioration of job response times

Detect problems

Check on the Analysis window

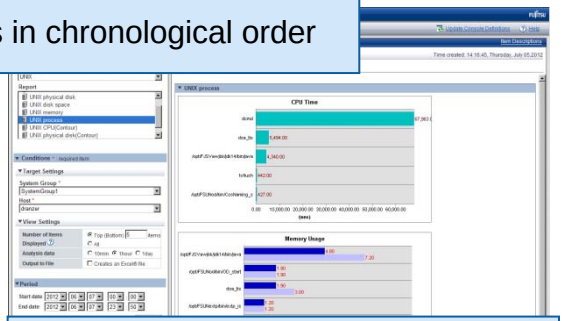
Analysis window

Narrows down problem locations



Identify problems in chronological order

Analysis window



Identify the problematic process

(2) Maintain the Level of Service with Monitoring and Drill-Down

FUJITSU

Until now

Time axis

Problem occurs

Collect investigation data

Troubleshooting

Lack of data means investigation struggles

Waiting for recurrence (long term)

Cause is unknown

After applying SQC

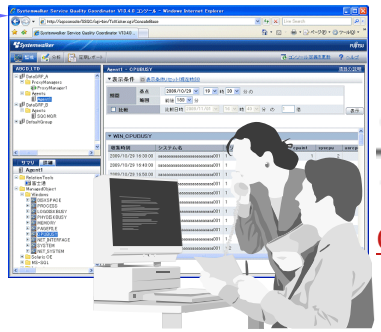
Time axis

Problem occurs

SQC

Performance data continuously collected and accumulated at regular intervals

Investigation starts immediately
(Status check and Troubleshooting)



Cause is isolated and system is recovered immediately!

(2) Application Example: Speedy Problem Analysis Even in a Complex Virtual Environment

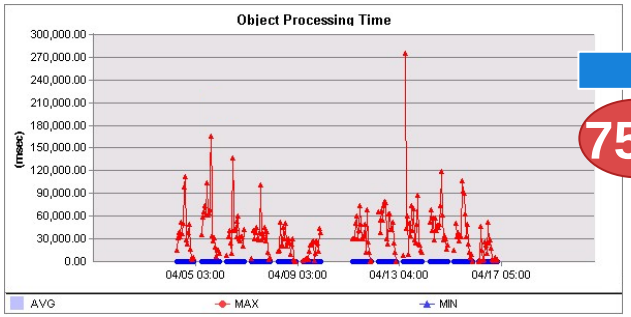
FUJITSU

Quick separation by analyzing from both host and guest sides

Want to quickly investigate the cause of deteriorating job response time performance

- Monitoring of response status
- Drill down into related resources and isolate the cause

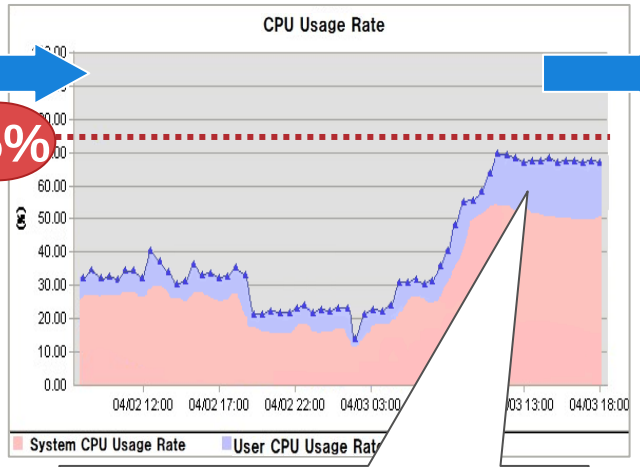
Detect response time deterioration



Drastic deterioration in response

Problem detected

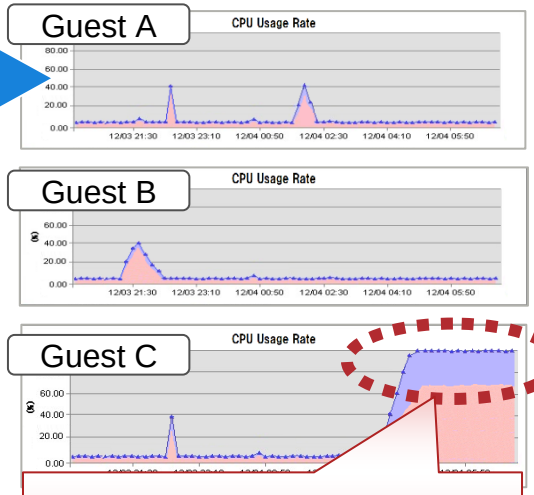
Confirm host server



CPU usage on the host server is kept down to 75% even at the peak

No problem

Check each guest



CPU usage of the Guest C is close to 100%

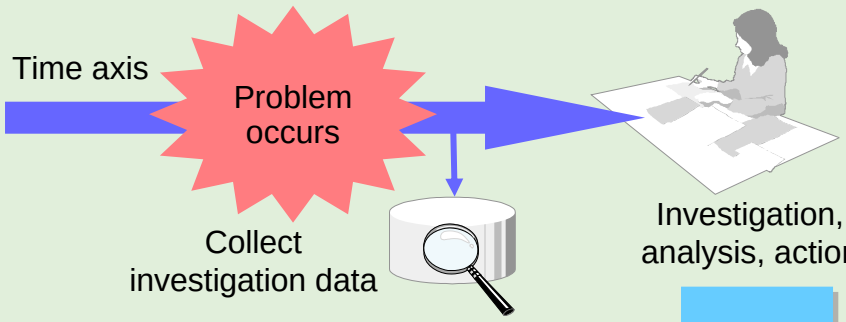
Insufficient resource assignment

(3) Investment Optimization Based on Analysis and Predictions

FUJITSU

Until now

(1) With insufficient resources, performance problems result in investigation costs



(2) With excessive resources, extra investment is required for assets and maintenance

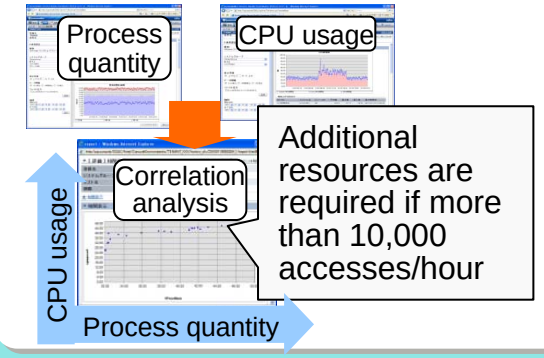
Asset management

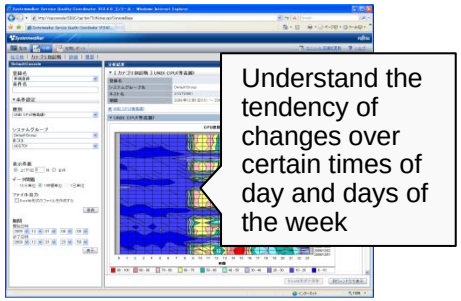
Patch application

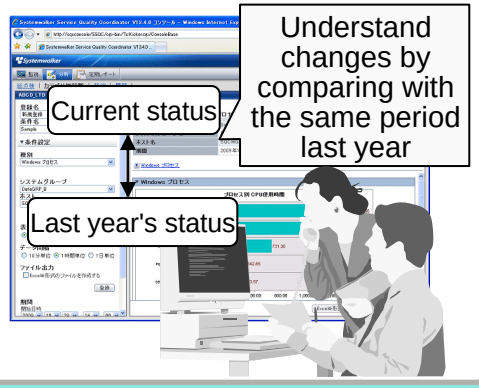
Electrical expenses

After applying SQC

Determine the amount of required resources for future demand by using the provided analysis scenarios, such as the tuning guidance and simulations, etc.







(3) Application Example: Check in Advance the Amount of Resources Required for Virtual Aggregation

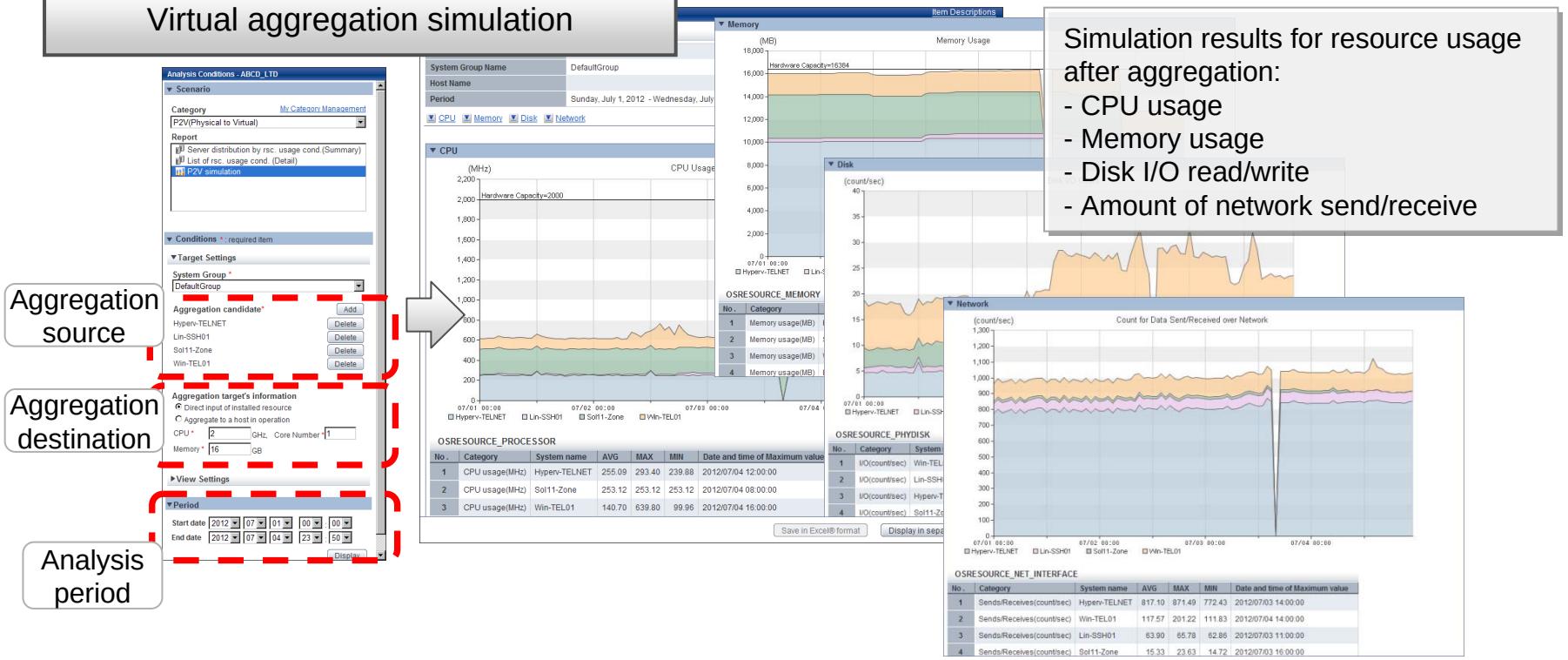
FUJITSU

Determine the appropriate amount of resources by forecasting the required resources

Want to put together a highly accurate estimate of the amount of resources required for virtual aggregation

Achieves highly effective virtual aggregation while avoiding peak load redundancies

Virtual aggregation simulation



FUJITSU

V15.0 Enhanced Features

Enhanced Analysis and Forecasting Functions Essential for Utilizing Virtual Resources

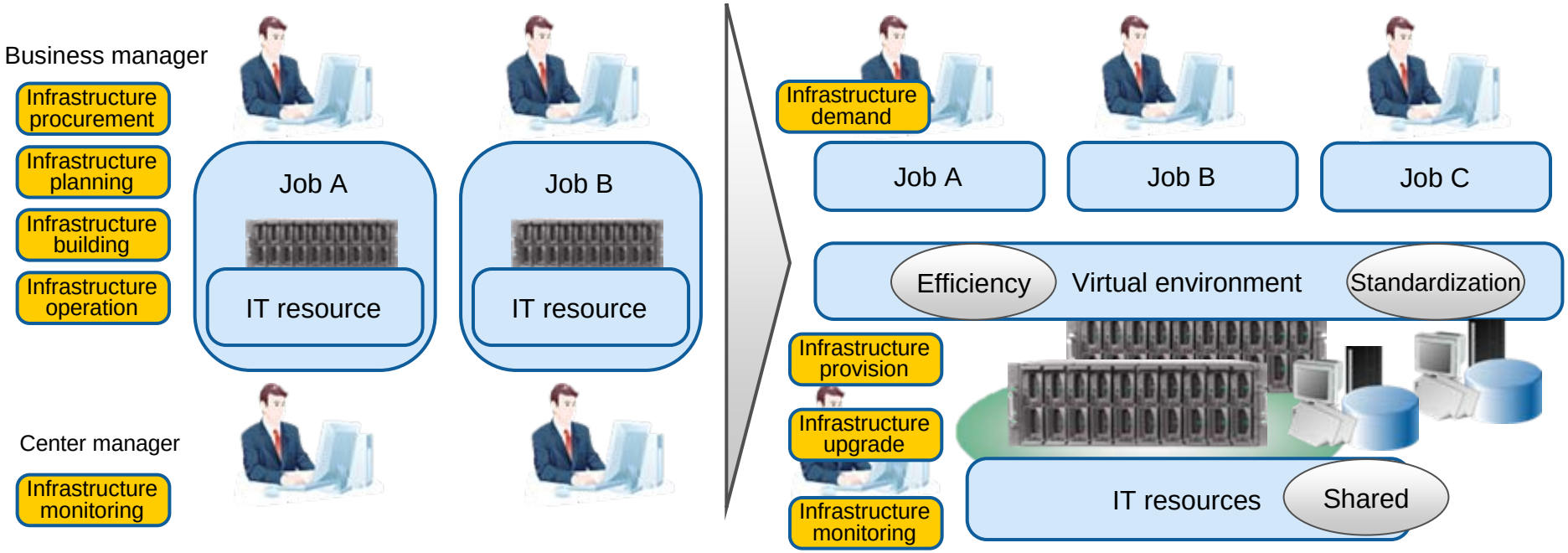
Systemwalker

Changing Operation Environment in IT systems

- Sharing IT resources within the IT system, and providing it to business departments as infrastructure -

FUJITSU

- A new operation format where IT resources are aggregated into the virtual environment in an effort to further reduce cost, and IT systems are provided to business system users as infrastructure, is practiced more often at a rapid pace within organizations
  - Sharing servers within an organization in an effort to standardize and increase efficiency of operations
  - Business system departments, as the users, are required to increase efficiency in infrastructure tasks (procurement, planning, building, and operation, etc), so that resources become available for other tasks

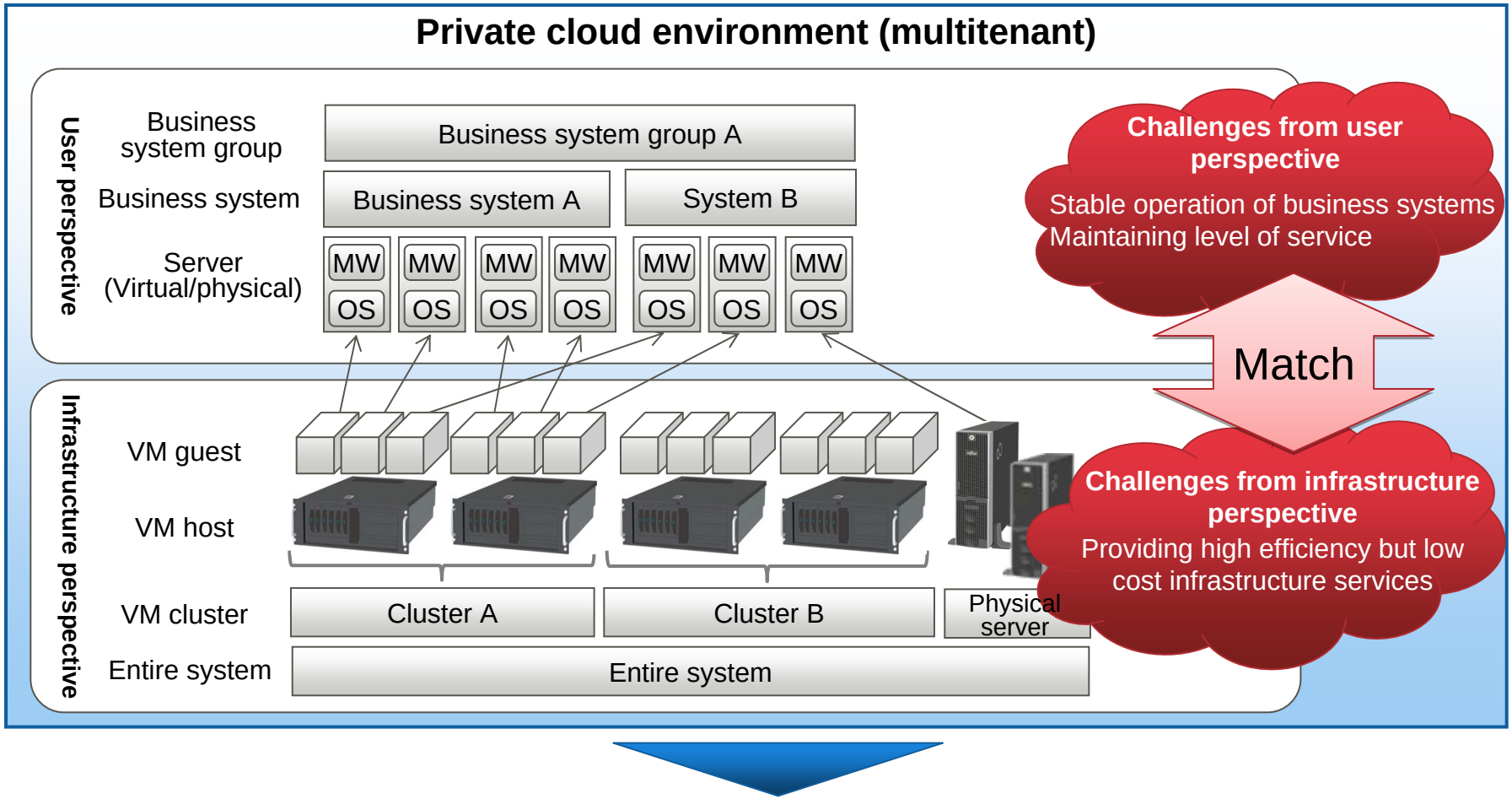


Cost reductions in IT resource aggregation and reduced load on the business manager are countered by an increased load on center managers who provide the IT resources

Challenges when Providing and Using Virtual Resources

FUJITSU

- Optimize balancing the supply and demand of resources with high accuracy

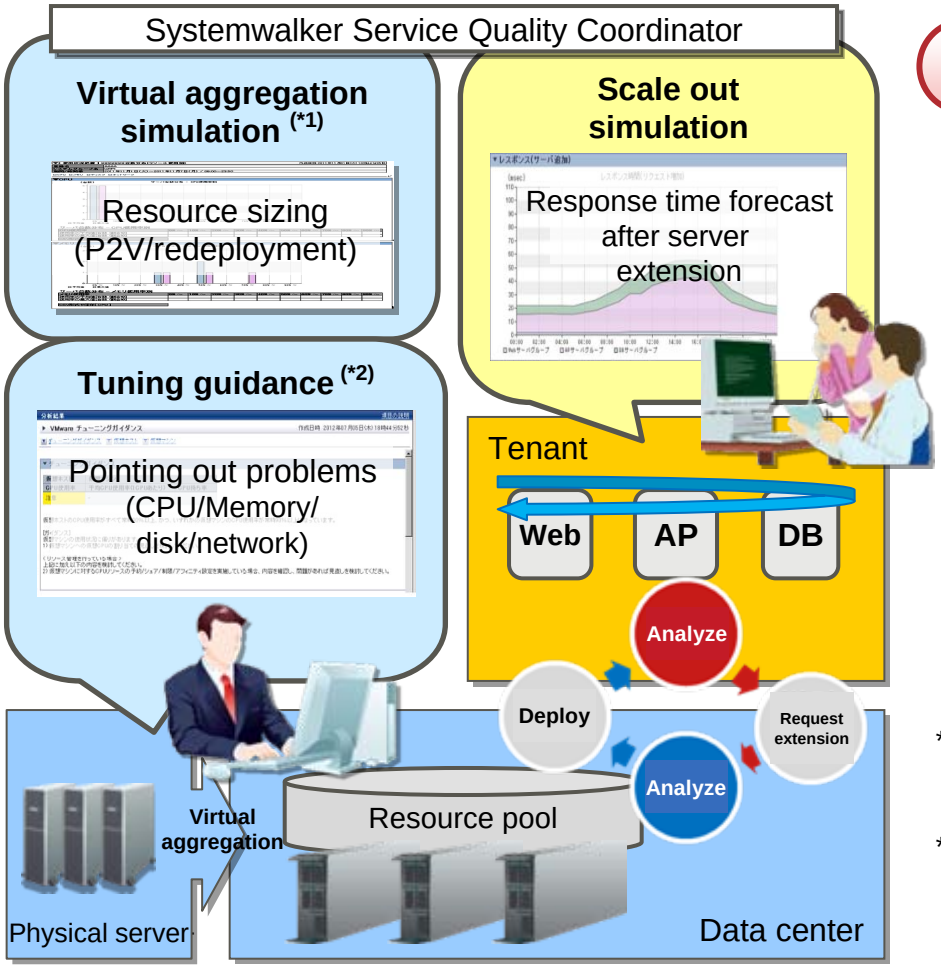


Capacity management required for both cloud service providers and users

V15.0 Enhanced Features

Supports capacity management through perspectives of both providers and users of virtualization/cloud environments

Achieves effective utilization of virtual resources by using analysis reports boasting Fujitsu tuning technologies



Enhancements

Simulation of aggregation and server extension

With the simulation function, the effect of aggregation to the virtual environment, the effect of reallocation, and response time forecast after scale out, etc, can be checked in advance.

Bottleneck analysis

With tuning guidance, the status of resource bottlenecks can be detected based on Fujitsu's tuning technology, and recommended actions are presented.

*1 By analyzing the performance load on the existing servers, job peak redundancies at the time of virtual aggregation can be avoided, and the appropriate number of resources can be estimated.

*2 The operation know-how that Fujitsu has developed over the years is incorporated. Problems can be detected from the ballooning and swapping status, and recommended actions are presented.

Virtual Aggregation Simulation

By carrying out appropriate estimation based on the operational status before aggregation, resource sizing costs can be reduced dramatically

The amount of resources cannot be estimated appropriately with server specification alone

By performing simulations based on the actual operational status, more efficient resource sizing can be achieved

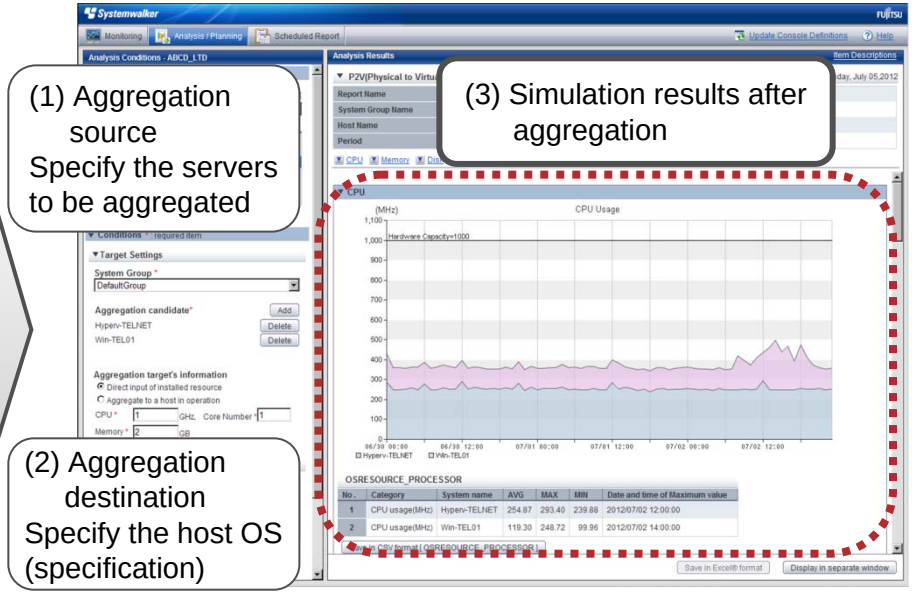
Numerous review tasks are needed after aggregation

Post-integration server is determined by pre-aggregation specifications (CPU, memory)

Understand the tendency of usage over a week

Reallocate according to the actual usage

Repeated



Scale Out Simulation

FUJITSU

By checking the improved effect on response times when scaling out the Web/AP server in advance, it is possible to plan resource expansion appropriately

Determining the effect, such as deterioration in response times caused by increases in the number of users in the future, is difficult

With appropriate resource expansion, stable operation of the business system can be achieved

Increase in the number of user accesses

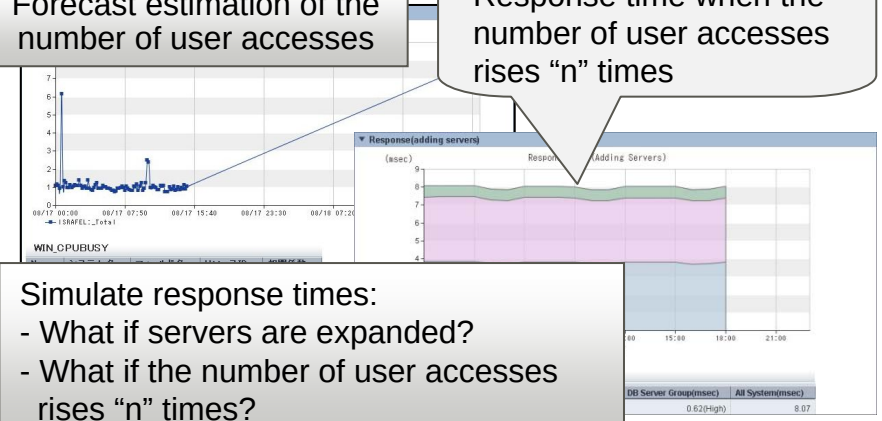
When?

By how much?

Server expansion

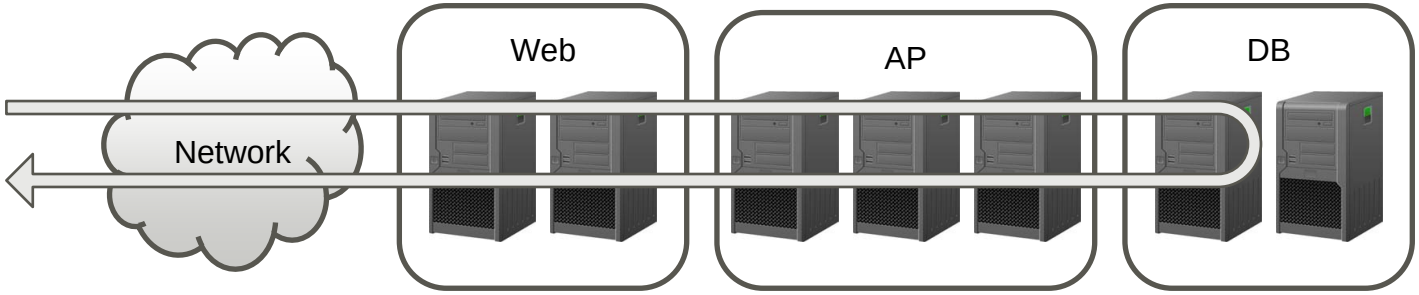
Forecast estimation of the number of user accesses

Response time when the number of user accesses rises “n” times



Simulate response times:
- What if servers are expanded?
- What if the number of user accesses rises “n” times?

End user

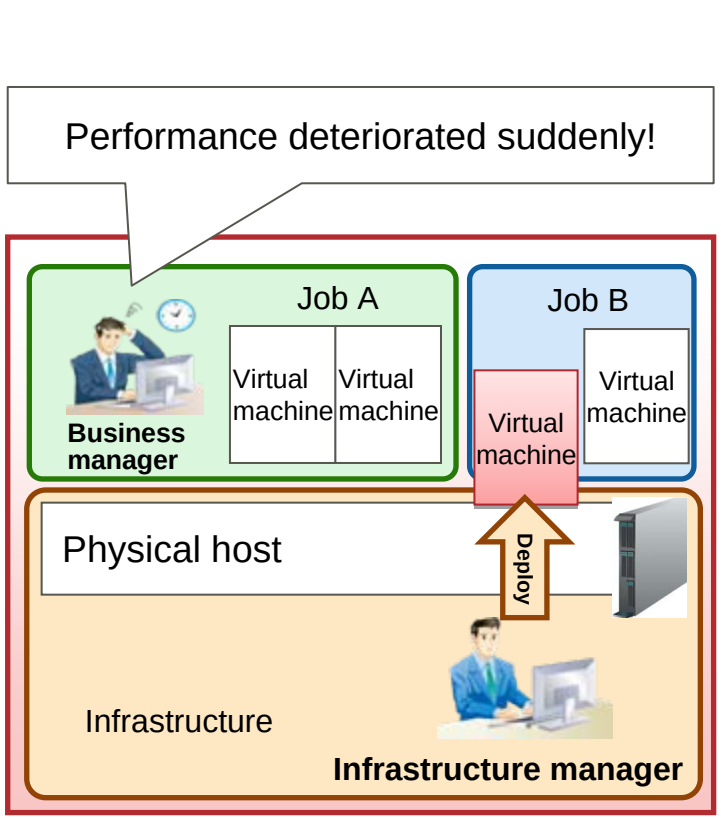


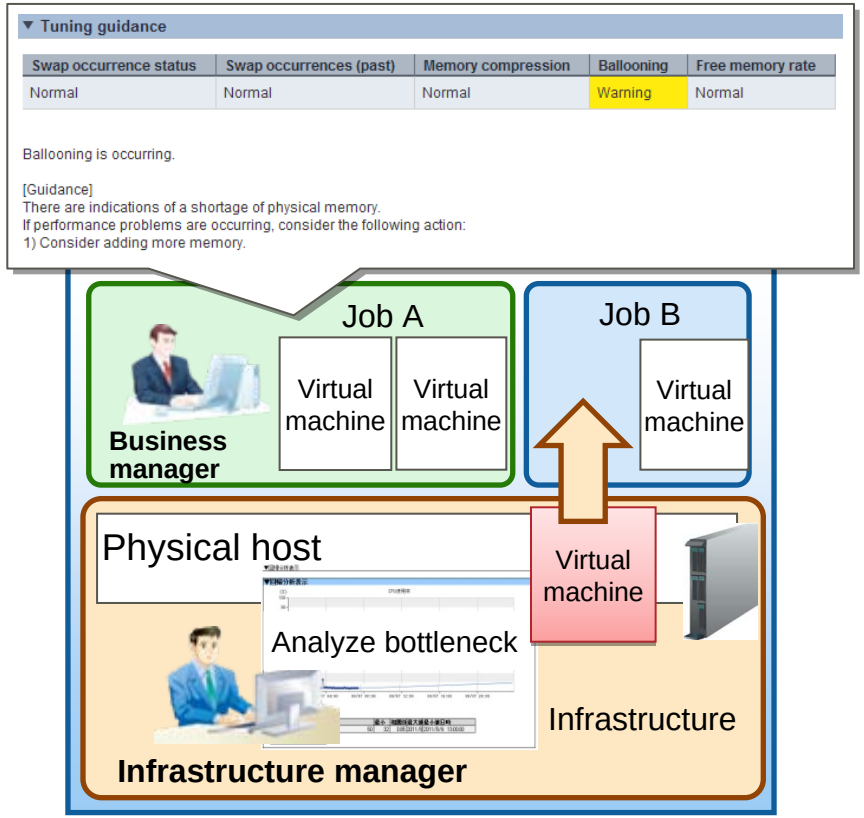
Tuning Guidance

The analysis report based on Fujitsu's tuning technology guides the user through bottleneck locations and appropriate solutions. Accurate tuning is possible without advanced analysis skills.

Performance of a virtual machine deteriorated after another virtual machine was deployed

Virtual machine can be deployed safely while avoiding the risk of bottlenecks occurring





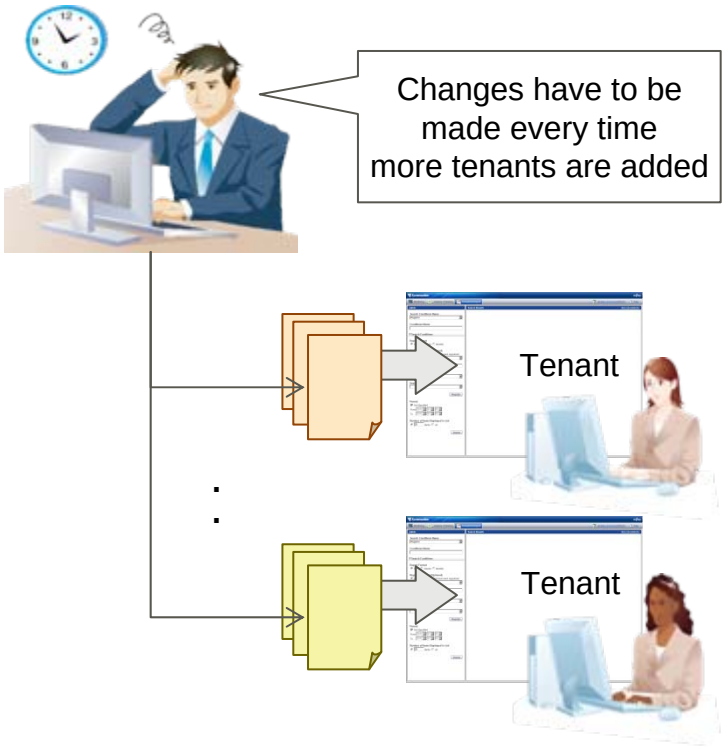
Automatic Creation of Report per Tenant

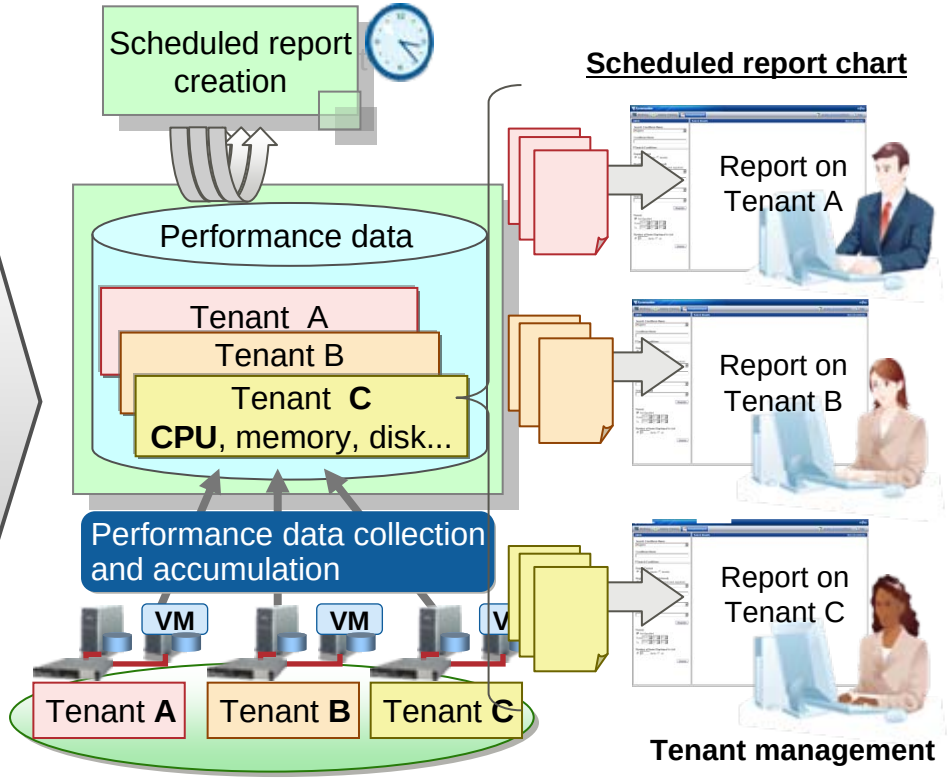
FUJITSU

An operational/diagnostic report can be automatically output for each tenant in a multitenant environment.
(ServerView Resource Orchestrator Cloud Edition linkage function)

Settings are changed manually according to increases/decreases in tenants. Reports cannot be created in a timely manner.

Report on each user (tenant) is output at a fixed time everyday





FUJITSU

Product Specification

List of Functions

Systemwalker

List of Functions

Functions		V15.0 New functions	Standard Edition	Enterprise Edition
Monitoring/visualization functions	Summary display		Y	Y
	Drilled-Down display		Y	Y
Analysis window and scheduled report window	Planning (*)	Virtual aggregation simulation Scale-out simulation Tuning guidance	Y	Y
	Performance analysis	Reporting according to the analysis scenario	Y	Y
	Generic report		Y	Y
Service management function	End user response management function		Y	Y
	Service operation management function		Y	Y
	Web transaction management function		Y	Y
	Server performance management function		Y	Y
	Application server performance management function	Supports Interstage Application Server(Java EE)	Y	Y
		Supports Oracle WebLogic Server	Y	Y
	Database server performance management function		Y	Y
	Job performance management function		Y	Y
	Network performance management function		Y	Y
	Storage performance management function		Y	Y
	User data management		Y	Y
	Virtual server management function	Supports VMware ESXi/vCenter 5.0/5.1, Linux virtual machine (KVM), and Oracle Solaris 11 Zone	Y	Y
Web usage management function	Web access log analysis function		Y	Y
	Tamper monitoring function		Y	Y
High reliability system operation	Cluster system monitoring		N	Y
	Supports Manager/Enterprise Manager cluster		N	Y
	Manager/Enterprise Manager redundancy		N	Y
Large scale system operation	Entire system monitoring (Manager layering)		N	Y
Dashboard function	Visualization with Dashboard		N	Y

Y: Supported N: Not supported

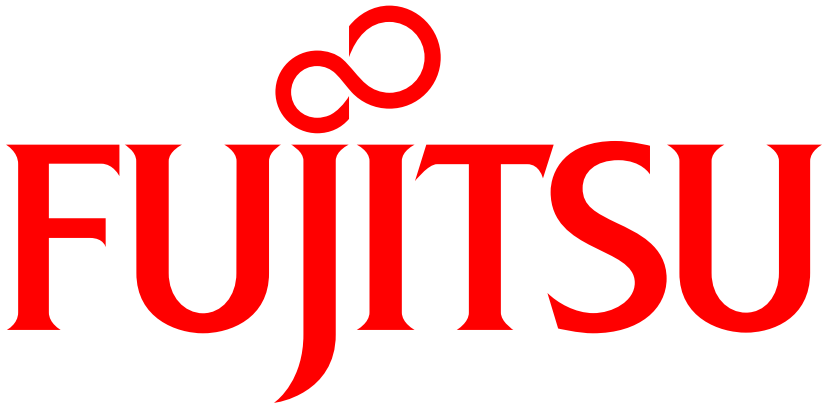
* : The estimates and simulation results displayed in each report are calculated on the basis of past results using Fujitsu's proprietary methods. Bear in mind that these are rough estimates and that operation is not guaranteed in the customer's actual computer environment.

Trademarks

FUJITSU

- Apache, and Tomcat are trademarks or registered trademarks of The Apache Software Foundation.
- HP-UX is a registered trademark of Hewlett-Packard Company in the United States.
- IBM, the IBM logo, AIX, AIX 5L, HACMP, Power, and PowerHA are trademarks of International Business Machines Corporation in the United States and other countries.
- Intel and Itanium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.
- Linux is a registered trademark of Linus Torvalds.
- Microsoft, Windows, Windows Server and the titles or names of other Microsoft products are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.

  All other trademarks are the property of their respective owners.
- Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.
- Oracle Solaris might be described as Solaris, Solaris Operating System, or Solaris OS.
- Red Hat is registered trademarks of Red Hat, Inc. in the United States and other countries.
- UNIX is a registered trademark of The Open Group in the United States and other countries.
- VMware, the VMware "boxes" logo and design, Virtual SMP, and VMotion are registered trademarks or trademarks of VMware, Inc. in the United States and/or other jurisdictions.
- Other company names and product names used in this document are trademarks or registered trademarks of their respective owners.
- The company names, system names, product names, and other proprietary names that appear in this document are not always accompanied by trademark symbols (TM or (R)).



shaping tomorrow with you