Hybrid Apps Integration Design Patterns

Cloud Integration

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Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Business Challenges

50%
time and cost

"Through 2020, integration work will account for
50% of the time and cost of building a digital platform."

Gartner

Integration: The Foundation for Digital Business

Source: www.mx3d.com

Integration Was Complex

SaaS

ORACLE CLOUD

ERP   HCM   Sales

SCM   Service   CPQ

Marketing

On-Premises

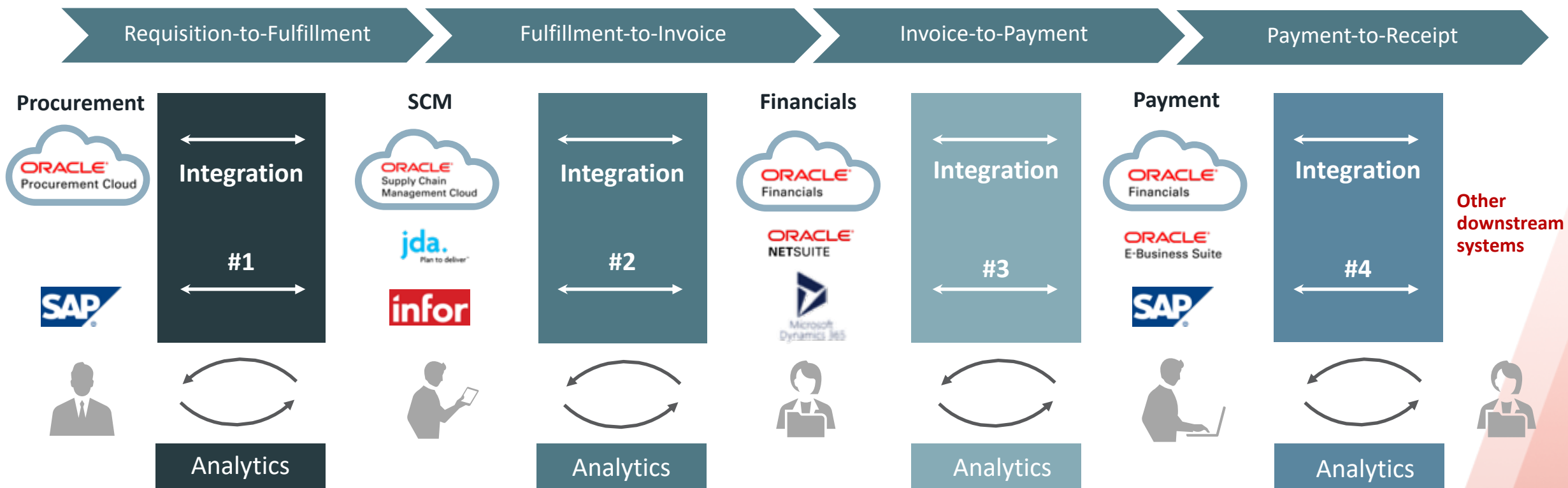| E-Business Suite	Custom apps	PeopleSoft	JD Edwards	Spreadsheets	SAP/Other
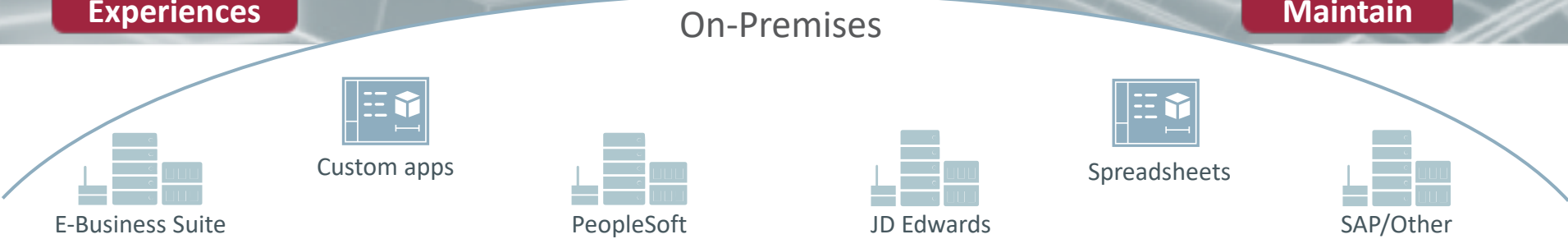
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What Are Your Digital Business Challenges?

ERP

HCM

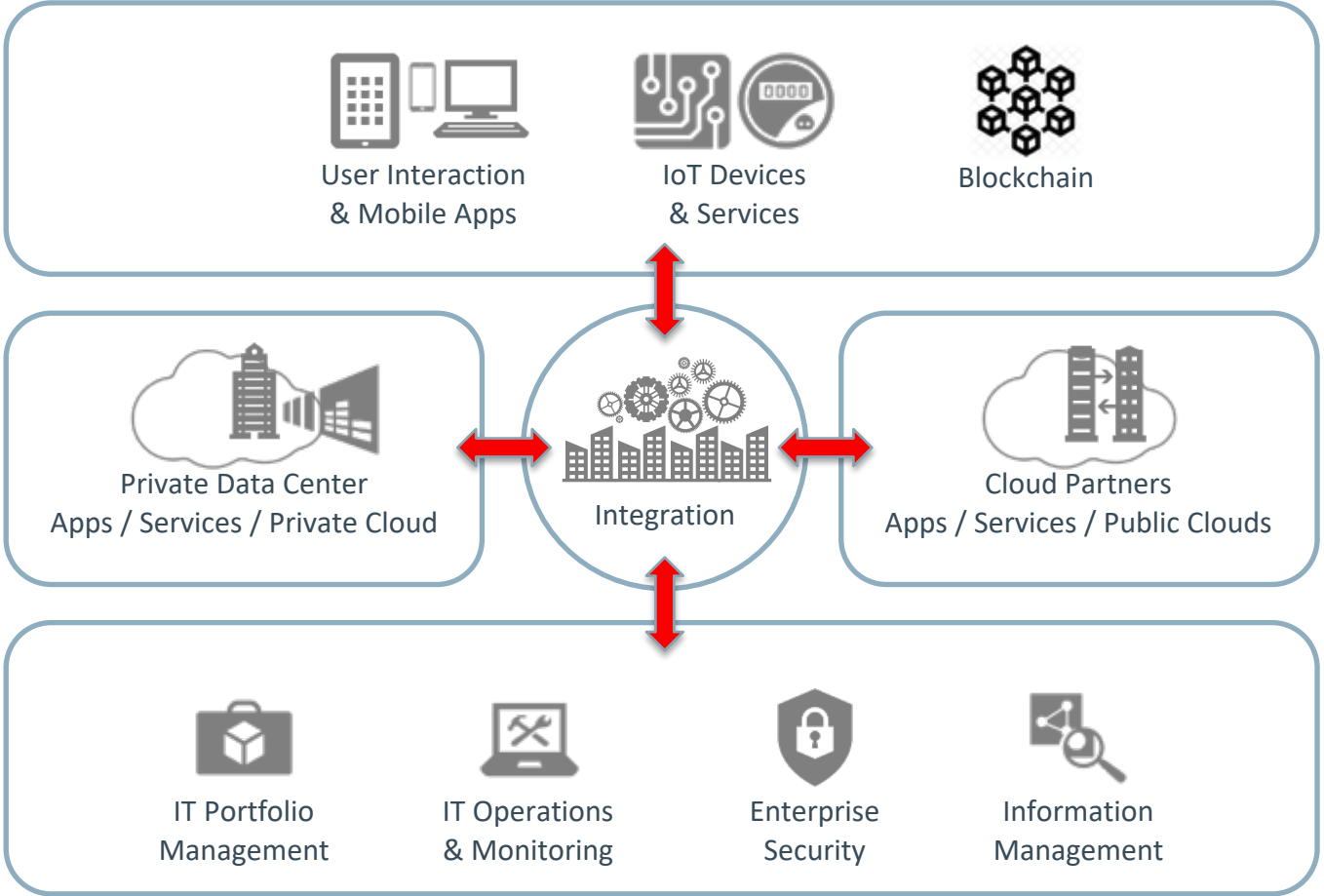**CX**

Yesterday's End-to-End Business Process

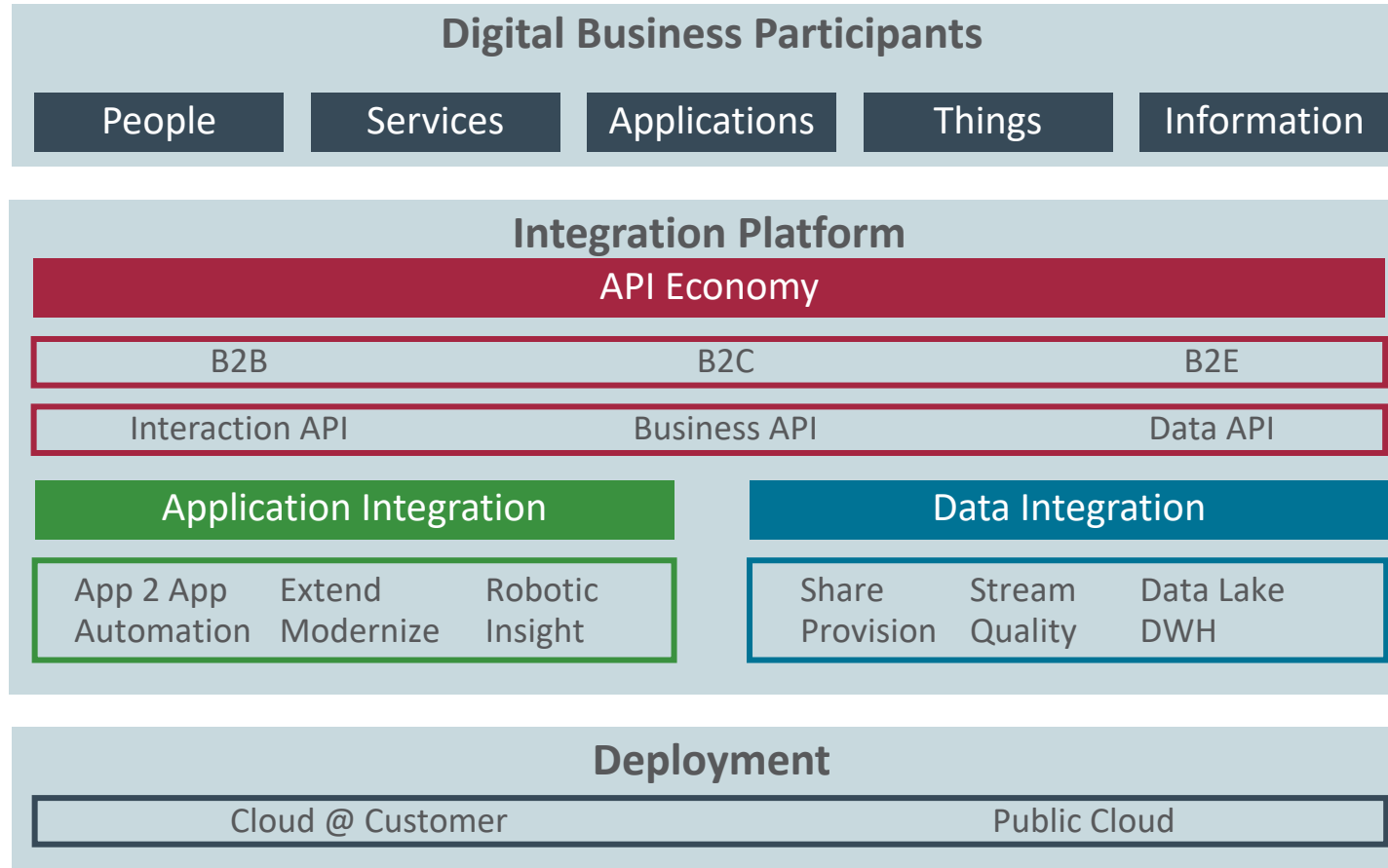## Requisition-to-receipt – decoupled integrations, processes, analytics

Requisition-to-Fulfillment	Fulfillment-to-Invoice	Invoice-to-Payment	Payment-to-Receipt

Procurement

ORACLE Procurement Cloud

SAP

Integration

#1

Analytics

SCM

ORACLE Supply Chain Management Cloud

jda. Plan to deliver

infor

Integration

#2

Analytics

Financials

ORACLE Financials

ORACLE NETSUITE

Microsoft Dynamics 365

Integration

#3

Analytics

Payment

ORACLE Financials

ORACLE E-Business Suite

SAP

Integration

#4

Analytics

Other downstream systems

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Integration Platform Concept

User Interaction & Mobile Apps

IoT Devices & Services

Blockchain

Private Data Center
Apps / Services / Private Cloud

Integration

Cloud Partners
Apps / Services / Public Clouds

IT Portfolio Management

IT Operations & Monitoring

Enterprise Security

Information Management

Oracle Integration Platform Layers

Digital Business Participants

People	Services	Applications	Things	Information

Integration Platform

API Economy

B2B	B2C	B2E

Interaction API	Business API	Data API

Application Integration

App 2 App Automation	Extend Modernize	Robotic Insight

Data Integration

Share Provision	Stream Quality	Data Lake DWH

Deployment

Cloud @ Customer	Public Cloud

Oracle Integration Platform Capabilities

API Economy

Manage API Lifecycle	Design and Mock-Test API	Document API	Build and Test API	Deploy and Publish API	Secure API
API Inventory and Catalog	Discover API	Consumer Registration & Management	API Analytics	API Routing & Load Balancing	API Policy Management

Application Integration

Data Integration

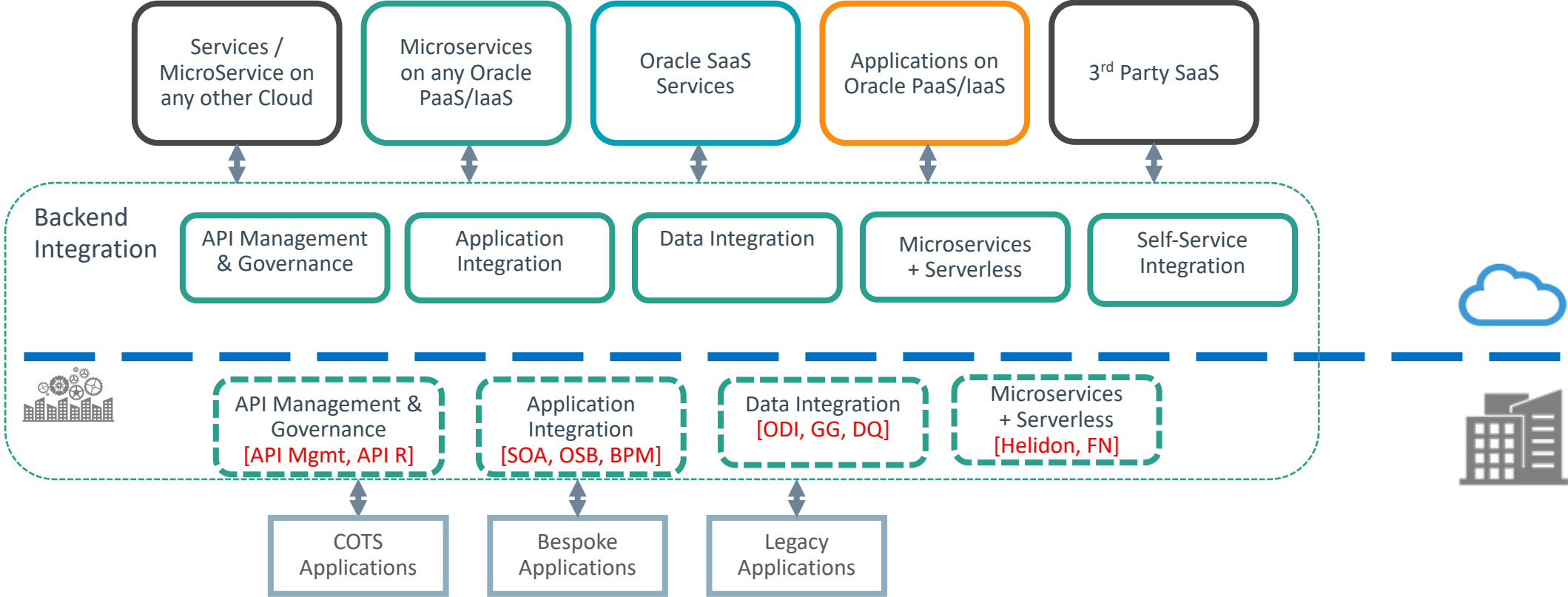|										
Orchestration	Process Automation	UI based Integration	File based Integration	Message based Integration	Case Management with Next Best Action	Stream Analytics	Real-time Data Replication	Bulk Data Movement	Data Streaming	Transform Pushdown E-LT / ETL
Application and Technology Adapters	Communication Protocols	Integration Recipes	Mapping Recommendations	Transformations	Routing & Load Balancing	Integration Insight	Data Source Connectivity	Prebuild Integrations	Cleans & Match	Data Profiling

Hybrid Integration Platform
Be Prepared for Any Type of Integration Need

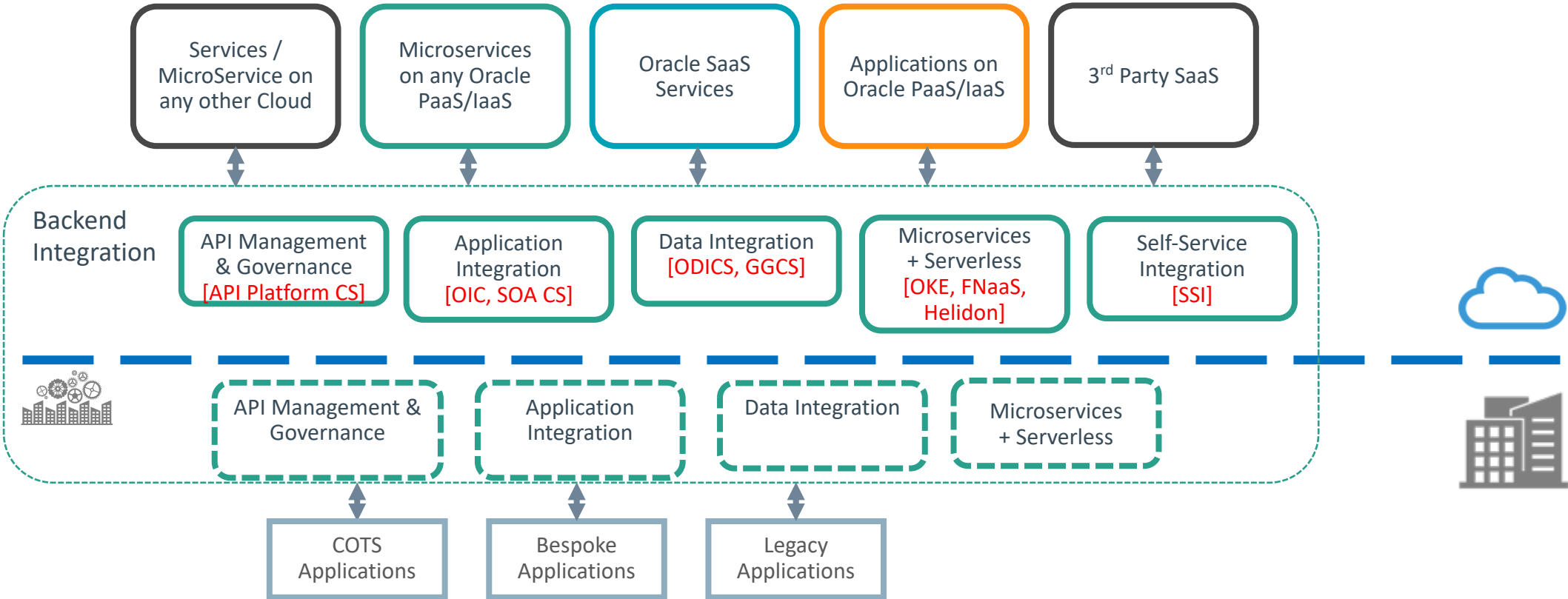| Services / MicroService on any other Cloud	Microservices on any Oracle PaaS/IaaS	Oracle SaaS Services	Applications on Oracle PaaS/IaaS	3rd Party SaaS

Backend Integration

API Management & Governance	Application Integration	Data Integration	Microservices + Serverless	Self-Service Integration

API Management & Governance	Application Integration	Data Integration	Microservices + Serverless

COTS Applications	Bespoke Applications	Legacy Applications

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Hybrid Integration Platform
Be Prepared for Any Type of Integration Need

Services / MicroService on any other Cloud	Microservices on any Oracle PaaS/IaaS	Oracle SaaS Services	Applications on Oracle PaaS/IaaS	3rd Party SaaS

Backend Integration

API Management & Governance	Application Integration	Data Integration	Microservices + Serverless	Self-Service Integration

API Management & Governance [API Mgmt, API R]	Application Integration [SOA, OSB, BPM]	Data Integration [ODI, GG, DQ]	Microservices + Serverless [Helidon, FN]

COTS Applications	Bespoke Applications	Legacy Applications

Hybrid Integration Platform
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Services / MicroService on any other Cloud	Microservices on any Oracle PaaS/IaaS	Oracle SaaS Services	Applications on Oracle PaaS/IaaS	3rd Party SaaS

Backend Integration

API Management & Governance [API Platform CS]	Application Integration [OIC, SOA CS]	Data Integration [ODICS, GGCS]	Microservices + Serverless [OKE, FNaaS, Helidon]	Self-Service Integration [SSI]

API Management & Governance	Application Integration	Data Integration	Microservices + Serverless

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Hybrid Integration Platform
Be Prepared for Any Type of Integration Need

Services / MicroService on any other Cloud	Microservices on any Oracle PaaS/IaaS	Oracle SaaS Services	Applications on Oracle PaaS/IaaS	3rd Party SaaS

Backend Integration

API Management & Governance [API Platform CS]	Application Integration [OIC, SOA CS]	Data Integration [ODICS, GGCS]	Microservices + Serverless [OKE, FNaaS, Helidon]	Self-Service Integration [SSI]

API Management & Governance [API Mgmt, API R]	Application Integration [SOA, OSB, BPM]	Data Integration [ODI, GG, DQ]	Microservices + Serverless [Helidon, FN]

COTS Applications	Bespoke Applications	Legacy Applications

Application Integration

Accelerates SaaS and on-premises connectivity

ORACLE®
Cloud Platform
Integration

Key Features

- 75+ prebuilt application connections

- Support for Oracle and non-Oracle apps

- Prebuilt integration flows

- Embedded recommendations

- Connect SaaS with on-premises apps
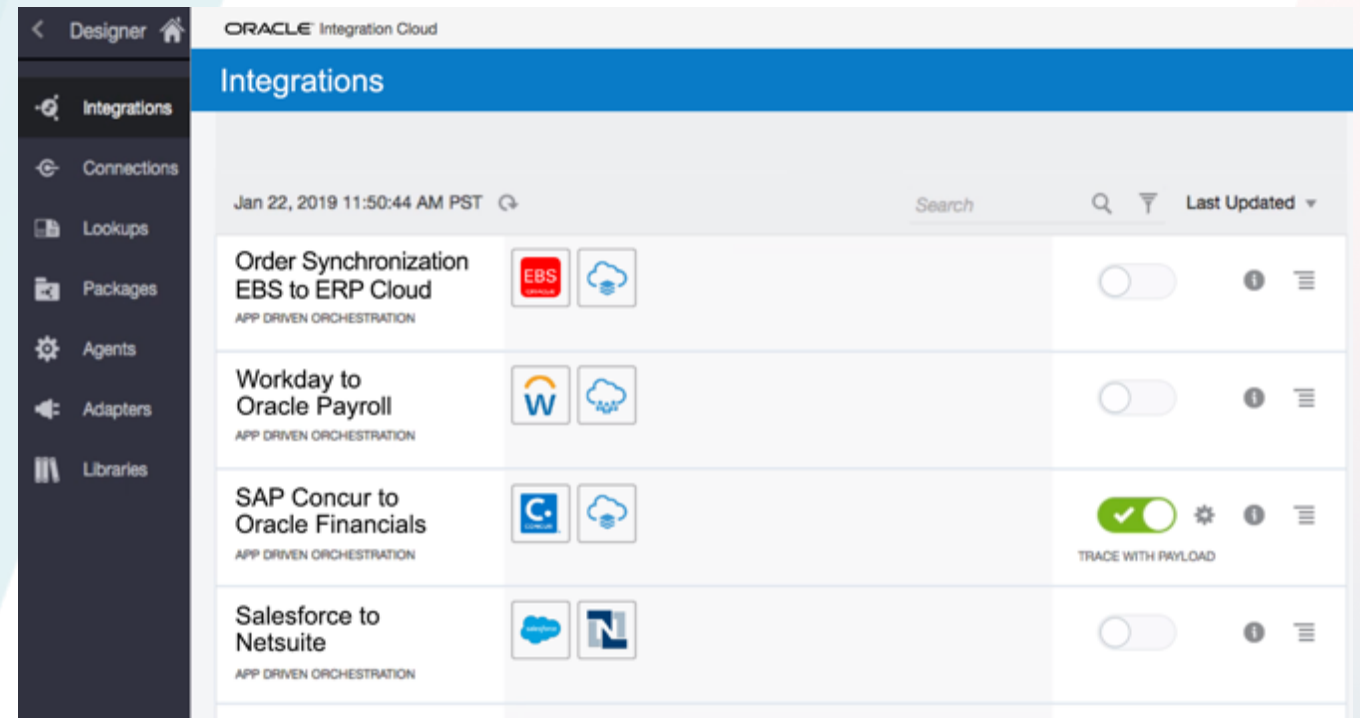
Enterprise Connectivity

Prebuilt adapters for cloud, on-premises, Oracle, non-Oracle and homegrown apps

ERP Connectivity

- ERP Cloud
- ORACLE NETSUITE
- EPM Cloud
- Utilities Cloud
- Logistics Cloud
- ORACLE E-Business Suite
- ORACLE JD Edwards
- SAP S/4 HANA
- SAP Ariba
- CONCUR
- intuit QuickBooks

HCM Connectivity

- HCM Cloud
- Taleo — Talent Acquisition Cloud
- Taleo — Talent Cloud for Midsize
- ORACLE PeopleSoft
- successfactors An SAP Company
- workday

Productivity and Social Connectivity

- Dropbox
- GoToMeeting
- box
- Google Calendar
- twilio
- DocuSign
- facebook
- slack
- twitter
- Eventbrite
- amazon S3
- Gmail
- Trello
- Basecamp
- MailChimp
- JIRA
- asana
- Adobe Sign
- Linked in
- EVERNOTE
- Office 365
- SurveyMonkey
- Content and Experience Cloud

CX Connectivity

- Sales Cloud
- Commerce Cloud
- CPQ Cloud
- Service Cloud
- Eloqua
- salesforce
- Responsys
- Field Service Cloud
- Monetization Cloud
- Policy Automation
- servicenow
- HubSpot

Database Connectivity

- Database Cloud
- ATP Cloud
- ADW Cloud
- Database
- MySQL
- SQL Server
- IBM DB2

RPA Connectivity

- UiPath
- AUTOMATION ANYWHERE
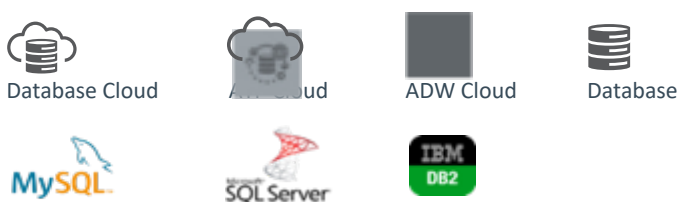
Technology Connectivity

- REST
- FTP
- AQ
- SOAP
- FILE
- JMS

Create Your Own Adapter

Create your own adapter with the
Zero-code adapter builder

Applications Integration Patterns

SaaS to SaaS

SaaS to On-Prem

On-Prem to SaaS

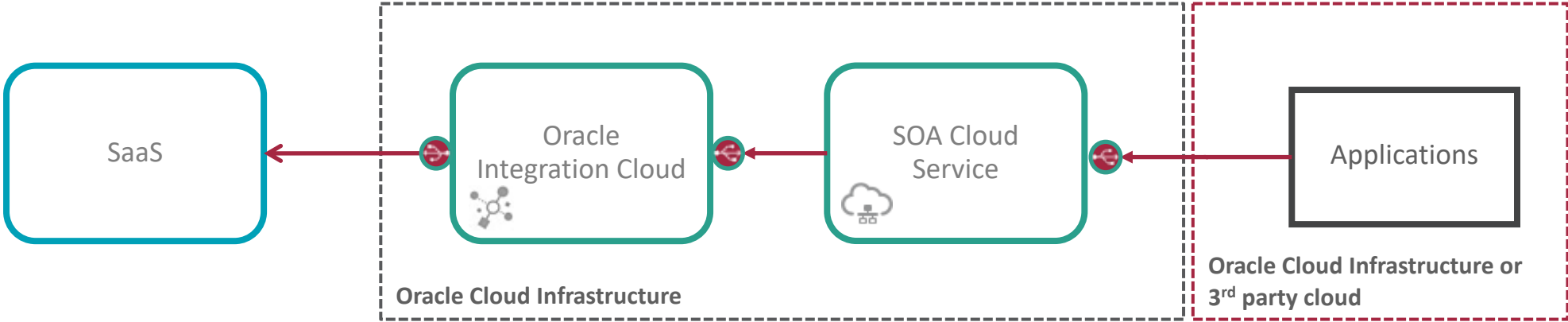Bulk Load to SaaS with MFT/SFTP

Bulk Load to SaaS

Lift-and-Shift Apps/SOA to Cloud

Embedded Process Form

Process in SaaS Integration

Embedded Process Form
VBCS

Process Forms and VBCS

Digital Assistant, Mobile
Blockchain
Container Native

Polyglot Cloud Development to SaaS
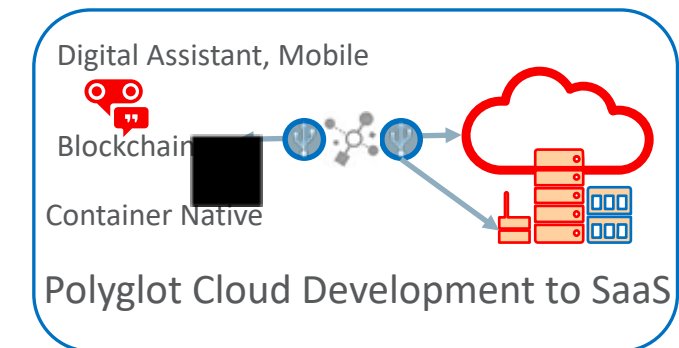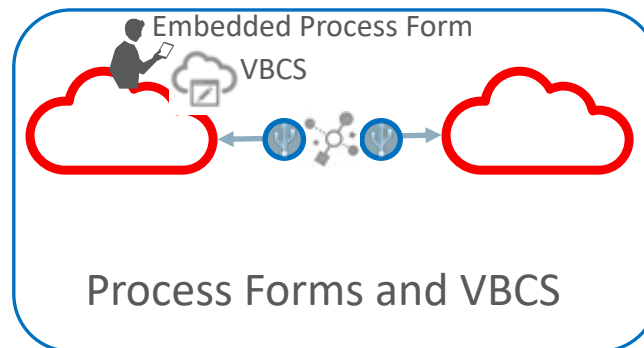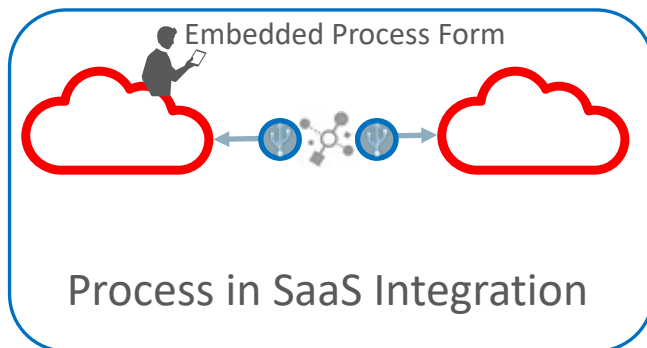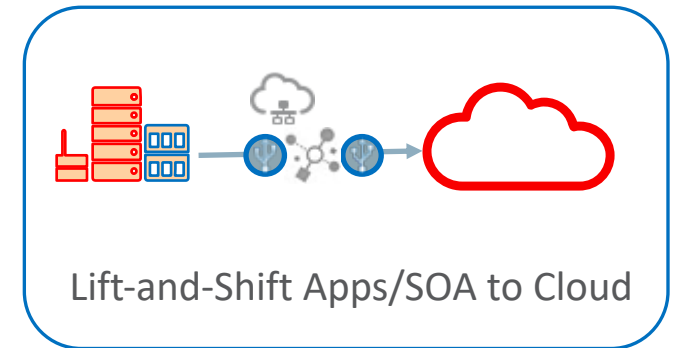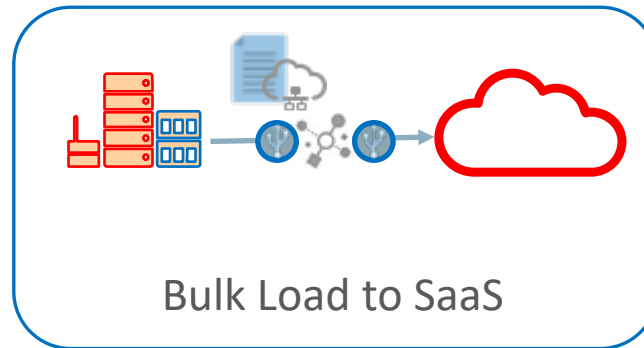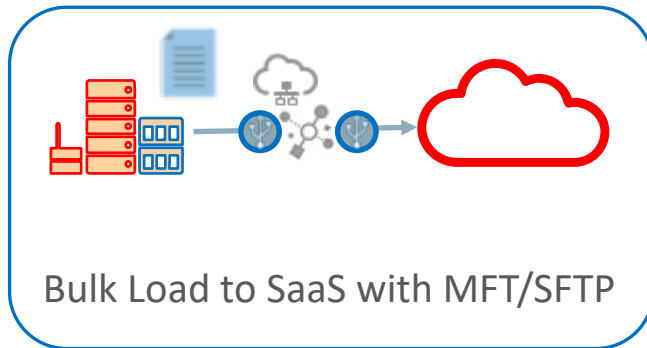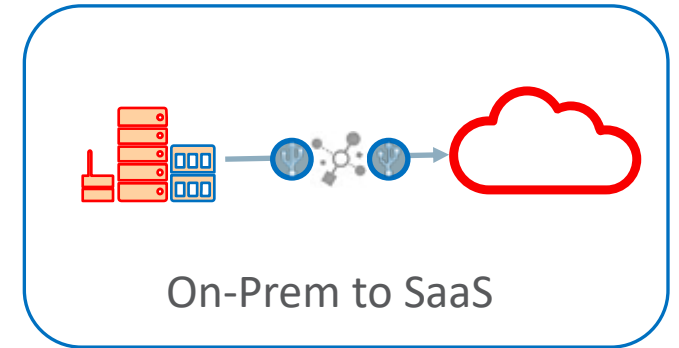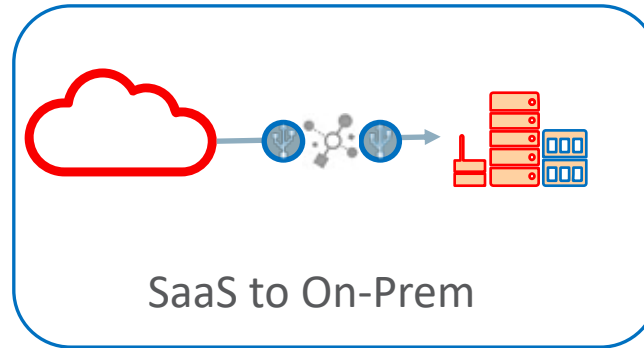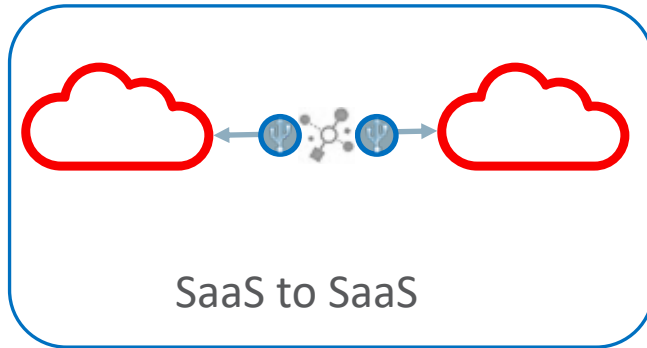
SaaS to SaaS Integration

SaaS to On-Prem Integration

Oracle Cloud Infrastructure

SaaS

Oracle Integration Cloud

2

On-Premises/3rd Party Clouds

1

Connectivity Agent

SOA suite

Applications

Key

Adapter

Request

Tunnel

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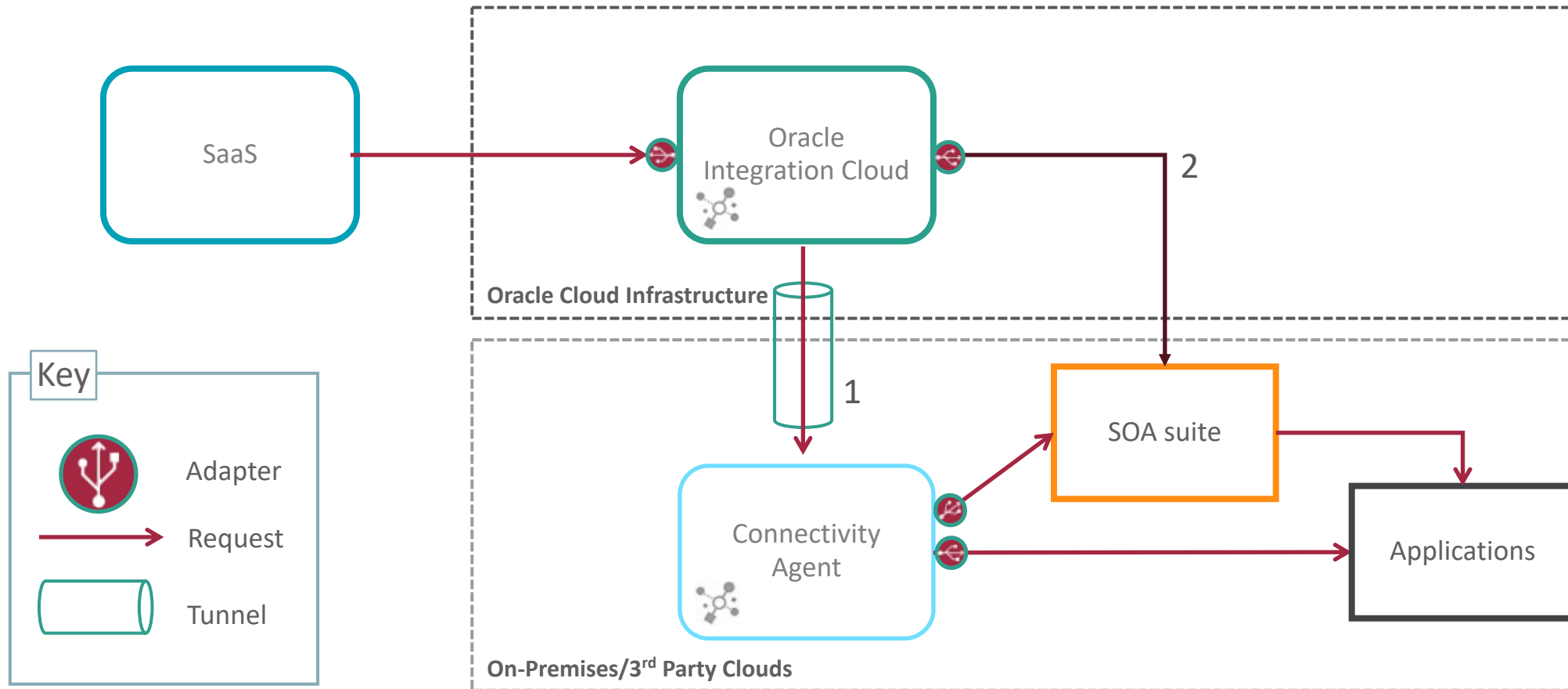
Integration of On-Prem to SaaS
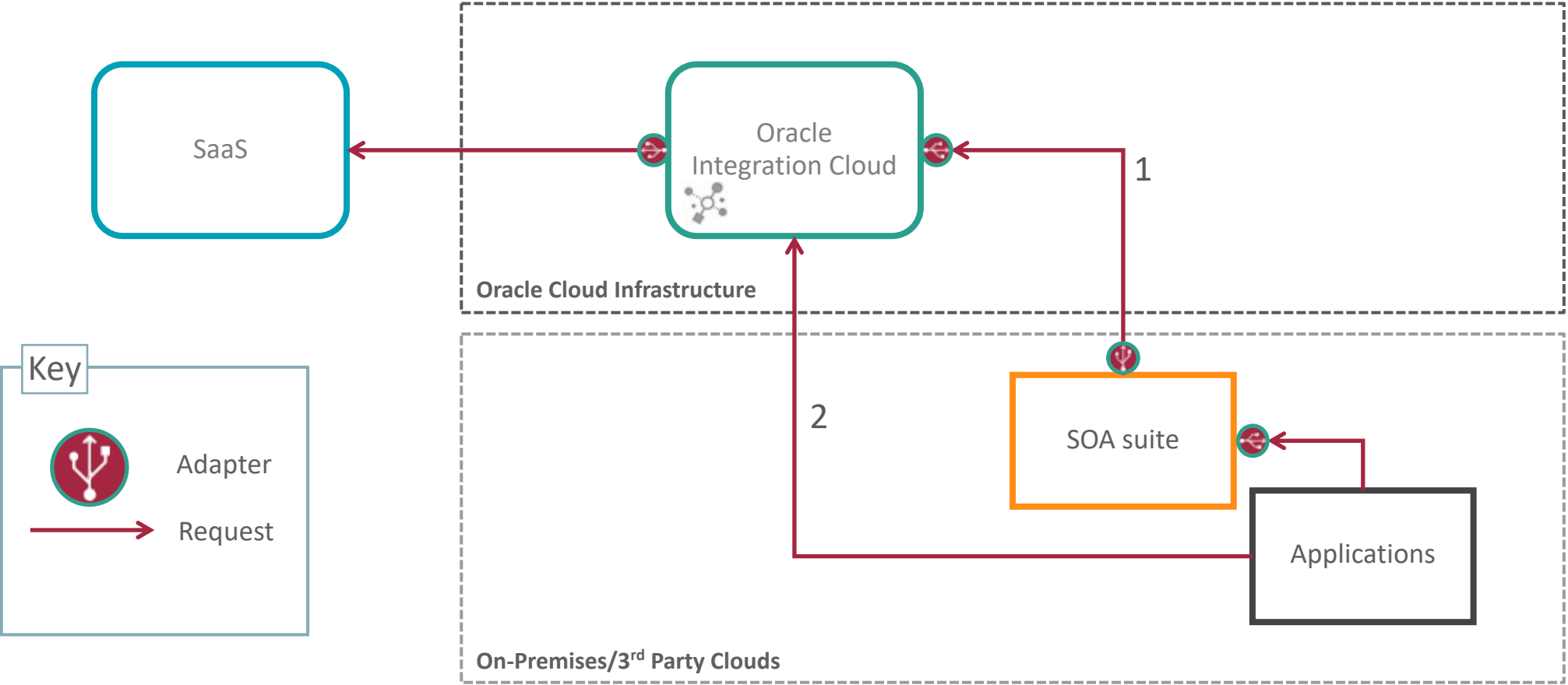
Integration of On-Premises to SaaS

SaaS

Oracle Integration Cloud

REST/SOAP, EBS Adapter, Siebel

Oracle Cloud Infrastructure

1

2

3

On-Premises/3rd Party Clouds

Connectivity Agent

AQ, Files, JDBC, JMS, SAP

SOA suite

Other Legacy Apps

Key

Adapter

Request

Tunnel
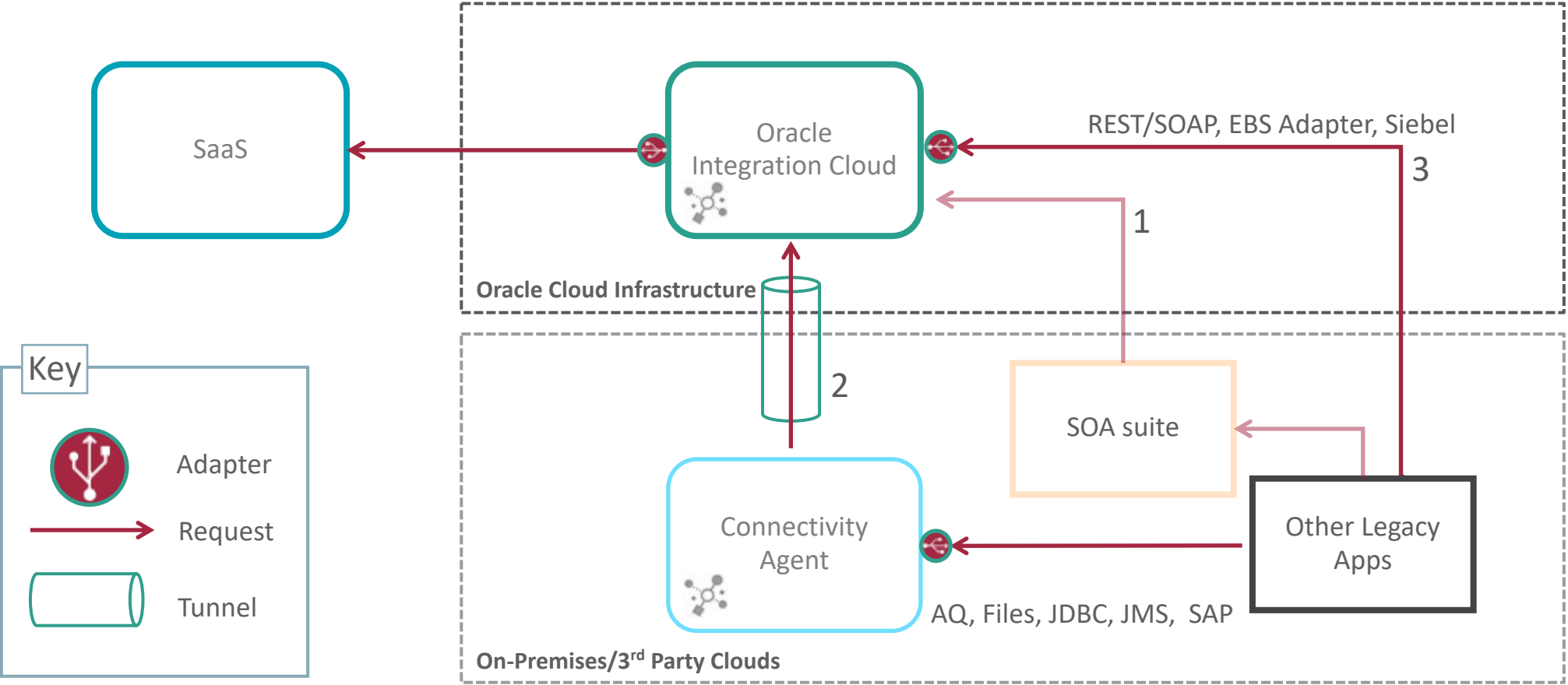
Bulk Load to SaaS with MFT/SFTP

Key

Adapter

Request

Files

Schedule

Bulk Load to SaaS

Lift-and-Shift Apps/SOA to Cloud

SaaS

Oracle Integration Cloud

SOA Cloud Service

Applications

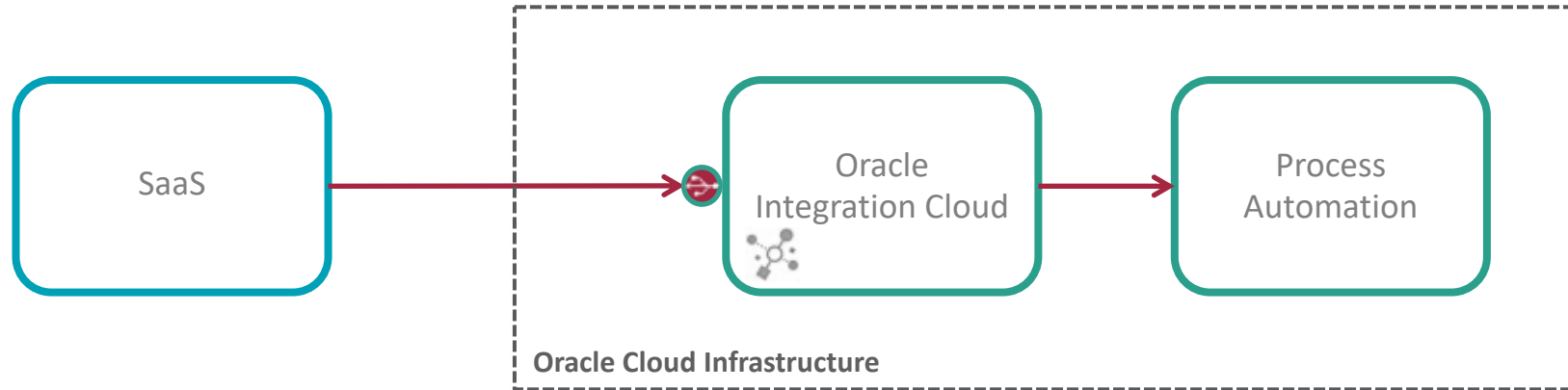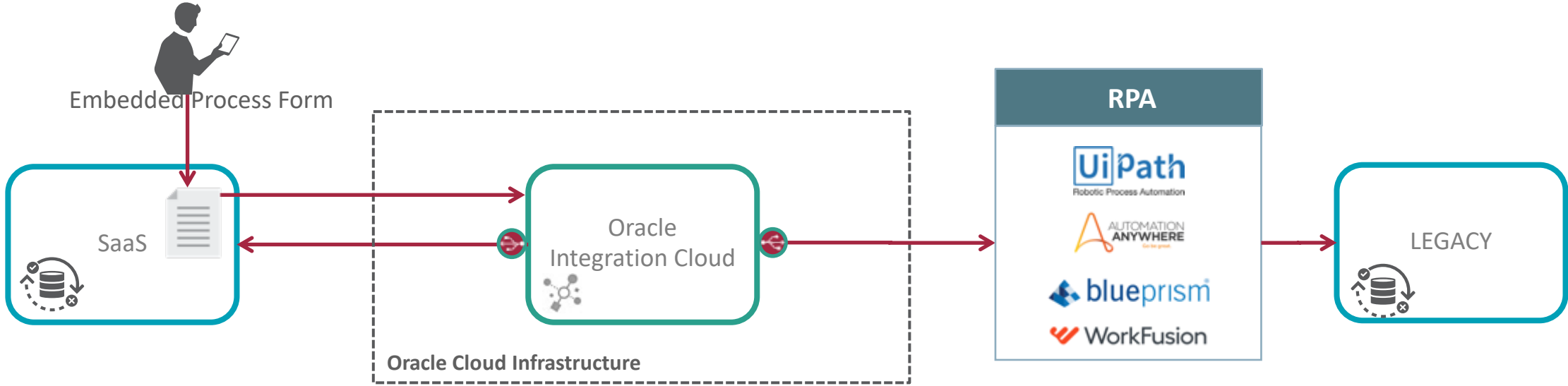**Oracle Cloud Infrastructure**

Oracle Cloud Infrastructure or 3rd party cloud

Key

Adapter

Request

ORACLE®
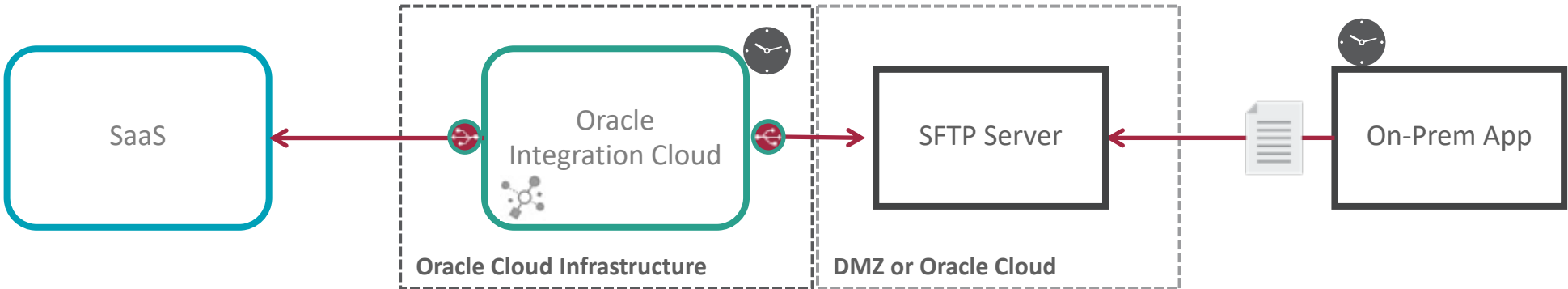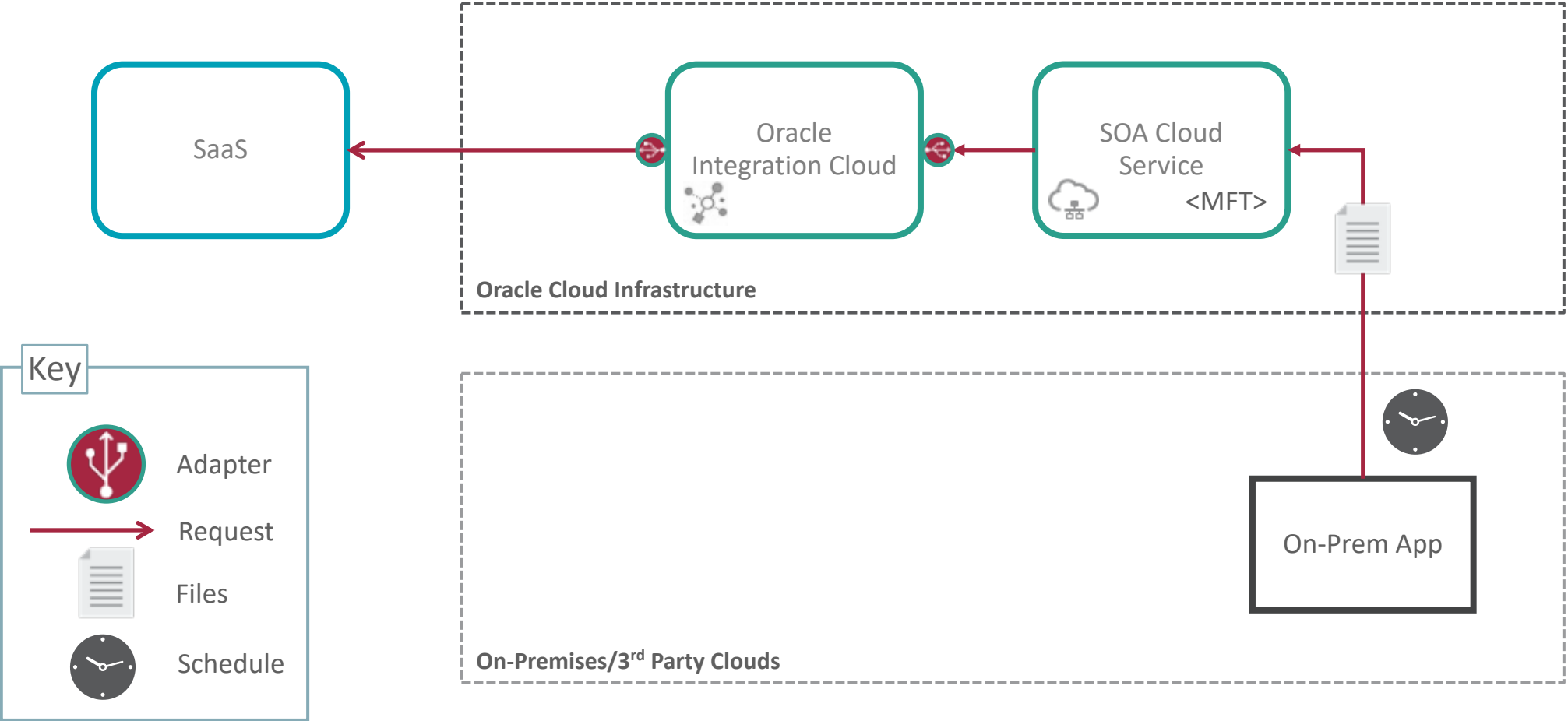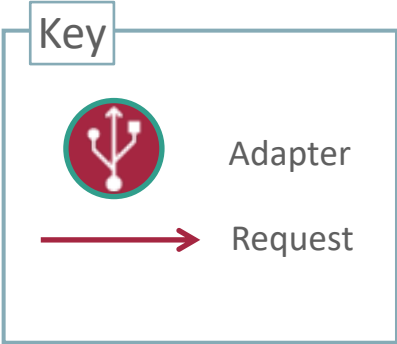
Extensions in SaaS Integration

Embedded Process Form/ Mash Up App

SaaS

Oracle Integration Cloud

Oracle Cloud Infrastructure

SaaS

Key

Adapter

Request

System of Record

SOA suite

Connectivity Agent

Applications

On-Premises/3rd Party Clouds

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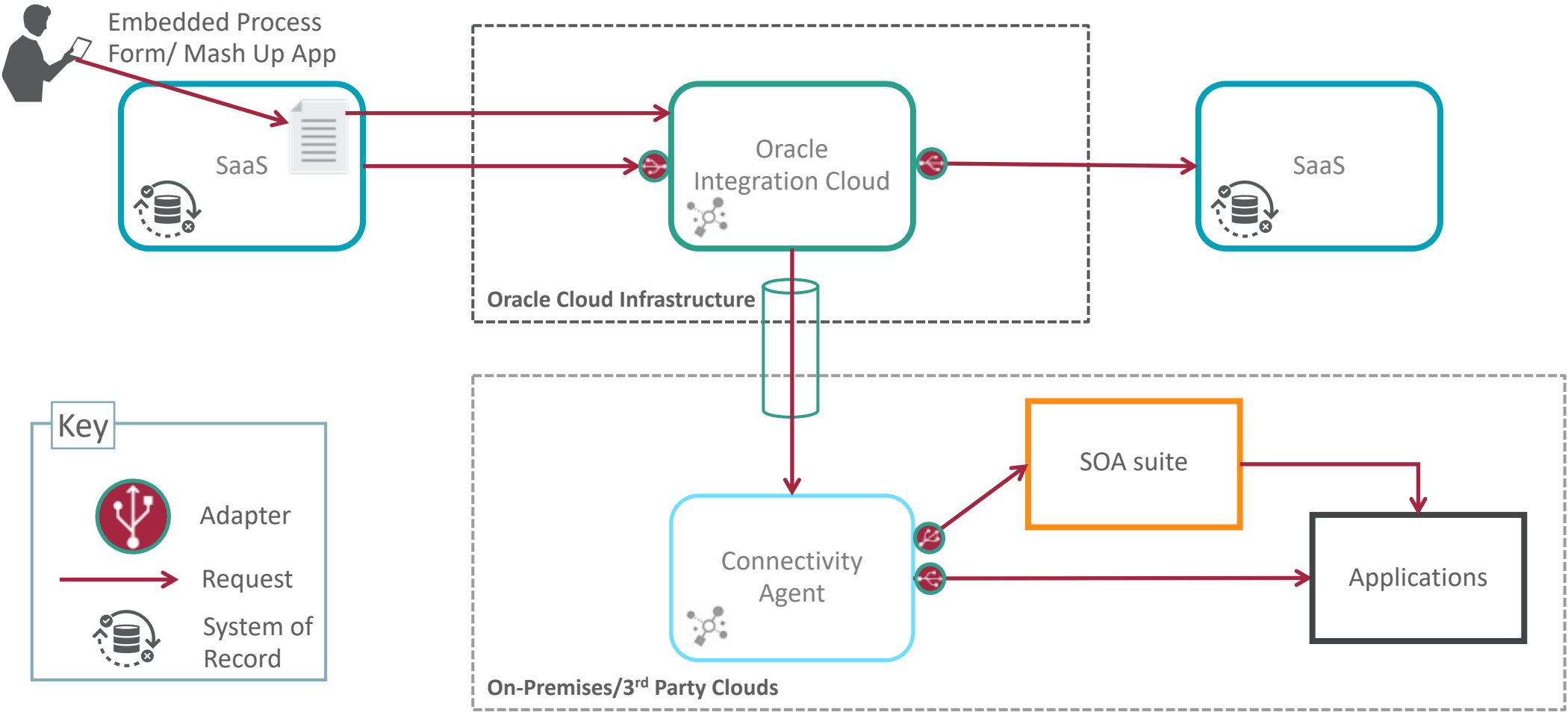
SaaS to Process Integration

SaaS → Oracle Integration Cloud → Process Automation

Oracle Cloud Infrastructure

Key
- Adapter
- → Request
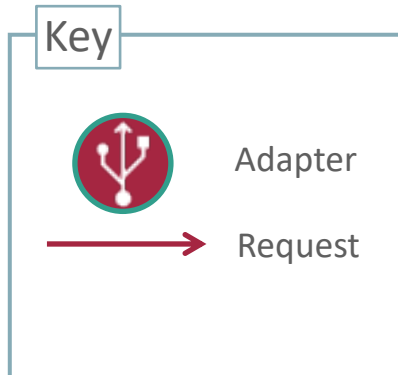
Robotic Process Automation

Process Automation and VBCS

Embedded Process Form

SaaS

Oracle
Integration Cloud

SaaS

Extend SaaS UX

Bespoke App

Business Objects

Visual Builder
Cloud Service

Oracle Cloud Infrastructure

Key

Adapter

Request

System of
Record
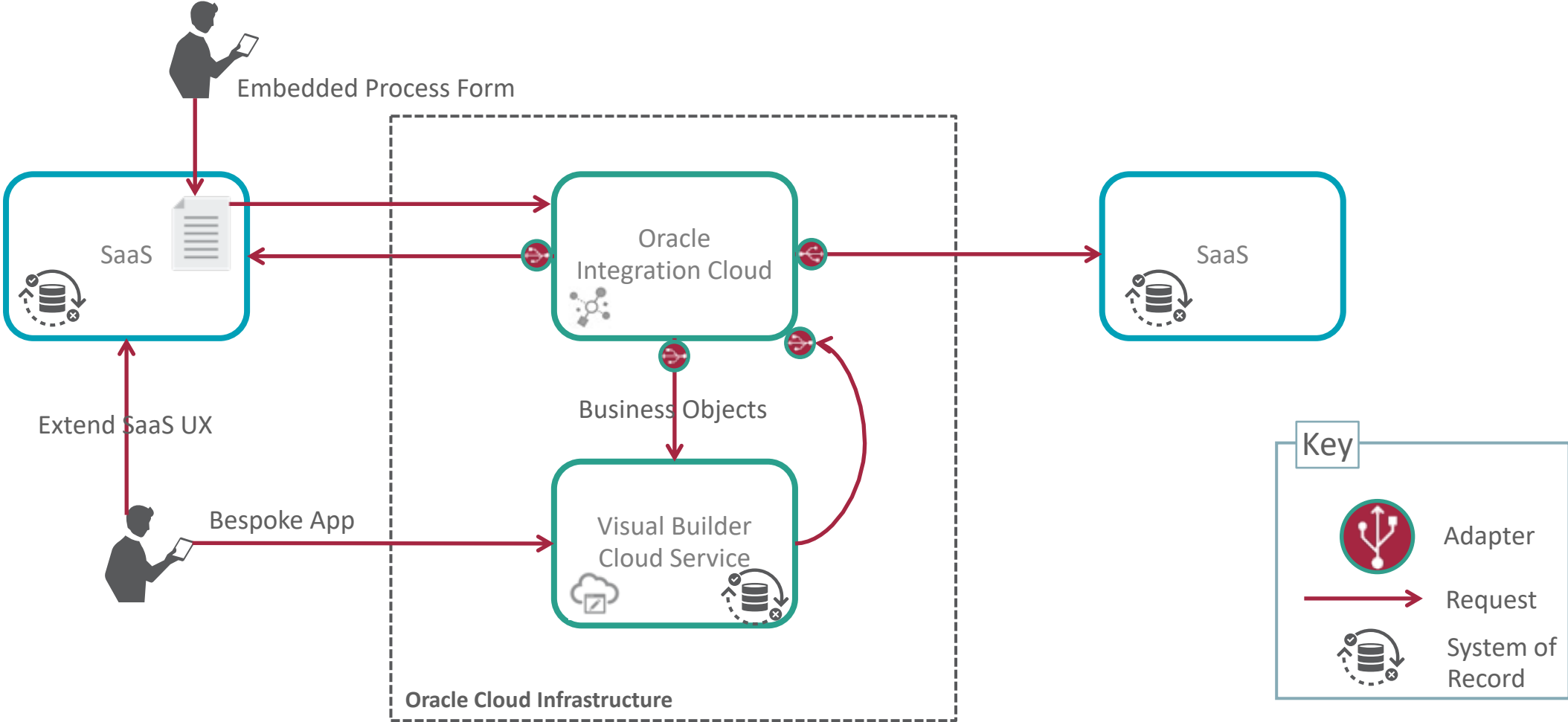
On-Prem to On-Prem Integration*[Future]

Key
- Adapter
- Request
- Tunnel

Oracle Cloud Infrastructure

Oracle Integration Cloud

1

OIC Execution Agent

SOA suite

Applications

On-Premises/3rd Party Clouds
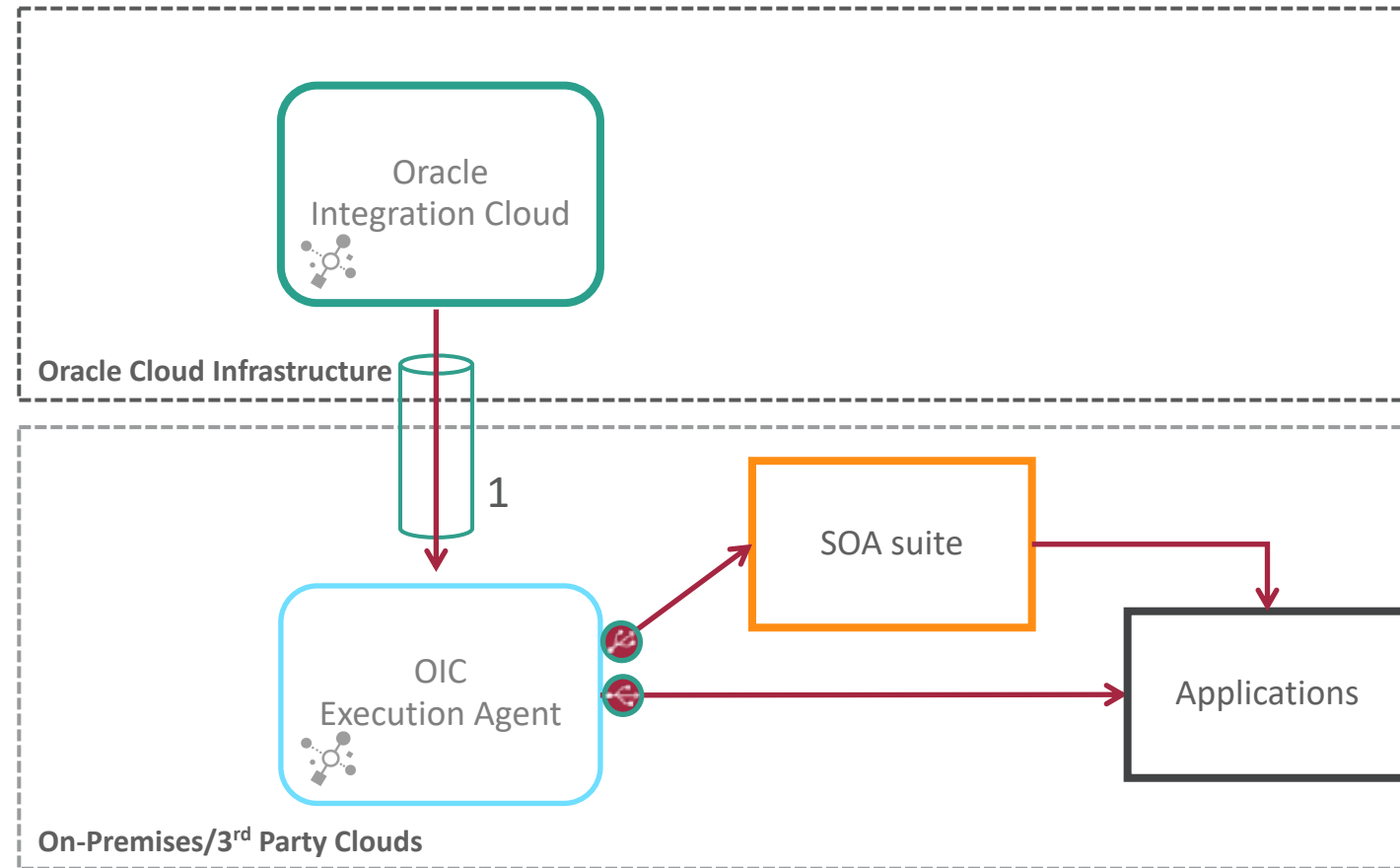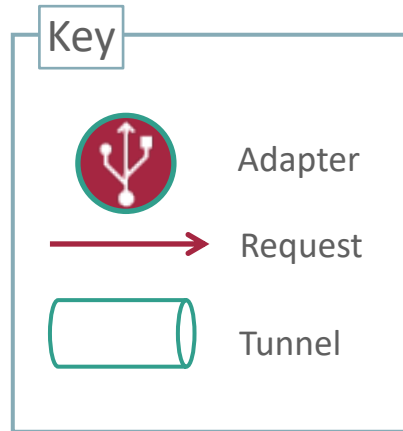
Service Orchestration / Choreography

Container Native

docker, kubernetes, fn, php, node.js, Java, python

HTTPS/REST

Oracle Integration Cloud

SOA Cloud Service

Oracle Cloud Infrastructure

Digital Assistants , Bots, Mobile, Web UX

{API}

SOA suite

Key

Adapter

Request

Polyglot Cloud Development to SaaS

Digital Assistants , Bots, Mobile

Blockchain Apps

Container Native

Oracle Integration Cloud

Oracle Cloud Infrastructure

HTTPS/REST

RPA

UiPath
Robotic Process Automation

AUTOMATION ANYWHERE
Go be great.

blueprism

WorkFusion

SaaS

On Premise App

SOA suite

Legacy

Key

Adapter

Request

Extending ISTIO and Integration Platforms with API Platform

Istio Architecture

DEMO

ORACLE®