As a hub for multi-cloud
IIJ launches new cloud data hub service

December 12, 2022

Internet Initiative Japan Inc.
Executive Officer
Division Director for Cloud Division
Naoshi Someya

IIJ celebrates its 30th anniversary on December 3, 2022.

There was no hesitation in naming the company with "initiative," 30 years ago.

As a pioneer, IIJ has always been opening up the possibility of Internet and shall continue to challenge in new innovation.

"I" in the middle of IIJ is "initiative"

- IIJ is always the beginning and the future.

Shaping the needs of the time

As a partner, IIJ supports clients' business by anticipating IT issues as well as changes in the environment and making them into services

Anticipated the use of hybrid
Cloud

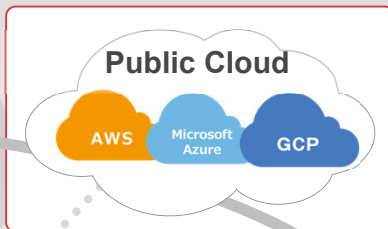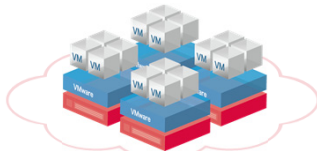Provide cloud services best suited for cloud migration from on-premise, management service and hybrid cloud

Multicloud Management Platform (MMP)

IIJ Unified Operation Management service
UOM

IIJ GIO
Infrastructure P2 Gen.2

VM VMware

Public Cloud
AWS
Microsoft Azure
GCP

Direct Connect

Gateway to cloud
Network

Network gateway that allows to use public cloud, network services and managed cloud services by just accessing

Digital Work Place

Cloud proxy	File server
Cloud exchange	AD
Remote access	VDI

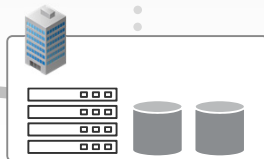### IIJ Omnibus

wizSafe
SOC

Promote cloud adoption within office
DWP（Digital Work Place）

Cloud based IT infrastructure services that enable business operation within digital space that realizes remote work

Clients（on-premise）

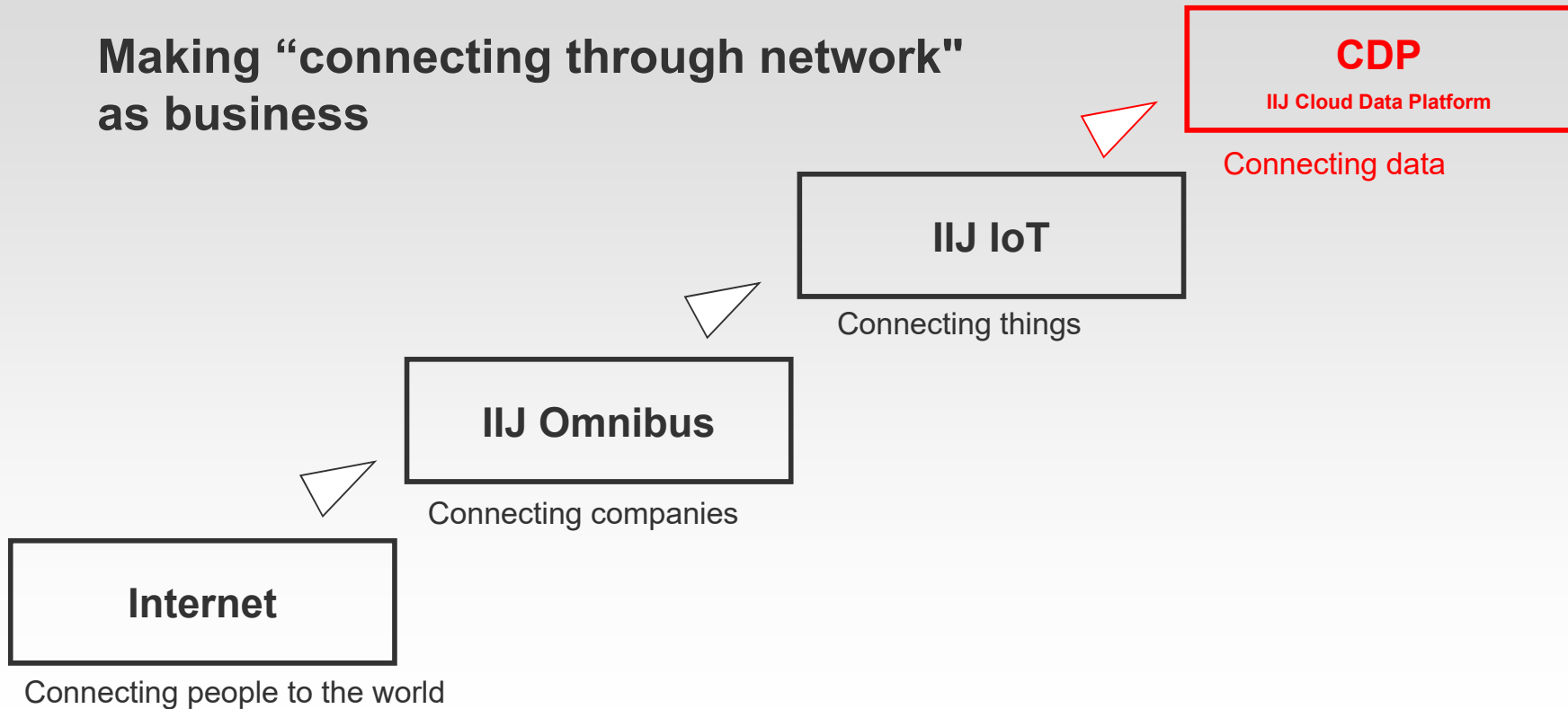**Maintain security within digital space**
Security

Security service centered around SOC (Security Operation Center) to maintain security within digital space

IIJ's Core Competence

Making "connecting through network" as business

CDP

IIJ Cloud Data Platform

Connecting data

IIJ IoT

Connecting things

IIJ Omnibus

Connecting companies

Internet
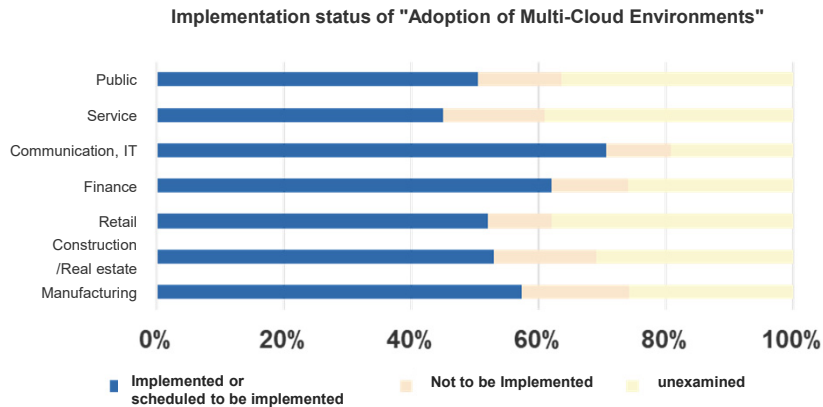
Connecting people to the world
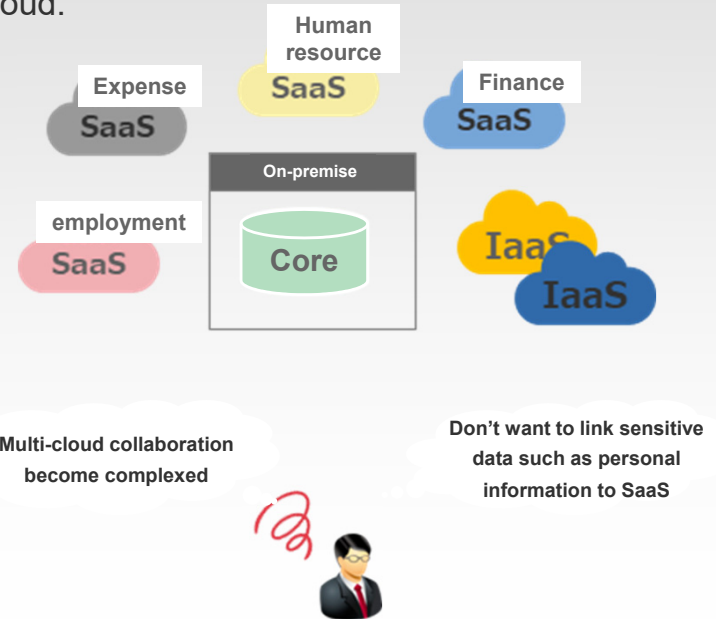
The reality of enterprise multi-cloud

Optimal use of cloud computing for each purpose is advancing

Many companies choose optimal use of cloud computing for each purposes, and it becomes commonplace to use multiple cloud computing services in addition to on-premise.

On the other hand, new challenges appeared by using multi-cloud.

Implementation status of "Adoption of Multi-Cloud Environments"

- Implemented or scheduled to be implemented
- Not to be Implemented
- unexamined

Source: ITR Domestic IT Investment Trends Survey Report 2022

Human resource SaaS

Expense SaaS

Finance SaaS

employment SaaS

On-premise

Core

IaaS

IaaS

Multi-cloud collaboration become complexed

Don't want to link sensitive data such as personal information to SaaS

The service concept of "Four Hubs" to support multi-cloud

Infrastructure services that handle critical information and serve as the core of a multi-cloud, an alternative to on-premise

Cloud-to-cloud connectivity network that connects public cloud, on-premise, and IIJ GIO

Infrastructure hub

IIJ GIO
Infrastructure P2 Gen.2

Data hub

IIJ Cloud
Exchange service

Operation hub

IIJ MMP
(Multi-Cloud Management Platform)

Data hub

IIJ CDP
(Cloud Data Platform)

Unified operation management service improves operational efficiency in multi-cloud environments

Secure data integration service that connects on-premise and cloud as well as cloud and other cloud

Challenges in enterprise data use and the aims of CDP

On-premise — Sales, Production, Finance, client

Cloud — Sales SaaS, Human resource SaaS, Analysis Cloud
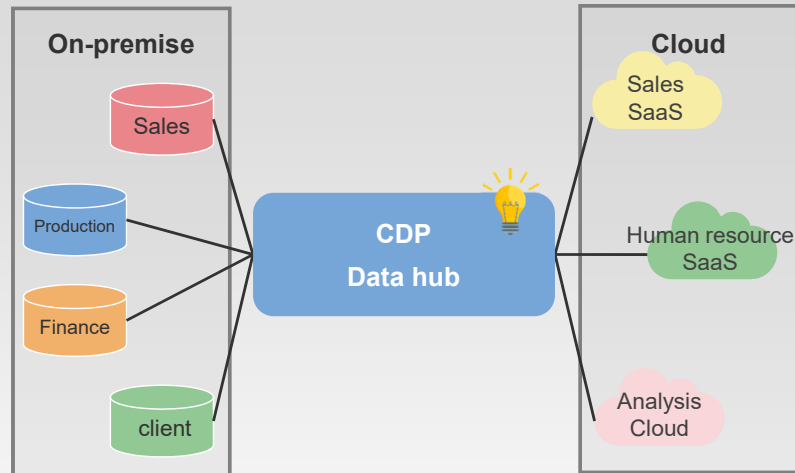
Develop one-to-one collaborative interfaces on a case-by-case basis

CDP Data hub

Challenges of data utilization in multi-cloud environments

- Development of data integration interface one by one becomes a bottleneck
- Concerns about integrating sensitive data such as personal information into SaaS
- High hurdle for initial introduction of sophisticated data integration tools
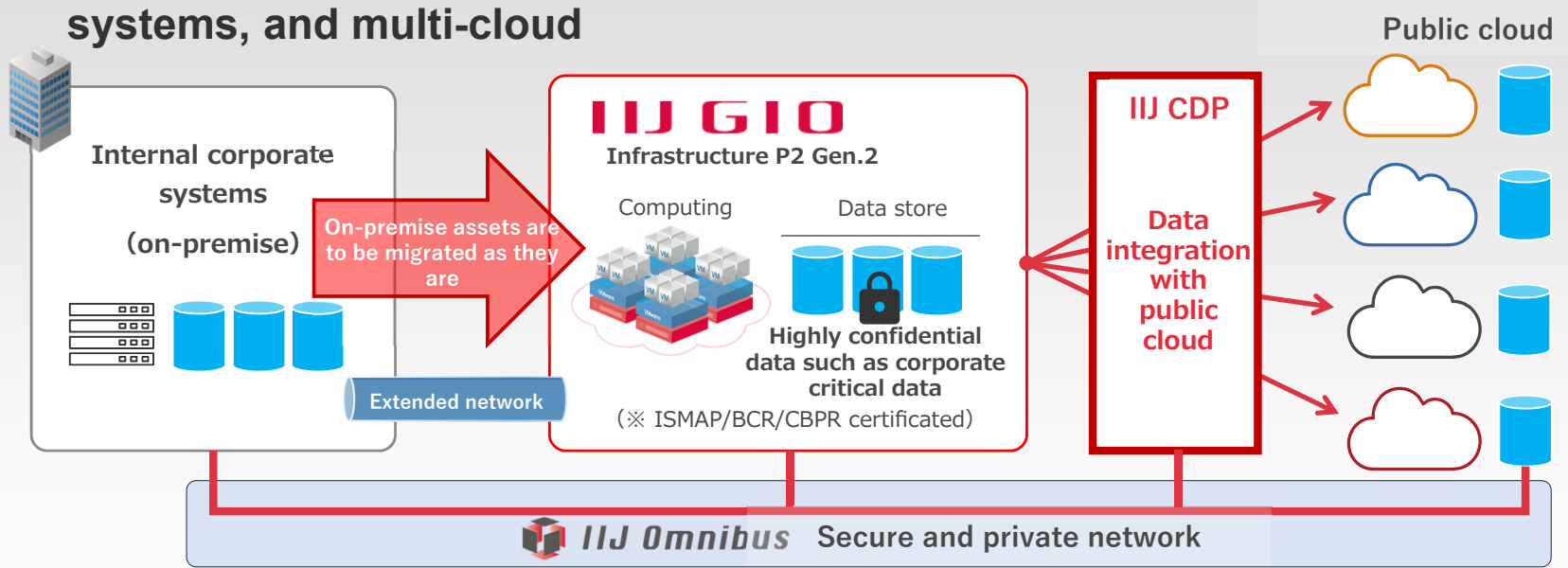
CDP Data Hub to solve such problems

- Integration with a wide variety of applications to access to cloud easily
- Masking function and access logs to handle sensitive data
- Cloud services that allow for small start

The world multi-cloud aims for

It is the world that realizes "full cloud" of enterprises systems based on secure network, IIJ GIO which is a migration destination of on-premise systems, and multi-cloud

Internal corporate systems

(on-premise)

On-premise assets are to be migrated as they are

Extended network

IIJ GIO
Infrastructure P2 Gen.2

Computing

Data store

Highly confidential data such as corporate critical data

(※ ISMAP/BCR/CBPR certificated)

IIJ CDP

Data integration with public cloud

Public cloud

IIJ Omnibus Secure and private network

IIJ supports corporate DX by connecting "four hubs" for multi cloud through services

Easy, Secure, and low-cost data migration between on-premise and multi-cloud
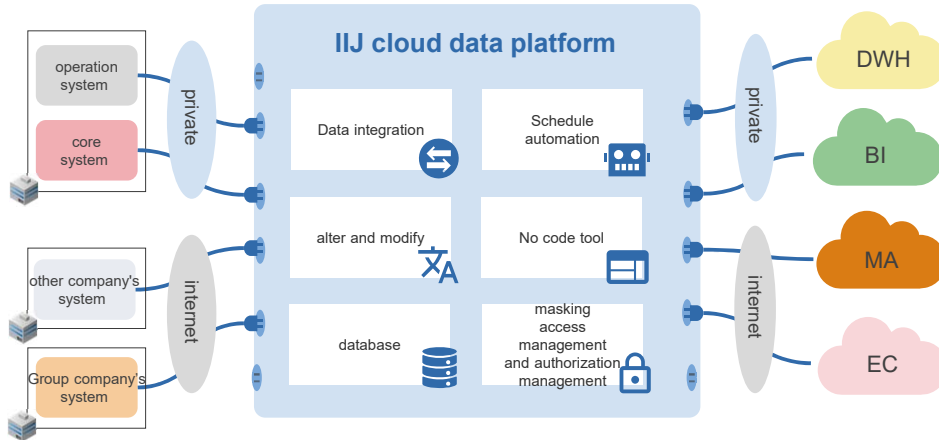
IIJ Cloud Data Platform Service

December 12, 2022

Internet Initiative Japan Inc.
Toru Suzuki, General Manager, Service Planning Office, Cloud Division

CDP is a PaaS service realizing data collaboration "easy" "secure" and "low-cost" as a hub connecting on-premise and cloud

Various cloud interface

Offers more than 90 integration adapters including cloud services such as Salesforce and AWS as well as RDBMS such as Oracle DB and MS SQL

Data flow for integration can be developed with no code

Data flow development with GUI by flow designer
As managed services, only utilize functions

Protect sensitive data by data masking

Anonymization of personal information and concealment of sensitive information
Use as a measure to prevent data leakage

on-premise and closed network connectivity

By using together with IIJ network services, closed connectivity to on-premise system is realized
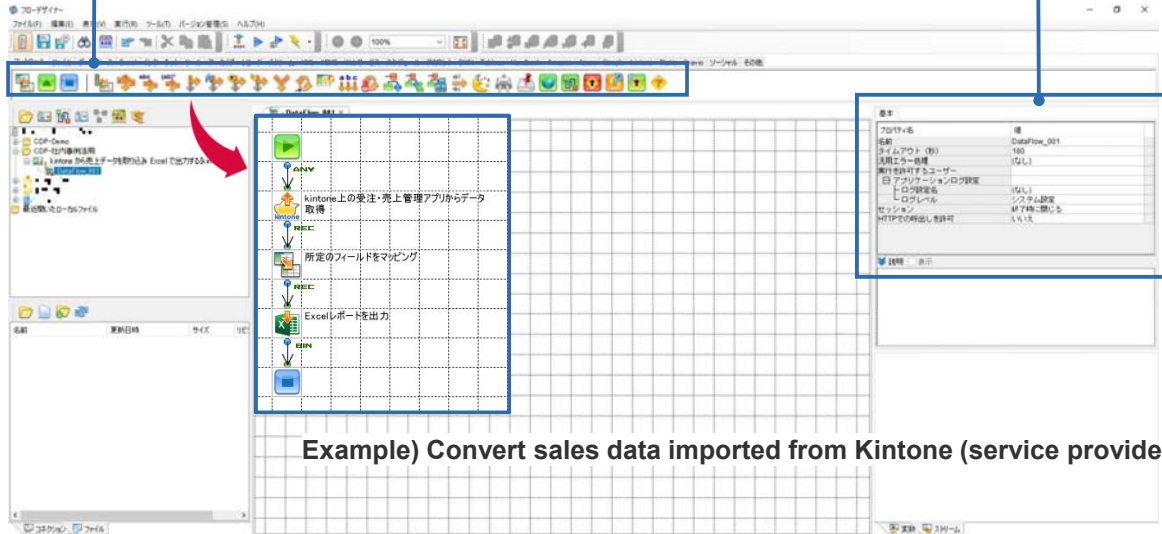
2

Immediately connect a wide variety of partners with about 90 types of integration adapters

Standard

file format
CSV XML PDF ZIP GZIP TAR JSON HTML MIME（S/MIME）固定長 text binary

network
SOAP REST HTTP/HTTPS FTP/SFTP POP3/POP3S IMAP/IMAPS SMTP/SMTPS LDAP/LDAPS

database
Oracle DB2 SQLServer MySQL PostgreSQL MariaDB MongoDB Microsoft Access FileMaker

Option

ERP
Microsoft Dynamics 365
Oracle Netsuite
SAP SAP S/4 HANA
ServAir
ツバイゾ

back office
MFcloud経理
PCAfinanceDX PCA商魂・商管DX
SmartHR
Office Station
請求management ロボ
奉行ERP

EDI
JFT SaaS
Biware
EDIFAS

Office/Groupware
Excel ActiveDirectory
Microsoft SharePoint
Notes/Domino
Microsoft Teams
Microsoft Office 365
Google（Gmail Calendar, Drive, Spread Sheet, Cntact）
BOX
Garoon
PowerEgg

SFA/CRM/marketing
Salesforce
Marketo
Oracle Eloqua
Google Analytics
Google Ads
Microsoft Dynamics 365 for Sales
Microsoft Dynamics CRM

Sansan
uSonar
DataMaster
名刺商売繁盛
KREISEL

database
Amazon Aurora DynamoDB
Azure Cosmos DB SQL DB
Amazon Redshift
Google BigQuery
Snowflake

cloud (IaaS)
Amazon Web Services
Microsoft Azure
Google Cloud Platform

SNS
LINE Slack
Facebook Twitter

IoT/blockchain
Ethereum

development platform
Kintone
ServiceNow

Intra-Mart
Canbus.
BIZ Platform
Business b-ridge

*Some service names are intentionally left in Japanese

3

Data can be easily altered and modified by simply arranging icons, even without knowledge. Speedy development using pre-prepared adapters.

1 **Drag and drop icons in processing order**

2 **Property setting**

No.1 share in Japan for 15 consecutive years

Used by more than 9,500 companies

Asteria⬥ warp

The data integration function of this service uses Asteria Warp as its core engine.

（Source）Techno System Research Co., Ltd.
"Software Marketing 2022 EAI/ESB Market Overview"

Example) Convert sales data imported from Kintone (service provided by Cybozu) to Excel

Private connectivity

Due to private connectivity with on-premise environment, the service can be used as a part of on-premise which means a database without Internet reachability can be integrated to cloud.

Protect sensitive data by masking function
Secure integration to Cloud

Bottleneck when using data

- **Want to conduct EC purchase analysis jointly with an agency…**

- **It is time-consuming to mask personal information when passing it to the cloud…**

- **Want to implement cloud migration with high quality test data…**

IIJ can・・・

By simply adding an icon on the flow design to complete the anonymization process

Offers data masking function as a standard function

Able to use data masking from no code tool

Quickly compete test database just like the production database

production database

test database

This service platform is provided from domestic cloud "IIJ GIO P2 service"

Initiatives taken by IIJ Group and IIJ GIO P2

Registered with ISMAP
- ISMAP is a program designed to have cloud services assessed and registered in advance as meeting the security requirements of the Japanese government so as to ensure a level of security and facilitate smooth introduction in government procurement of cloud services
- After independent auditors' audit on the effectiveness of internal control, ISMAP registration is completed

BCR approval, CBPR certification
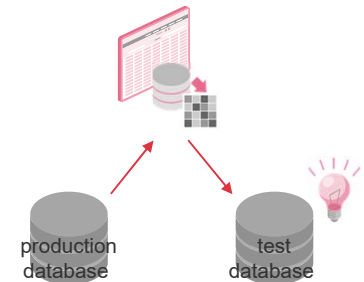- BCR approval: Approved as a corporate group taking appropriate protective measures as required by the EU GDPR
- CBPR certification: Certified in conformity with APEC Privacy Principles for the protection of cross-border personal data of enterprises, etc.

Cloud security certificates (ISO/IEC 27017:2015)
- Third-party certification that cloud services are provided under an established information security management system and in line with information security management practices

Private connectivity and a rich set of interfaces allow Cloud integration without modifying the existing on-premise system

Private connectivity and a rich set of interfaces allow Cloud integration without modifying the existing on-premise system

on-premise and cloud integration

on-premise
- sales
- HR
- private network

Cloud data platform
- collect
- Alter modify
- integrate
- JSON
- CSV

SaaS
- finance
- talent management

private network

IaaS

- Integrated data is consolidated in a secure environment with private connectivity
- Data can be linked without changing the network on the on-premise side or developing and additional linked interface

1 **Extract data from on-premise database**

2 **Processing and conversion of data into a format suitable for the linked cloud service**

3 **Data integration via REST or FTP according to the interface of the linked cloud services**

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Serve as a hub of data integration for Multicloud environment

Able to realize Cloud utilization by the right person in the right place

Data adoption within multi-cloud

SaaS
PaaS

on-premise
finance

Cloud data platform

collect → Modify and alter → integration

SaaS
PaaS
finance

Integrated data

CSV

Internet

AI

DWH

- Aggregate data scattered in Multicloud and on-premise. Data conversion to analysis-compliant format
- Data aggregation and analysis is possible even when using the most appropriate Cloud for each application

① Collect data from on-premise and cloud service

② Data formatting, including data type conversion, duplicate elimination, and data merger

③ Utilize data in the most suitable cloud according to usage and price

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Sensitive data such as personal information stored on-premise is made confidential by data masking. Data can be used safely in Cloud

Secure cloud adoption of sensitive data

on-premise

Sensitive data

Cloud data platform

collect | Alter modify | integrate

Sensitive data

data masking

CSV

Internet

MA

- Mask sensitive data such as personal information so that it cannot be identified

- Anonymized data is securely utilized in external Cloud for analysis MA etc.

1 private connectivity allows sensitive data to be collected without going over Internet

2 Mask sensitive data such as personal information so that it cannot be identified

3 Data after masking is utilized in an external Cloud

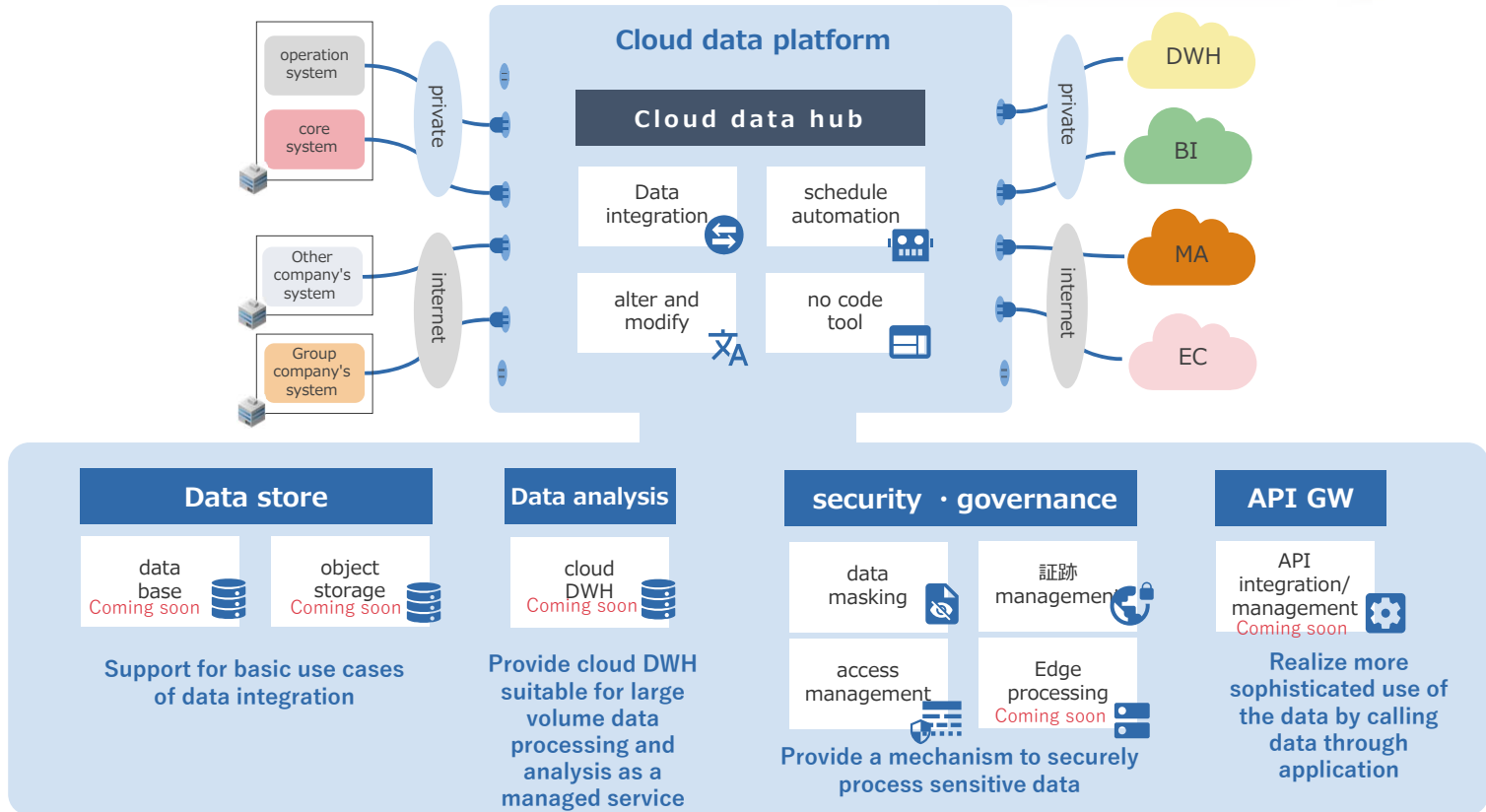# No initial cost. No minimum contract period.
Depending on data integration volume and requirement, one can flexibly change editions and resources. Able to start small

Edition

Entry	Standard	Enterprise
• Edition suitable for small start with minimal data integration functions and database integration.	• Standard edition maintains a comprehensive set of data integration functions. External triggers and sub-flow processing are available, allowing for more advanced functionality than Entry.	• Edition designed for large-scale, high-volume processing that implements functions such as recovering from the middle of processing in the event of an error (priority execution and check pointing).
From JPY120 thousand per month	From JPY290 thousand per month	From JPY350 thousand per month

✖

Computing resource

SMALL	MIDDLE	LARGE
• CPU：2vcpu • Memory size ：3GB • data store volume：500GB（encrypted）	• CPU：6vcpu • Memory size ：12GB • data store volume：500GB（encrypted）	• CPU：12vcpu • Memory size ：24GB • data store volume：500GB（encrypted）

Future Development Plans

Cloud data platform

Cloud data hub

Data integration	schedule automation
alter and modify	no code tool

operation system
core system
Other company's system
Group company's system

private
internet

DWH
BI
MA
EC

private
internet

Data store
data base	object storage
Coming soon	Coming soon

Support for basic use cases of data integration

Data analysis
cloud DWH
Coming soon

Provide cloud DWH suitable for large volume data processing and analysis as a managed service

security・governance
data masking	証跡 management
access management	Edge processing
	Coming soon

Provide a mechanism to securely process sensitive data

API GW
API integration/ management
Coming soon

Realize more sophisticated use of the data by calling data through application

IIJ

Internet Initiative Japan

The internet started in Japan in 1992, along with IIJ. Since that time, the IIJ Group has been building the infrastructure for a networked society, and with our technical expertise, we have continued to support its development. We have also continued to evolve our vision for the future and innovate to make it a reality. As an internet pioneer, IIJ has blazed the trail so that others could realize the full potential of a networked society, and that will never change. The middle "I" in "IIJ" stands for "initiative," and IIJ alway starts with the future.