HITACHI
Inspire the Next

Integrated Operations Management

Job management

Introducing JP1/Automatic Job Management System 3

- Achieving automatic and stable operation of business systems -

Hitachi, Ltd.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

HITACHI
Inspire the Next

Contents

- Overview of JP1/Automatic Job Management System 3
- What you can do
- Example of a system configuration
- Support for safe use

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Overview of JP1/Automatic Job Management System 3

HITACHI
Inspire the Next

Improve efficiency and save labor in the development and execution of an application flow, and achieve automatic and stable operation of business systems in various environments

Applications running without servers

Cloud services

AWS Lambda, Amazon S3 etc.

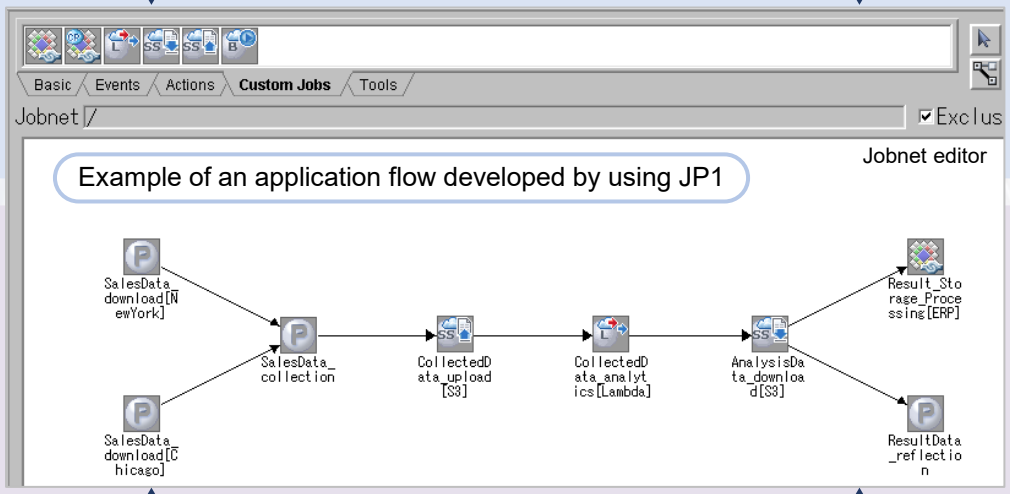
Google Cloud Functions, Google Cloud Storage etc.

Azure Batch, Azure Blob Storage etc.

SaaS/Web services

SAP S/4HANA Cloud, private edition etc.

Web services



Cloud platforms

AWS, Azure, Google Cloud, OCI etc.

Amazon EC2

Azure Virtual Machines

Google Compute Engine

OCI Compute VMs etc.

On-premises

Windows

Linux®

AIX

Mainframe

Applications running on servers

Amazon S3: Amazon Simple Storage Service AWS: Amazon Web Services Azure: Microsoft Azure OCI: Oracle Cloud Infrastructure Amazon EC2: Amazon Elastic Compute Cloud OCI Compute VMs: Oracle Cloud Infrastructure Compute VMs

© Hitachi, Ltd. 2023, 2024. All rights reserved.

HITACHI
Inspire the Next

What you can do

- What you can do with JP1/Automatic Job Management System 3
- Easily develop complex application flows
- Enable detailed scheduling according to operations
- Connect applications that run in different environments
- Intuitively understand the status of operations
- Visualize operation schedules and results
- Address operation failures in a variety of ways
- Visualize the health of your job management system
- Automate switching of application flows

© Hitachi, Ltd. 2023, 2024. All rights reserved.

What you can do with JP1/Automatic Job Management System 3

HITACHI
Inspire the Next

Develop and execute application flows

- Easily develop complex application flows
- Enable detailed scheduling according to operations
- Connect applications that run in different environments

Monitor operations

- Intuitively understand the status of operations
- Visualize operation schedules and results
- Address operation failures in a variety of ways

Operate tasks

- Visualize the health of your job management system
- Automate switching of application flows

Increased efficiency

Labor savings

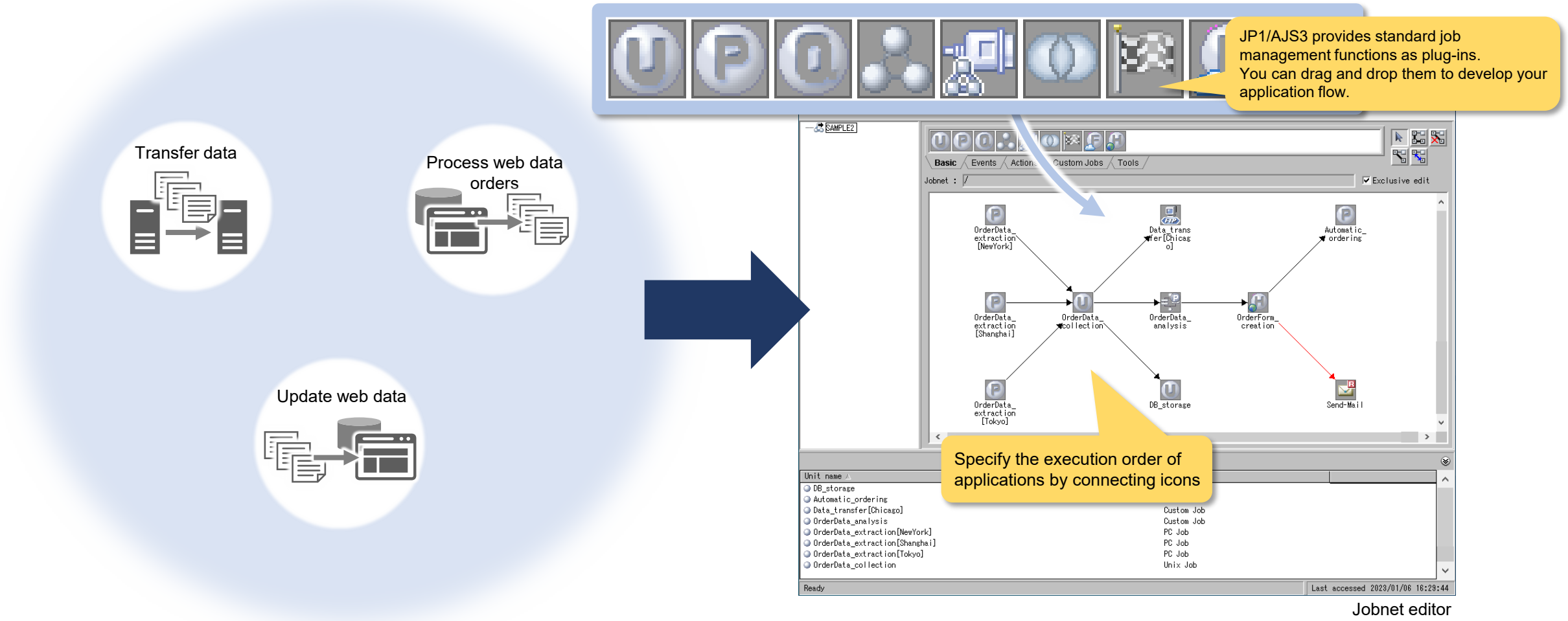
Stable operation

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Develop an application flow to be automated by low-code development

HITACHI
Inspire the Next

You can use a GUI to define the series of tasks in a complex application flow that you want to automate, and achieve low-code development of the application flow.



Jobnet editor

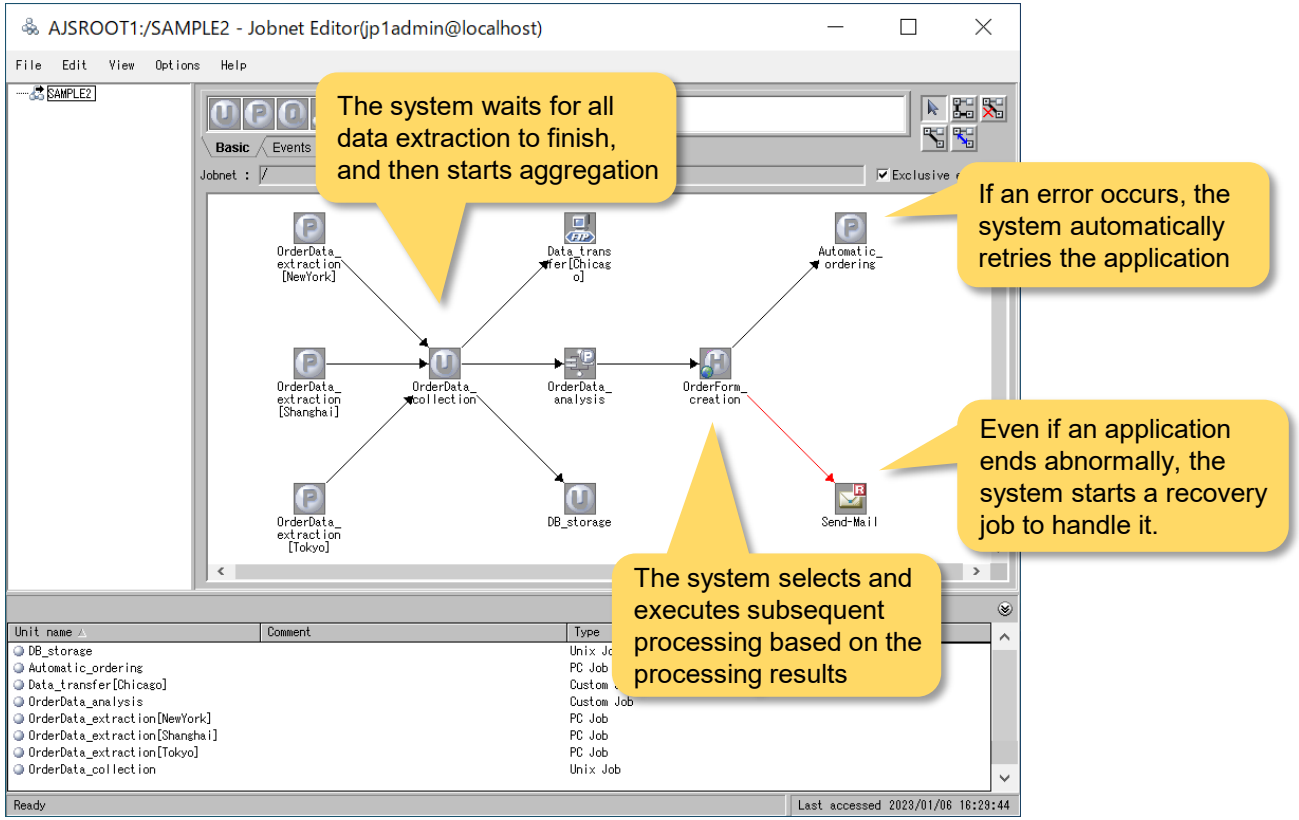
© Hitachi, Ltd. 2023, 2024. All rights reserved.

Control application flows that have complex execution conditions

HITACHI
Inspire the Next

You can easily develop application flows that have complex execution conditions. For example, you can specify that the system must wait for multiple processes to finish before it starts the next process, or the system can switch the next process to be executed depending on the processing results.

Automatically execute processing based on execution conditions such as waiting, branching, normal/error sorting, etc.



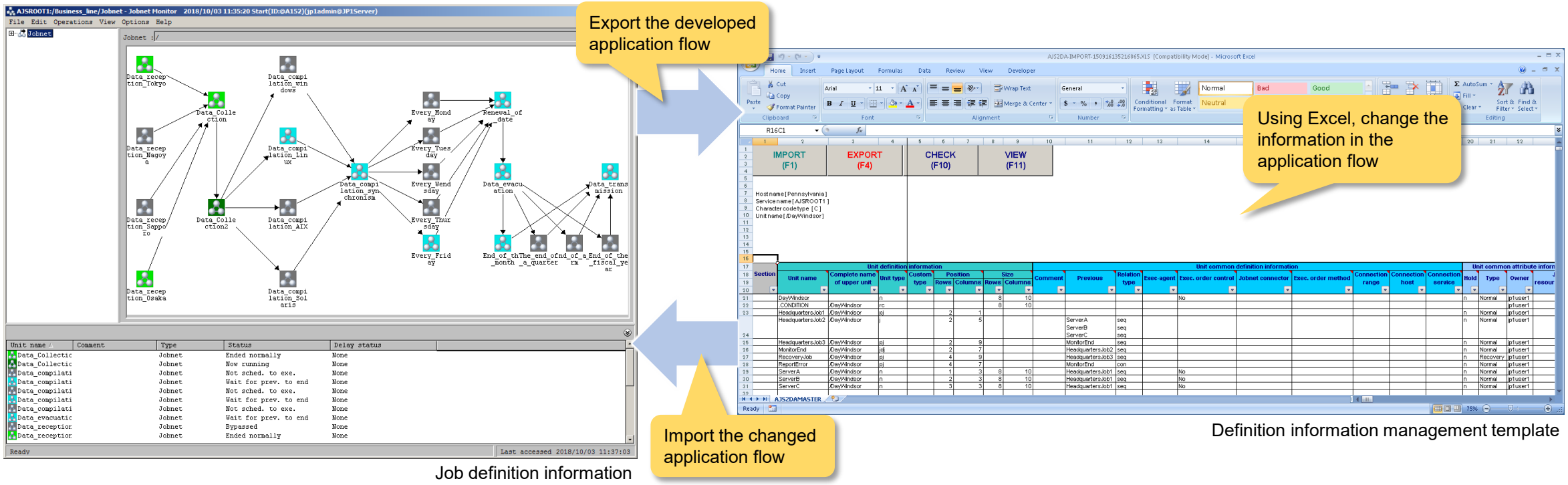
Jobnet editor

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Improve the efficiency of making changes to a complex application flow

HITACHI
Inspire the Next

After you use a GUI to develop an application flow, you can export it into an Excel file, edit it, and import it. By adding, modifying, and batch replacing Excel files, you can streamline the work required to modify an application flow.



Job definition information

Definition information management template

Requires JP1/Automatic Job Management System 3 - Definition Assistant.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Easily generate design documents for an application flow

HITACHI
Inspire the Next

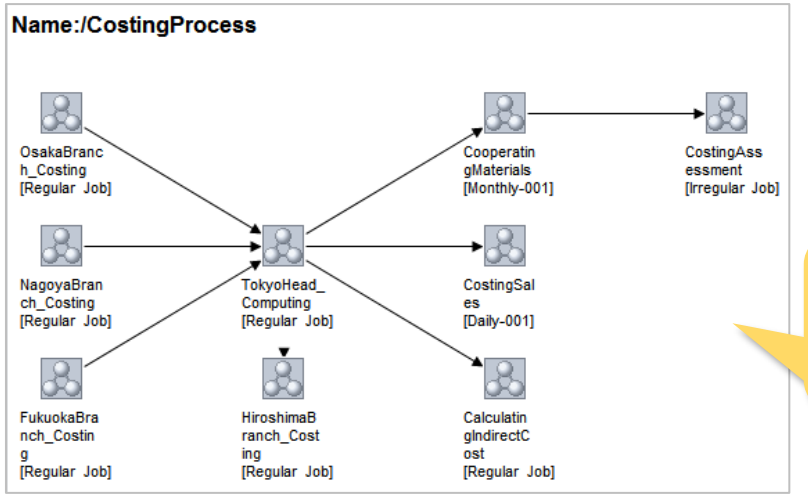
You can automatically generate design documents from an application flow that you defined by using a GUI. This saves labor when creating development histories and maintenance materials.

Output definition information in list and map formats

Unit name	Unit type	Script file name	Type of end judgment
(1) /Costing_Process	Jobnet	-	-
(2) Factory_Calculation_processing	Jobnet	-	
(3) Consignment_Management	Jobnet	-	
(4) Consignment_Inventory	PC job	C:\mog\H_ITAKUH.SPT	
(2) Overhead_Calculation_Process	Jobnet	-	
(3) Post-processing_Overhead_Cal	PC job	C:\mog\K_KANSEF.SPT	
(3) Preprocessing_Overhead_Cal	PC job	C:\mog\K_KANSEA.SPT	
(2) Sales_Calculation_Process	Jobnet	-	-
(3) Post-processing_of_Sales_cal	PC job	C:\mog\E_EIGYOU.SPT	cod

You can check the details of definitions for each unit in a list.

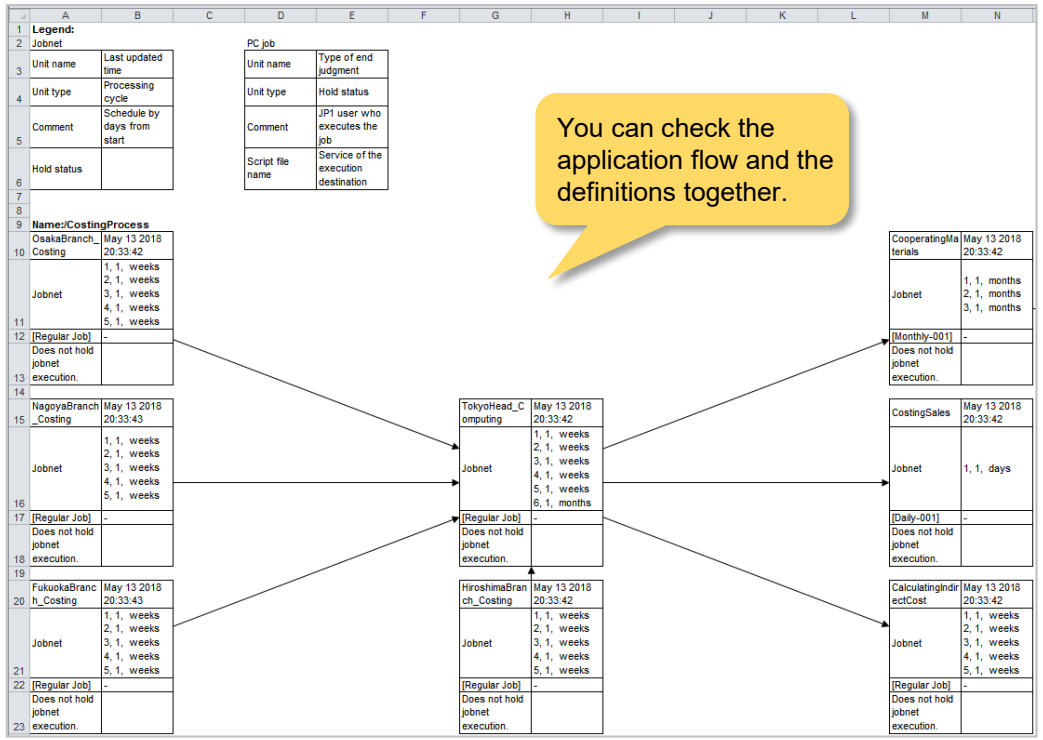
Output example of a document in jobnet list format



You can document and check the application flow diagram defined with the GUI.

Output example of a document in map format

Output definitions in flow format



You can check the application flow and the definitions together.

Output example of a document in jobnet flow format

© Hitachi, Ltd. 2023, 2024. All rights reserved.

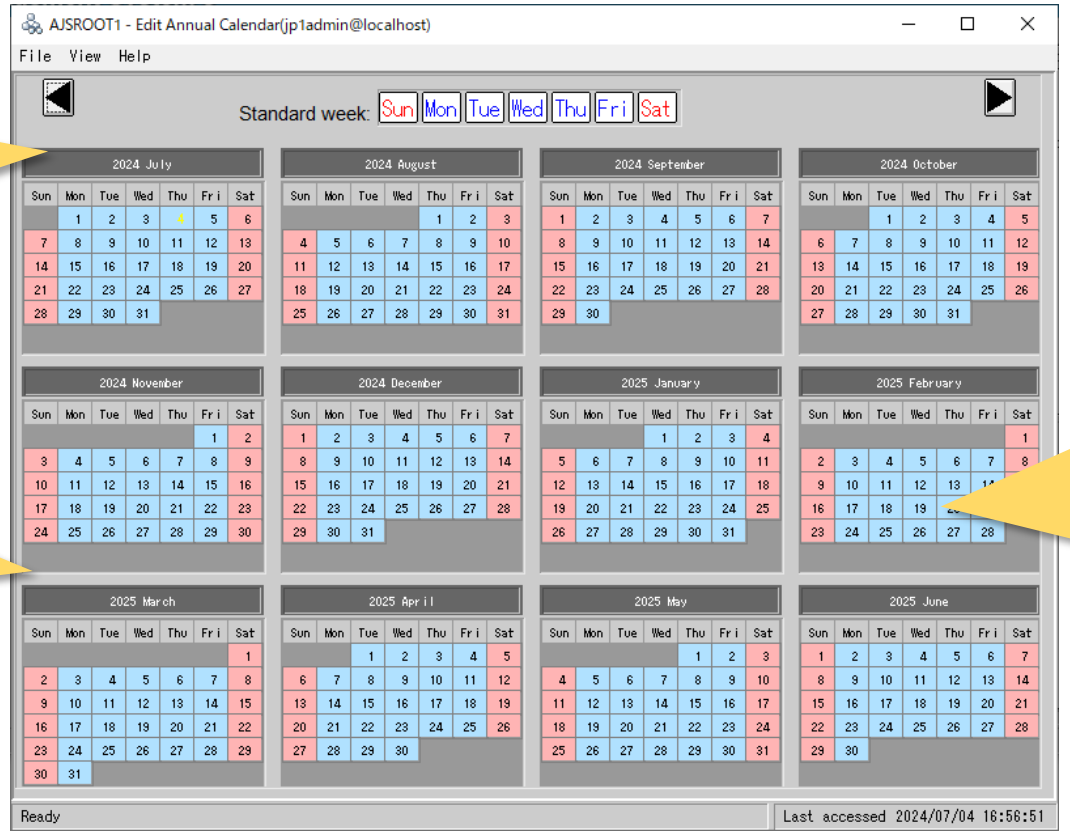
Execute applications according to company calendars and work schedules

HITACHI
Inspire the Next

Control the execution of applications based on a calendar with business days and non-business days set according to the calendar and work schedule for each site. These include monthly, weekly, or specific day schedules and rescheduling of non-business day schedules.

You can define business days and non-business days to match your particular operations.

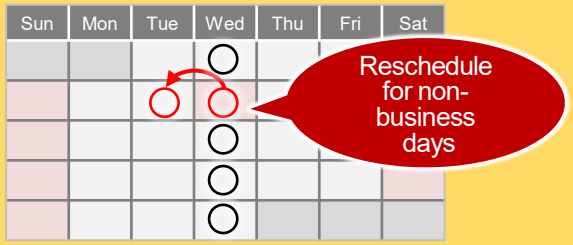
You can perform operations using different calendars for different sites.



Edit Annual Calendar

Example of scheduling the execution date

Execute a job every Wednesday
(reschedule for non-business days)



(: Execution date : Business day : Non-business day)

© Hitachi, Ltd. 2023, 2024. All rights reserved.

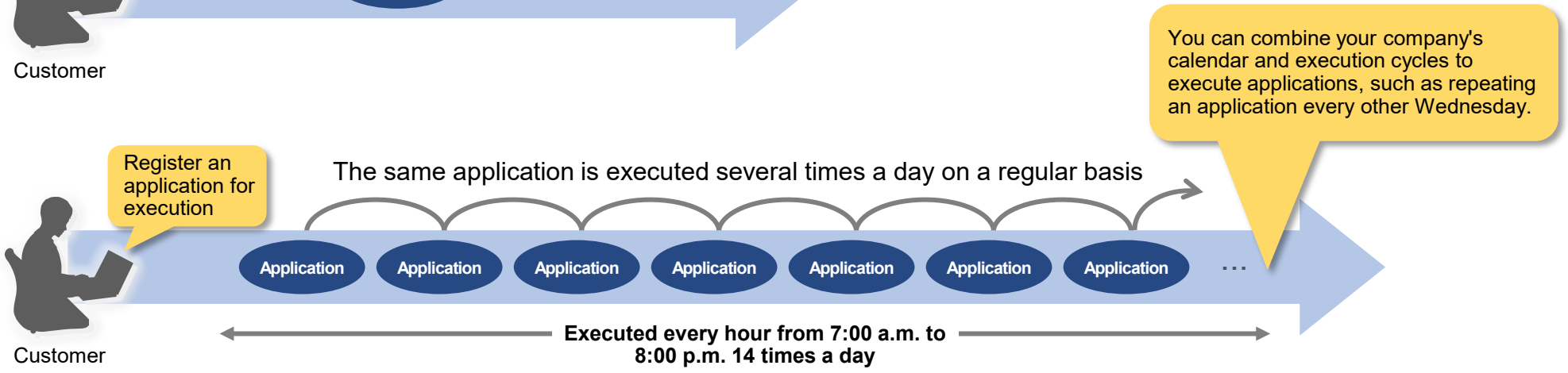
Automatically execute applications according to various triggers

HITACHI
Inspire the Next

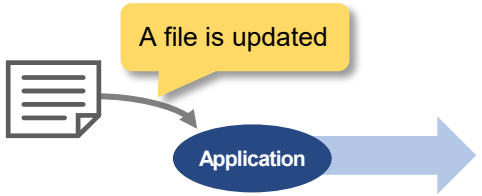
There are many patterns of execution triggers, and applications can be executed automatically when a specified trigger occurs.

Executed immediately

Executed repeatedly

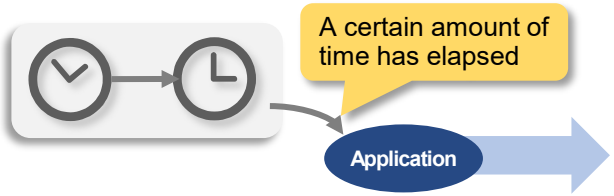


Executed when certain events occur



Automatically executed when a file is updated

Automatically executed when an email is received



Automatically executed when a certain amount of time has elapsed

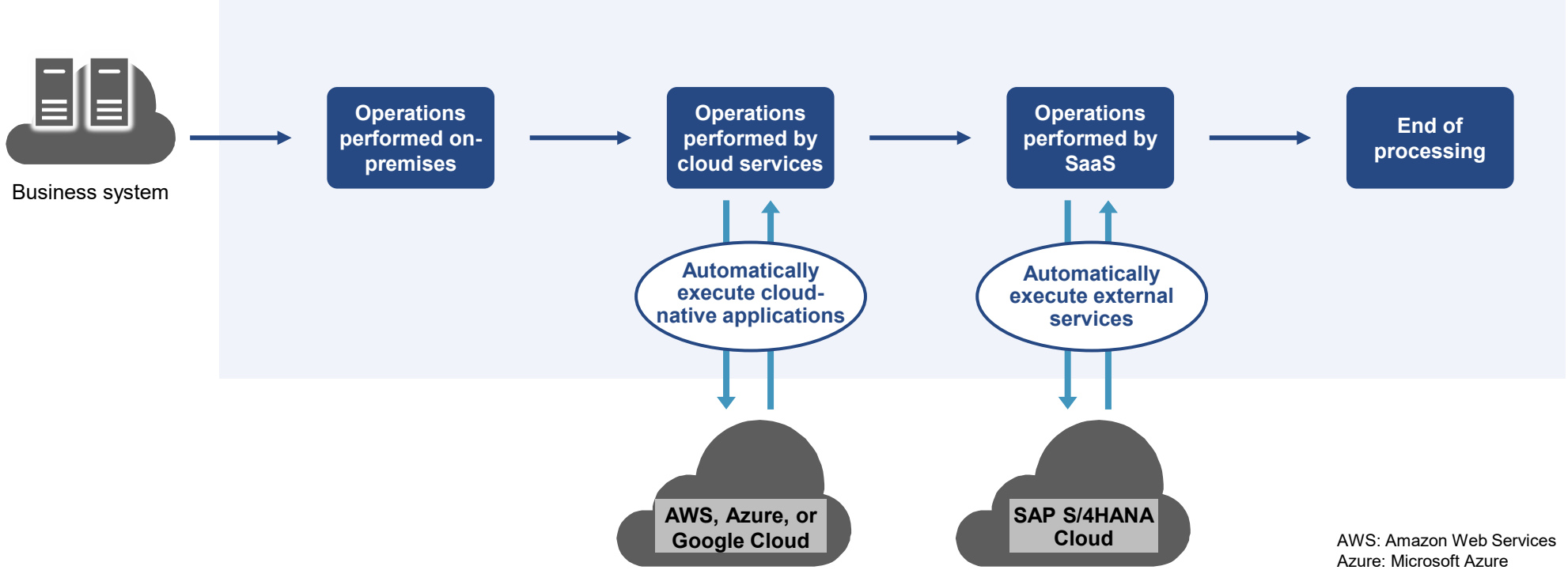
© Hitachi, Ltd. 2023, 2024. All rights reserved.

Control the execution of all applications

HITACHI
Inspire the Next

You can automatically execute applications that are executed on-premises, or you can link with and automatically operate serverless applications executed by cloud services or SaaS.

Centrally manage applications executed in various environments



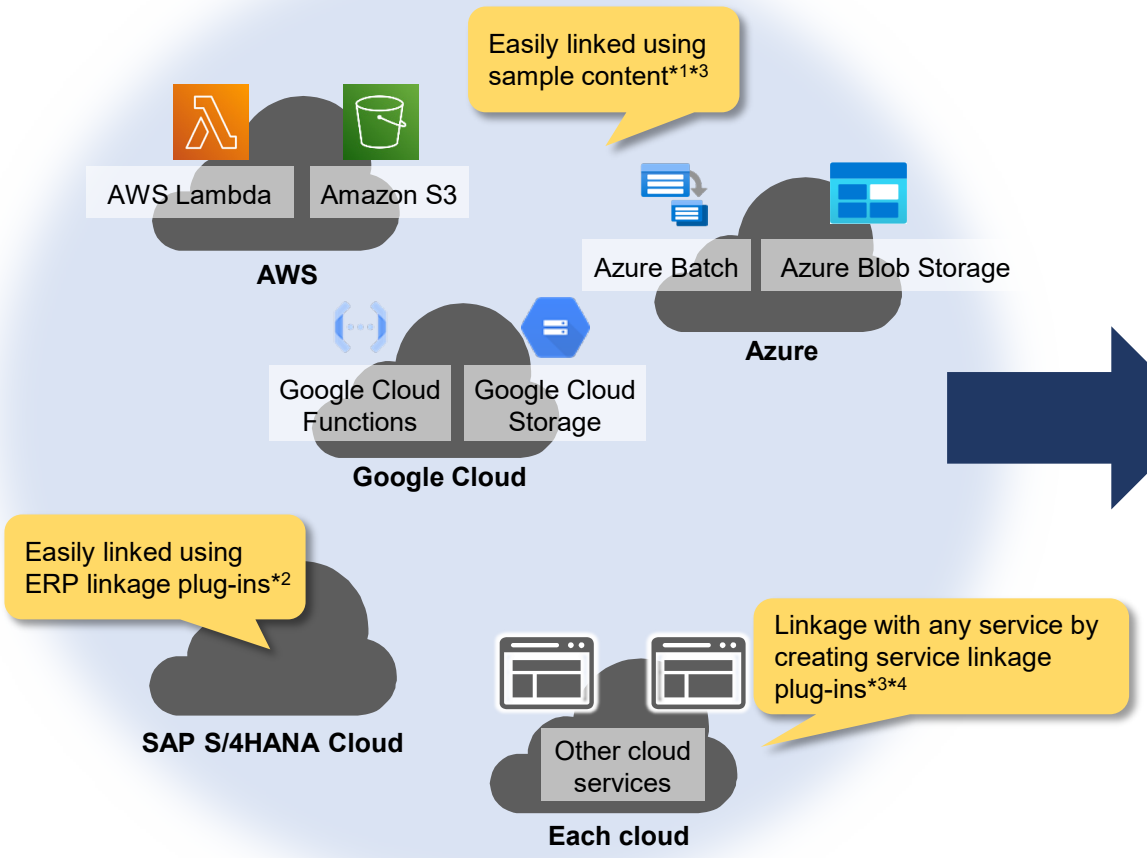
AWS: Amazon Web Services
Azure: Microsoft Azure

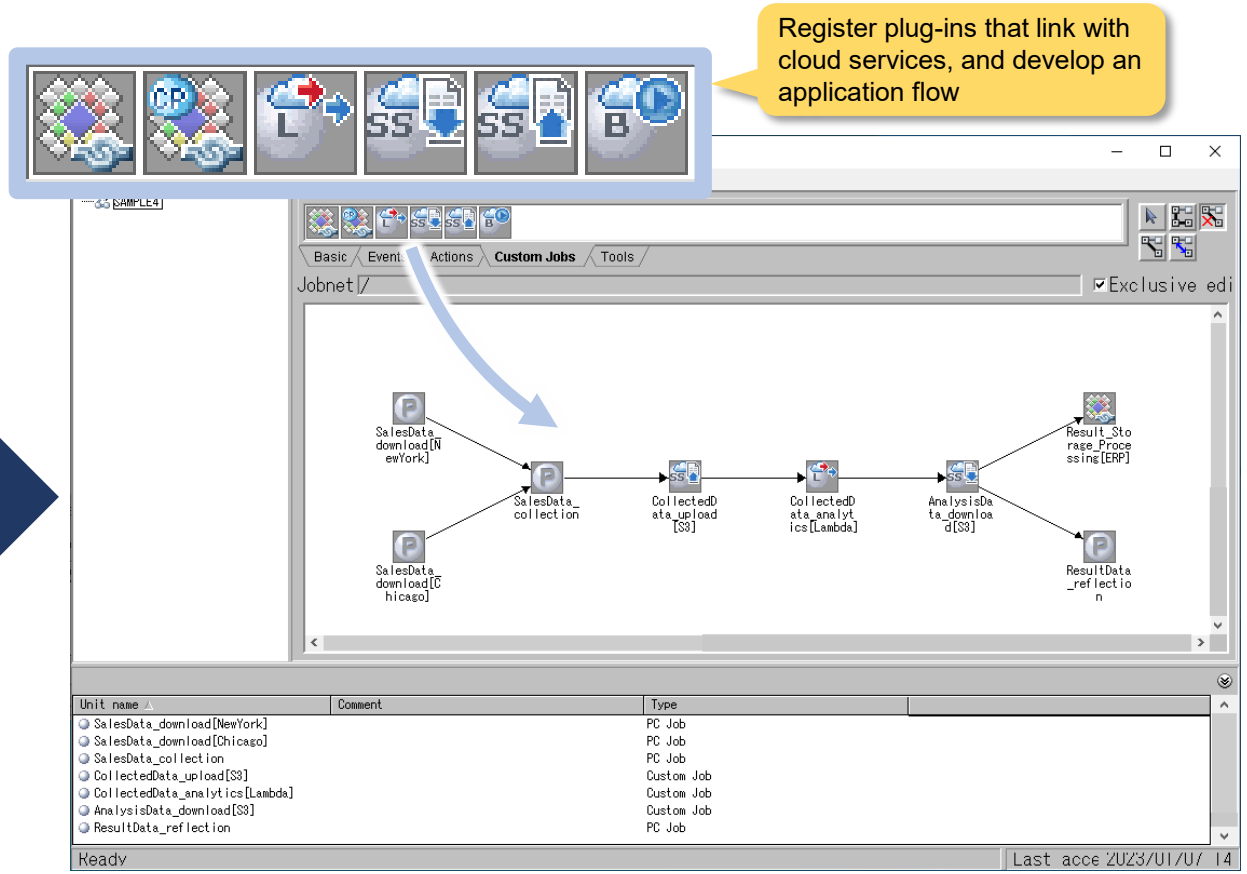
© Hitachi, Ltd. 2023, 2024. All rights reserved.

Easily link applications with various cloud services

HITACHI
Inspire the Next

You can use a GUI to define applications to be executed by cloud services such as AWS, Azure, and Google Cloud, and easily link applications executed by multiple cloud services.





Jobnet editor

AWS: Amazon Web Services
Amazon S3: Amazon Simple Storage Service
Azure: Microsoft Azure

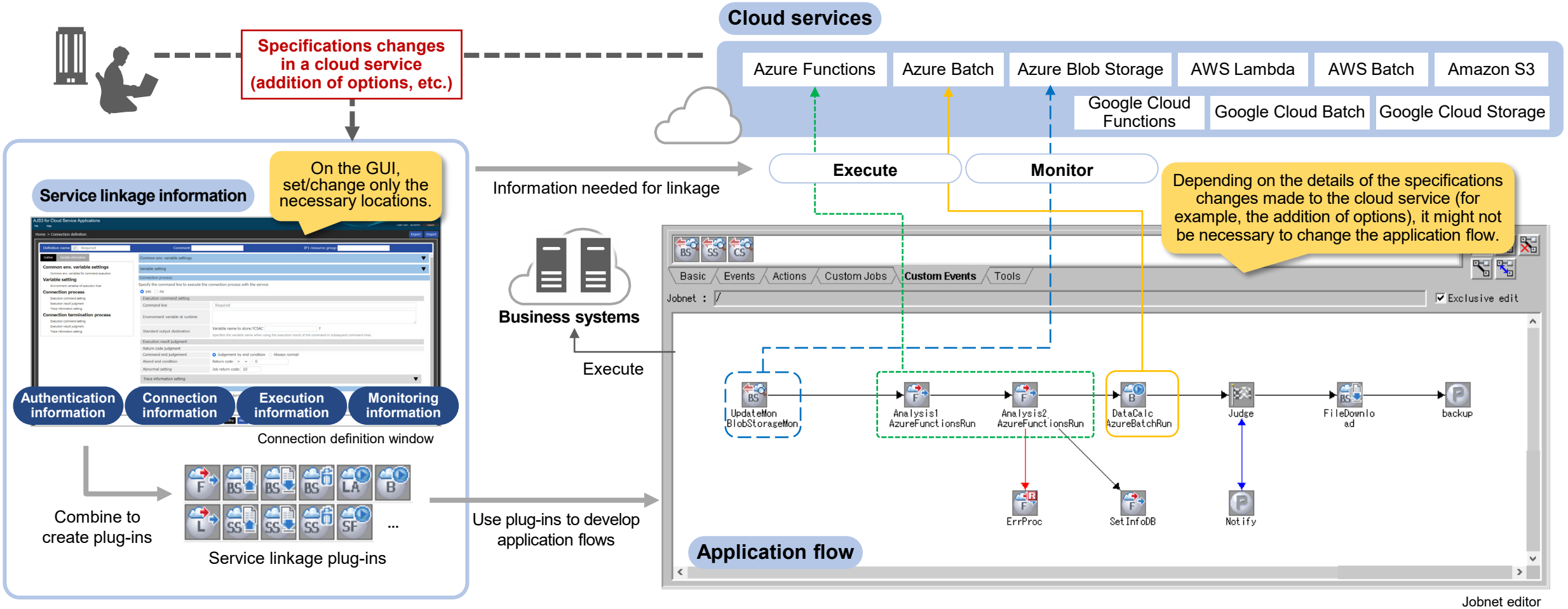
*1 For support service subscribers, we provide service linkage plug-ins as sample content for linking with cloud services.
*2 Requires JP1/Automatic Job Management System 3 for Enterprise Applications.
*3 Requires JP1/Automatic Job Management System 3 for Cloud Service Applications.
*4 When linking with any cloud service using service linkage plug-ins, the customer must verify the linkages.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Swiftly respond to specifications changes in cloud services

HITACHI
Inspire the Next

Separately manage application flows and service linkage information (authentication information, connection information, execution information, and monitoring information). Even if the specifications of a cloud service change, you can still link to that cloud service after implementing the minimum necessary changes.



Azure: Microsoft Azure AWS: Amazon Web Services Amazon S3: Amazon Simple Storage Service

Requires JP1/Automatic Job Management System 3 for Cloud Service Applications.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

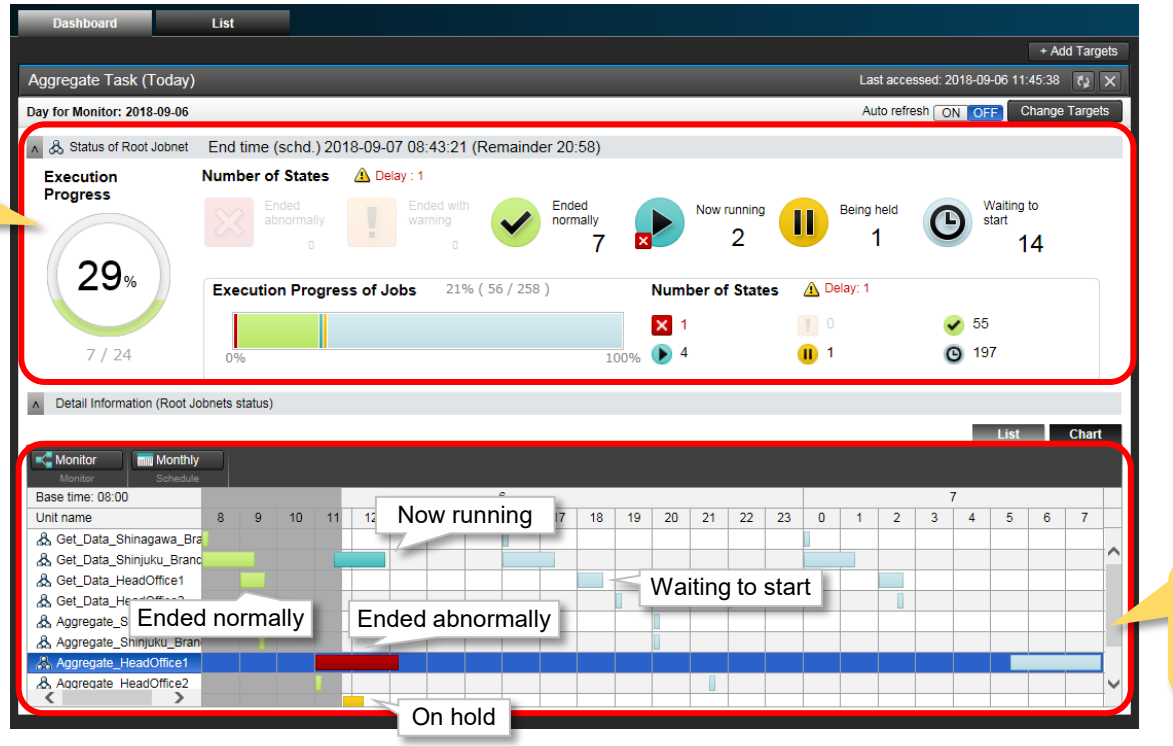
Understand the progress and execution status of your applications

HITACHI
Inspire the Next

You can check the progress of all applications, the number of executions by status (such as normal ends, abnormal ends, and delays), and the execution status of each application.

Display the status of applications in a single window

Display an overview of all the applications, including their progress, scheduled completion time, and any abnormalities.



Dashboard

Legend

- ✕: Ended abnormally
- !: Ended with warning
- ✓: Ended normally
- ▶: Now running
- ⏸: On hold
- 🕒: Waiting to start

Display the execution status of each application using colors

© Hitachi, Ltd. 2023, 2024. All rights reserved.

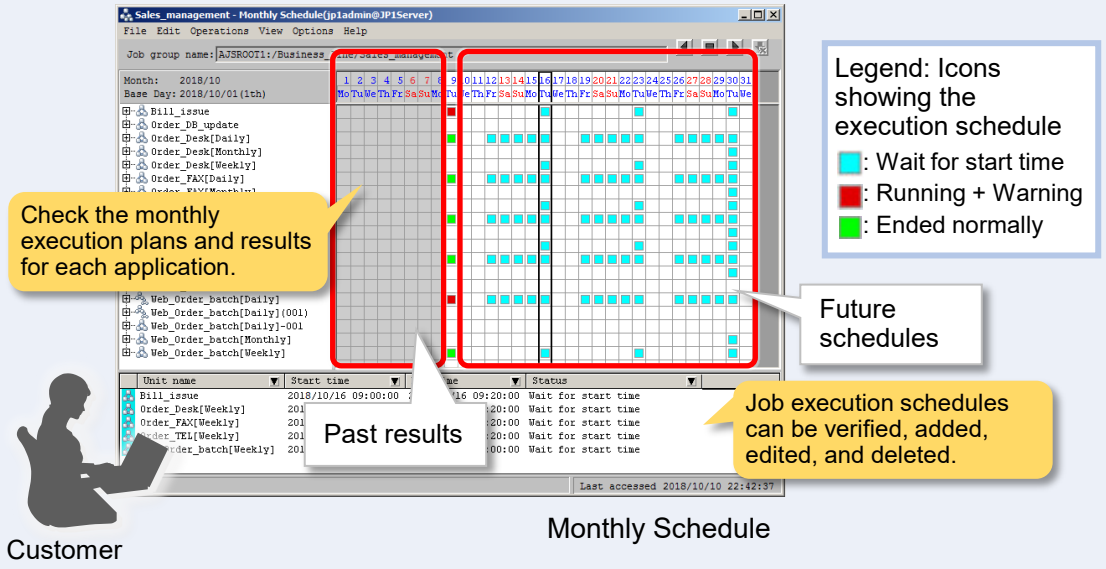
Check the schedule and results of applications at a glance

HITACHI
Inspire the Next

You can check the execution results and schedule of applications on a monthly basis in the monthly schedule and on a daily basis in the daily schedule.

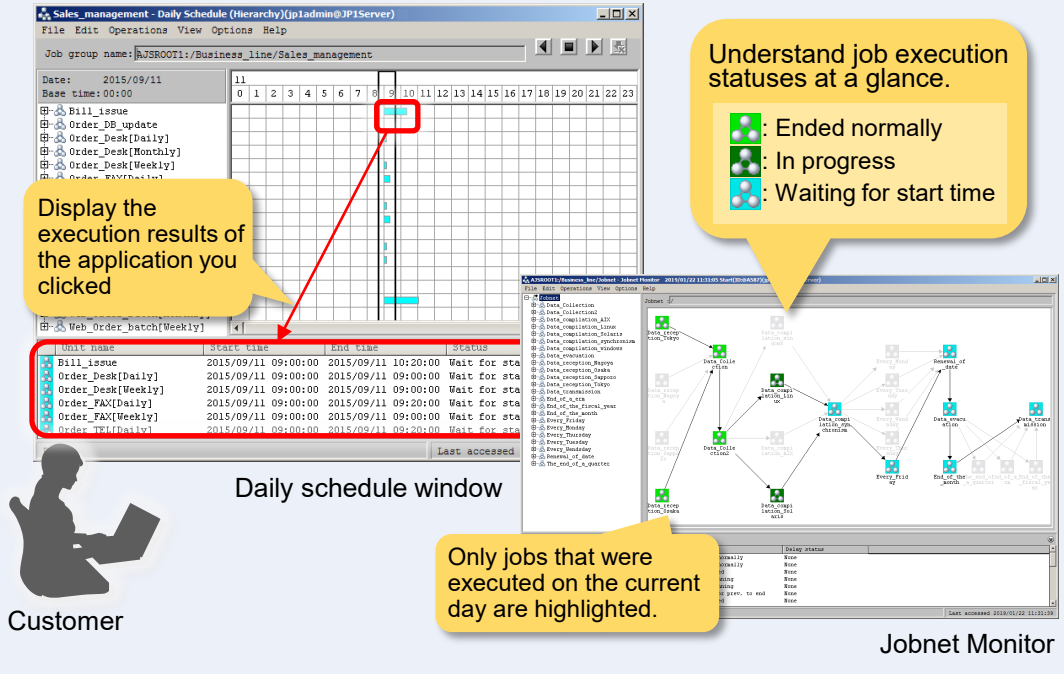
Monthly schedule: Check the schedules and actual results on a monthly basis

You can check the execution results and execution schedules of all applications in a list.
With one glance, you can check whether the previous day's applications have finished normally and whether there are any errors in the future schedules, together with past results.



Daily schedule: Check the execution status of applications for the current day in real time

You can check the status of operations in real time in Gantt chart format. You can check the execution status of applications.



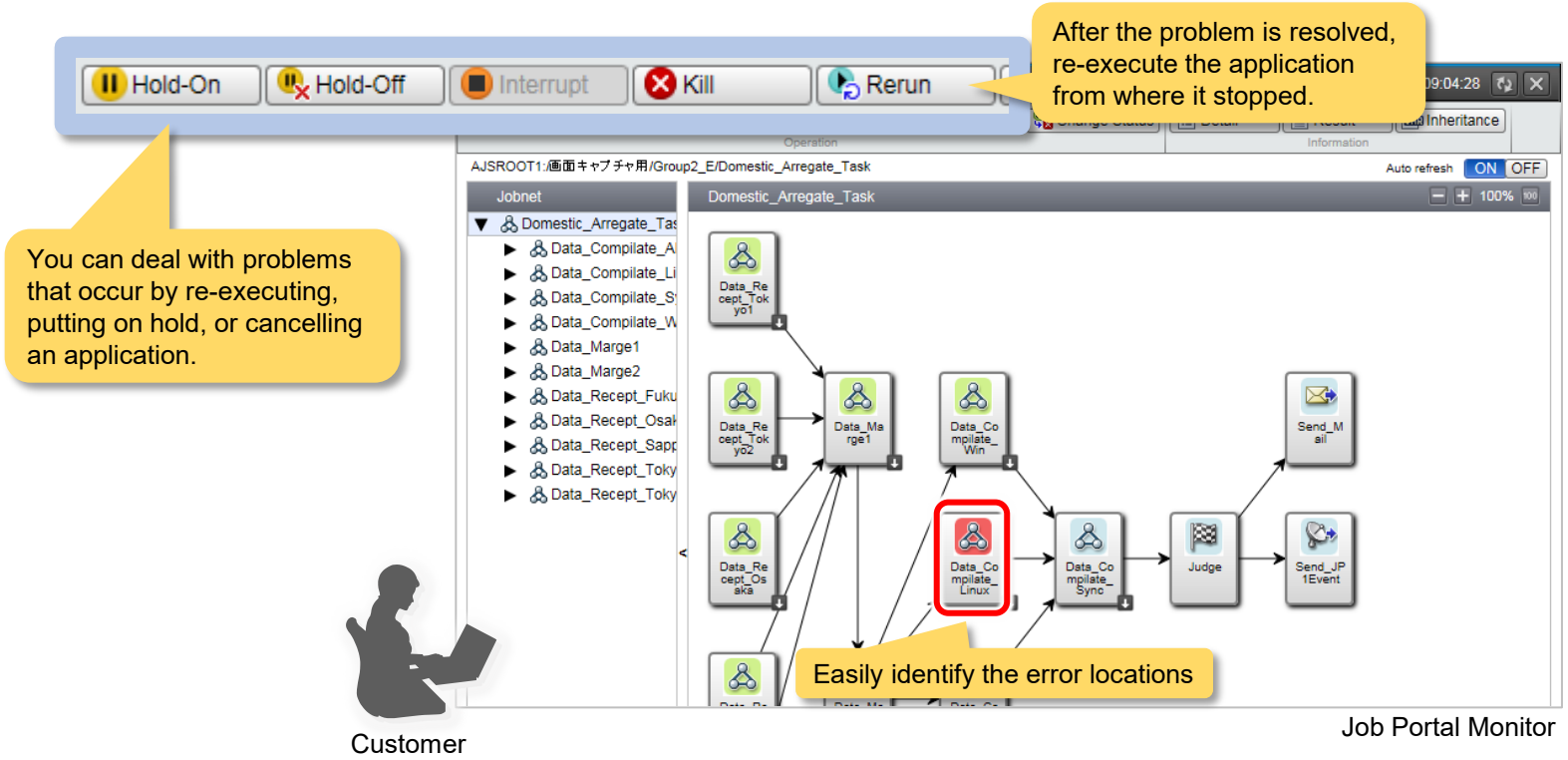
© Hitachi, Ltd. 2023, 2024. All rights reserved.

Quickly troubleshoot problems

HITACHI
Inspire the Next

You can easily identify where a problem is occurring, and smoothly take action such as suspending the target application or putting it on hold.
After resolving the problem, you can resume the application from where it was suspended or put on hold.

Check the status and suspend, hold, or resume the target applications on the same window



© Hitachi, Ltd. 2023, 2024. All rights reserved.

Quickly understand the status of the entire job management system

HITACHI
Inspire the Next

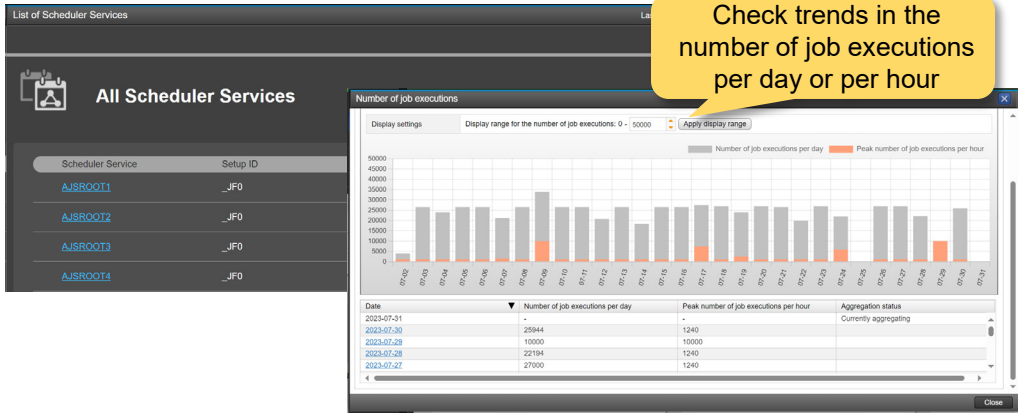
On a single window, you can centrally monitor the status of the job management system, such as the scheduler service that controls the execution of applications and the database of the job management system.
You can check at a glance whether the job management system is working without any problems.

Management portal - Summary

In the summary window, check whether there are any factors that might cause operations to stop

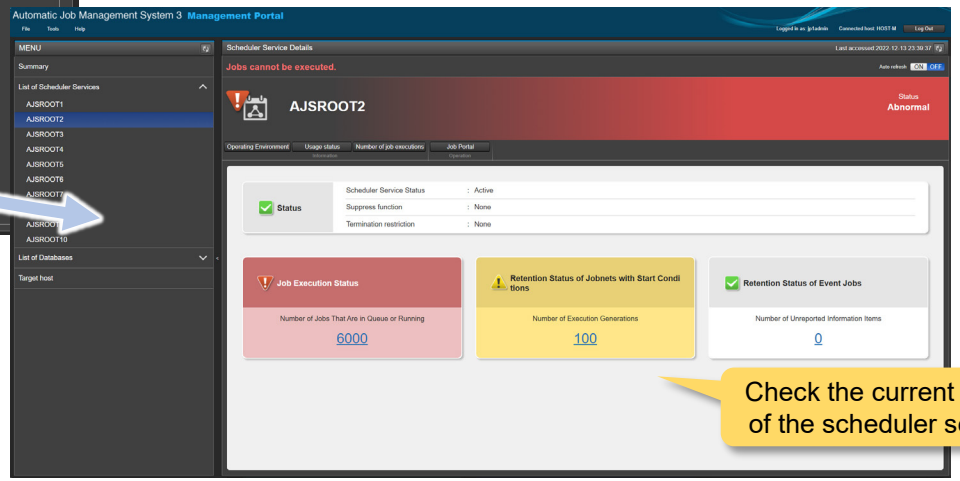
System administrator

JP1/AJS3 - Manager: JP1/Automatic Job Management System 3 - Manager



Check trends in the number of job executions per day or per hour

Number of job executions



Check the current status of the scheduler service

Management portal - Scheduler Service

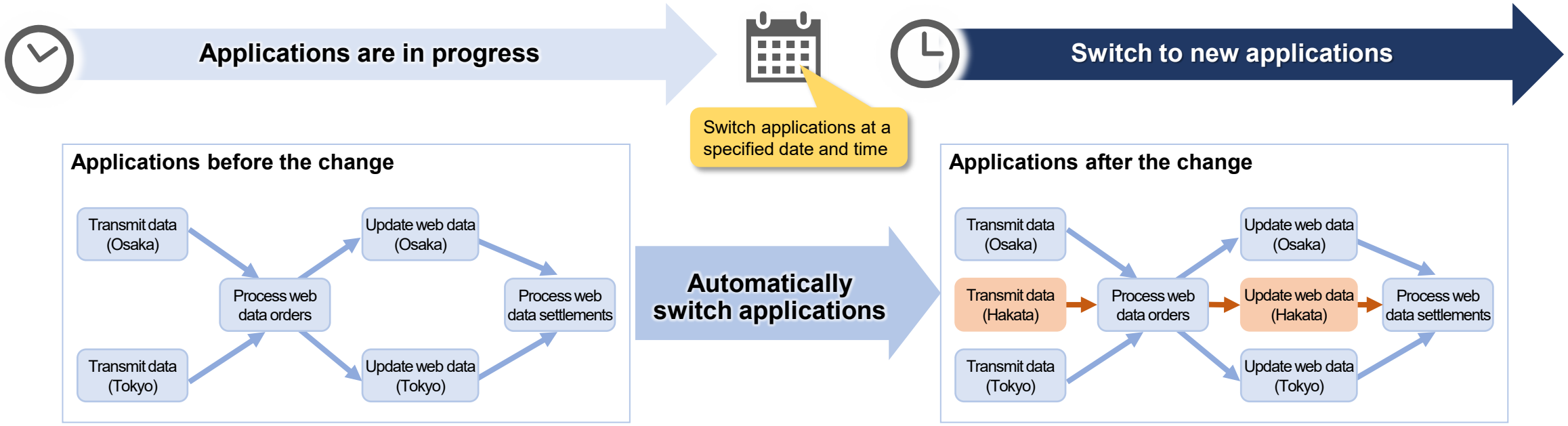
© Hitachi, Ltd. 2023, 2024. All rights reserved.

Automatically switch applications at a specified date and time

HITACHI
Inspire the Next

When changing an application flow, you can switch it to a new application flow at a pre-specified switching date and time without stopping currently running applications.

Automatically switch the application flow at a specified date and time while continuing business operations



© Hitachi, Ltd. 2023, 2024. All rights reserved.

Example of a system configuration

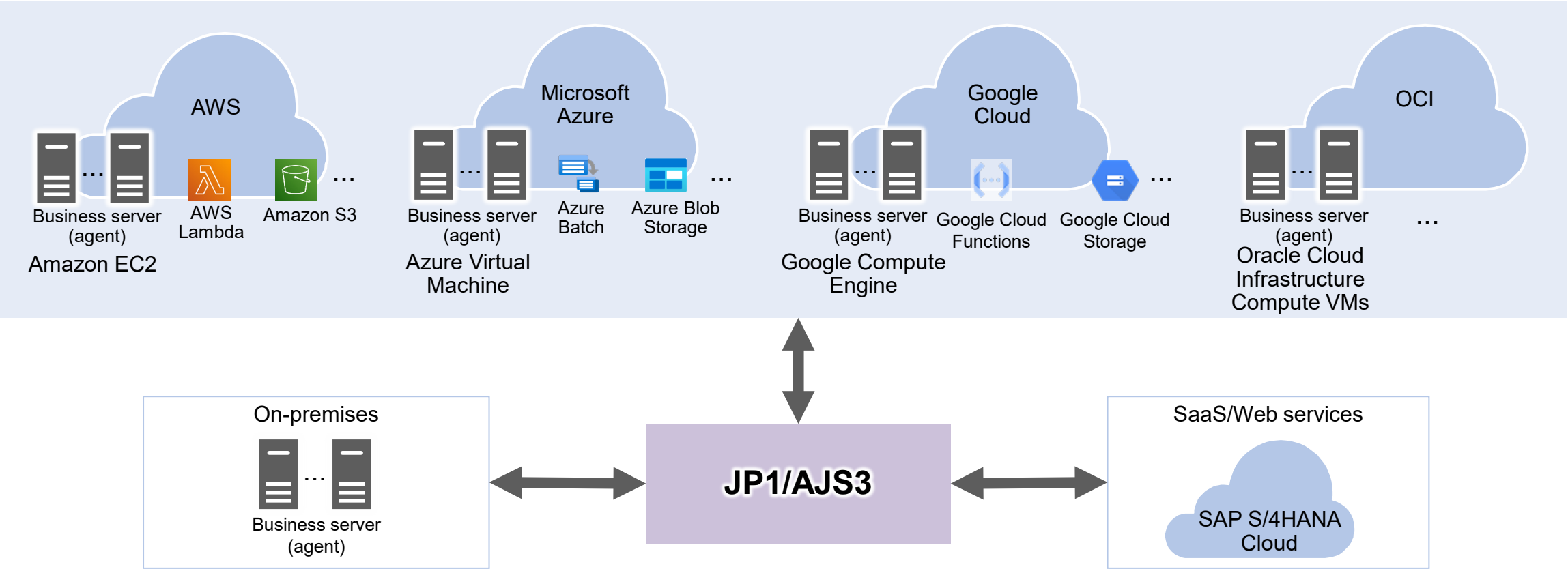
- **Example of a system configuration**

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Example of a system configuration

HITACHI
Inspire the Next

The system configuration for managing and controlling the execution of an application flow in JP1/AJS3 is as follows.



AWS: Amazon Web Services
Amazon S3: Amazon Simple Storage Service
Amazon EC2: Amazon Elastic Compute Cloud
OCI: Oracle Cloud Infrastructure
JP1/AJS3: JP1/Automatic Job Management System 3

When linking with any cloud service using service linkage plug-ins, the customer must verify the linkages.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

HITACHI
Inspire the Next

Support for safe use

- Support for evolving and diversifying system environments
- JP1 professionals assist customers
- One-stop problem resolution at an early stage
- Long-term use with peace of mind and guaranteed compatibility with preceding versions
- Global use with peace of mind
- Reliable quality for customers

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Support for evolving and diversifying system environments

HITACHI
Inspire the Next

You can introduce JP1/AJS3 according to your system environment, such as on-premises or cloud.

We respond flexibly and quickly to evolving and diversifying environments and your needs.

OS	Windows, Linux, AIX
Cloud	Amazon Web Services, Microsoft Azure, Oracle Cloud Infrastructure, Google Cloud, Other clouds are also supported
Virtualization environment	VMware ESXi, Hyper-V, Kernel-based Virtual Machine (KVM), Container (Docker, Podman, OpenShift, Kubernetes), etc.
Cluster environment	Windows Server Failover Cluster (WSFC), CLUSTERPRO X, Lifekeeper, HA monitor, etc.

JP1/AJS3 runs on Japanese, English, and Chinese operating systems.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

JP1 professionals assist customers

HITACHI
Inspire the Next

We can achieve the optimal system operation for our customers.

JP1 professionals can derive a system operation method suitable for the customer's requirements, system scale, and environment, and help achieve a network management system.

Process for achieving the optimal system operation for customers

Requirement definition	Design, construction, testing	Operation
Consultation	**Construction support**	**Education**

Inquiry*

* Technical inquiries regarding JP1 functions and JP1 operation method

By involving JP1 professionals, you can clarify system operation requirements, shorten the examination and implementation period, and smoothly hand over to the operation team.

JP1 professionals are engineers who have a specified level of JP1 skills and have been certified based on the JP1 Engineer Qualification System.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

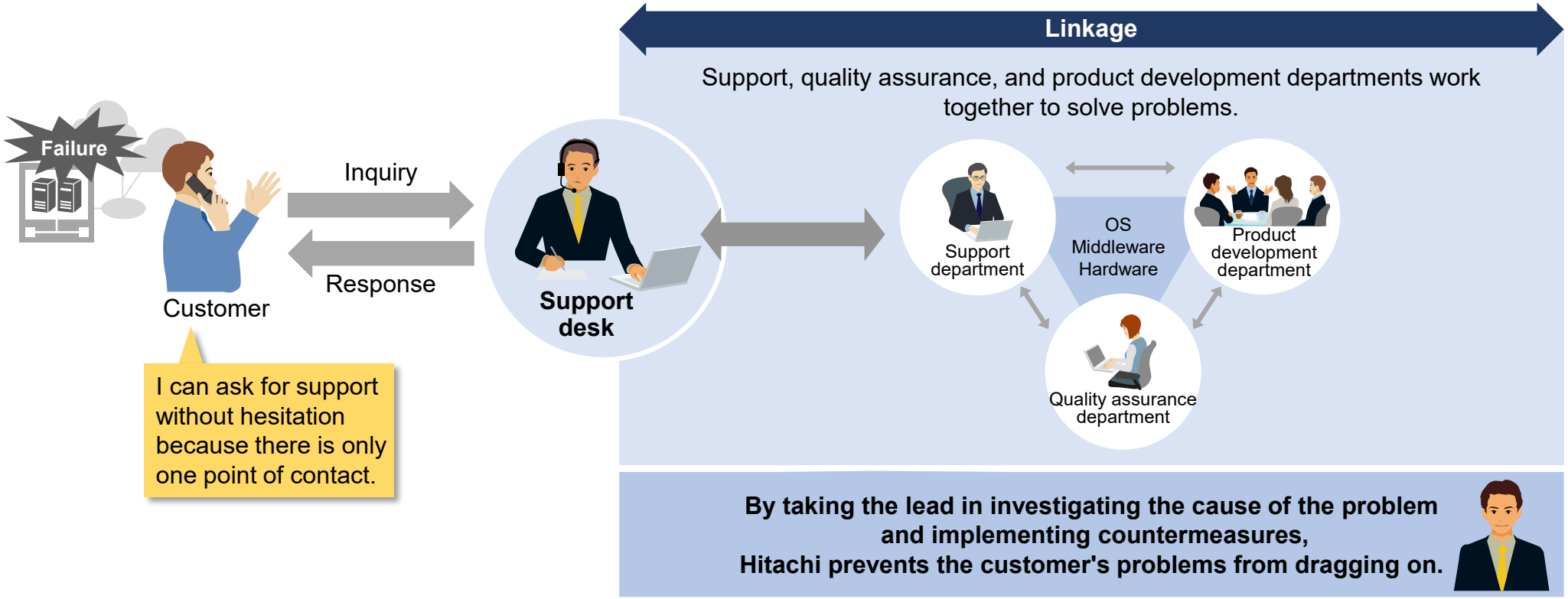
One-stop problem resolution at an early stage

HITACHI
Inspire the Next

We provide one-stop support to solve problems quickly.
This reduces the burden on customers of a problem occurs.

We provide support for early stage resolution of complex problems, which can involve multiple elements such as operating systems and middleware.

One-stop support resolves problems quickly, prevents recurrence, and ensures stable operation of customer systems



© Hitachi, Ltd. 2023, 2024. All rights reserved.

Long-term use with peace of mind and guaranteed compatibility with preceding versions

HITACHI
Inspire the Next

You can use JP1 for a long time and expand your business systems without worry.

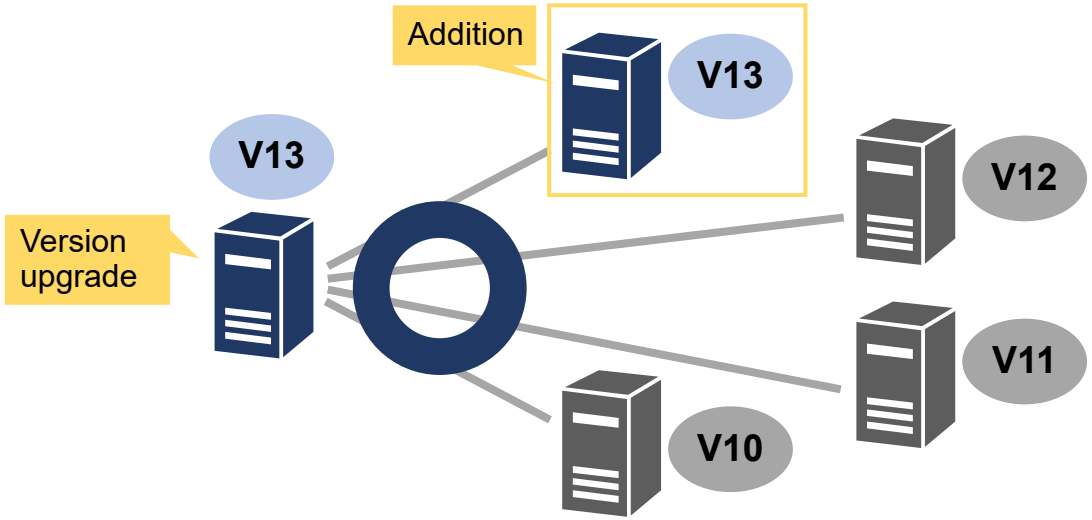
We provide continuous support even when the customer's system has a long life cycle.
JP1 ensures compatibility between versions, allowing for gradual system expansion.

Long-term support for the life cycle of customer systems

At least 10 years of support is guaranteed

with the same version

Flexible support for business system expansion



Guaranteed compatibility with the preceding three major versions.
You can operate your system even if it contains different JP1 versions.

Even if you upgrade JP1, interface compatibility is maintained.
Therefore, you can use the linked products, services, user programs without modification.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Global use with peace of mind

HITACHI
Inspire the Next

You can use JP1 with peace of mind around the world.

We support our customers with sales and support locations covering all regions of the world.

Our sales and support locations around the world and in Japan work together to support our customers

We cover all regions of the world including Asia, Oceania, North America, South America, Europe, Middle East and Africa.

Hitachi's sales and support locations support customers in cooperation with the support, quality assurance, and product development departments in Japan.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Reliable quality for customers

HITACHI
Inspire the Next

Achieve stable operation of mission-critical systems!

We have established a system to maintain high quality and high reliability so that customers can use our products with peace of mind.

JP1

High-quality and highly reliable operation management that supports stable operation of customer systems

Guaranteed product quality

- We ensure quality by setting voluntary standards
- We utilize technical know-how and experience accumulated over many years of development

Product development department

Close information sharing
Incident prevention activities

Quality assurance department

Guaranteed quality for customers

- Thorough quality control is implemented from the customer's perspective, from the upstream development process
- Using a QA department independent from the product development department strengthens quality governance

© Hitachi, Ltd. 2023, 2024. All rights reserved.

Third-party product names and trademarks

HITACHI
Inspire the Next

- AIX is a trademark of International Business Machines Corporation, registered in many jurisdictions worldwide.
- Amazon Web Services, AWS, the Powered by AWS logo, Amazon Elastic Compute Cloud (Amazon EC2) , Amazon Simple Storage Service (Amazon S3) , AWS Lambda are trademarks of Amazon.com, Inc. or its affiliates.
- Docker and the Docker logo are trademarks or registered trademarks of Docker, Inc. in the United States and/or other countries.
- Google Cloud, Google Cloud Storage, and Google Compute Engine are trademarks of Google LLC.
- Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.
- Microsoft, Azure, Excel, Hyper-V, Windows, and Windows Server are trademarks of the Microsoft group of companies.
- OpenShift is a registered trademark of Red Hat, Inc. in the United States and other countries.
- Oracle, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates.
- SAP S/4HANA Cloud is the trademark or registered trademark of SAP SE or its affiliates in Germany and in other countries.
- UNIX is a registered trademark of The Open Group.
- Other company, product or service names may be trademarks or registered trademarks of others.

- Product specifications are subject to change for the purpose of improvement without prior notice.
- The colors of actual product screens may appear to be slightly different from those in the screenshots shown in this document.
- Microsoft product screenshots are used with permission from Microsoft.
- If you plan to export any of these products, please check all restrictions (for example, those stipulated by Japan's Foreign Exchange and Foreign Trade Law and the export control laws and regulations of the United States), and carry out all required procedures.
  If you require more information or clarification, please contact your Hitachi sales representative.
- For the most recent information on the support status of a JP1 product, including supported operating environments, please visit the JP1 website.

© Hitachi, Ltd. 2023, 2024. All rights reserved.

HITACHI
Inspire the Next

END

Integrated Operations Management

Job management

Introducing JP1/Automatic Job Management System 3

- Achieving automatic and stable operation of business systems -

Hitachi, Ltd.

GPA04e-02	2024.9

© Hitachi, Ltd. 2023, 2024. All rights reserved.