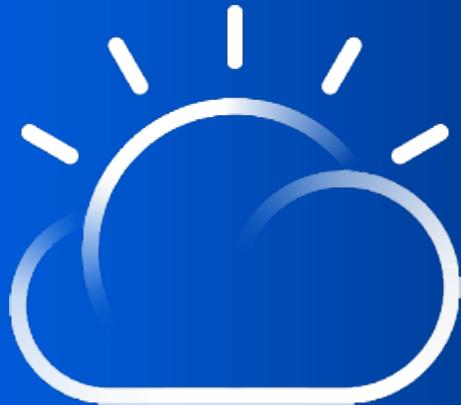


An Introduction to IBM Cloud Pak for Integration



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Overview

- Market Need
- Agile Integration Mindset
- IBM Cloud Pak for Integration
- Strategic Investments 2019-2020

Market Need

1. Business Transformation

Digital Transformation is a necessity!

2. IT Transformation

Application
modernization

enabled by

Agile Integration

3. Technology Transformation

Simple integration
experience for any
squad member

Cloud native
integration

Market Need

1. Business Transformation

Digital Transformation is a necessity!

2. IT Transformation

Application modernization

enabled by

Agile Integration

3. Technology Transformation

demands

Simple integration experience for any squad member

Cloud native integration

resulted in designing
Cloud Pak for Integration

Agile Integration Mindset

- | | |
|--------------------------|------------------------------|
| 1. (Re)Invent with Data | APIs, Events, Integration... |
| 2. Scale and Flexibility | Break the monolith |
| 3. Speed and Agility | Developer/Ops productivity |

Agile Integration Mindset



Hybrid Integration Platform

Rapidly build, manage and optimize integrations across applications, data, cloud services, APIs, events

Support an expanding range of integration styles

Open, hybrid cloud approach



Agile Architecture

Fine grained, integrate where needed across clouds, SaaS, and on-premises

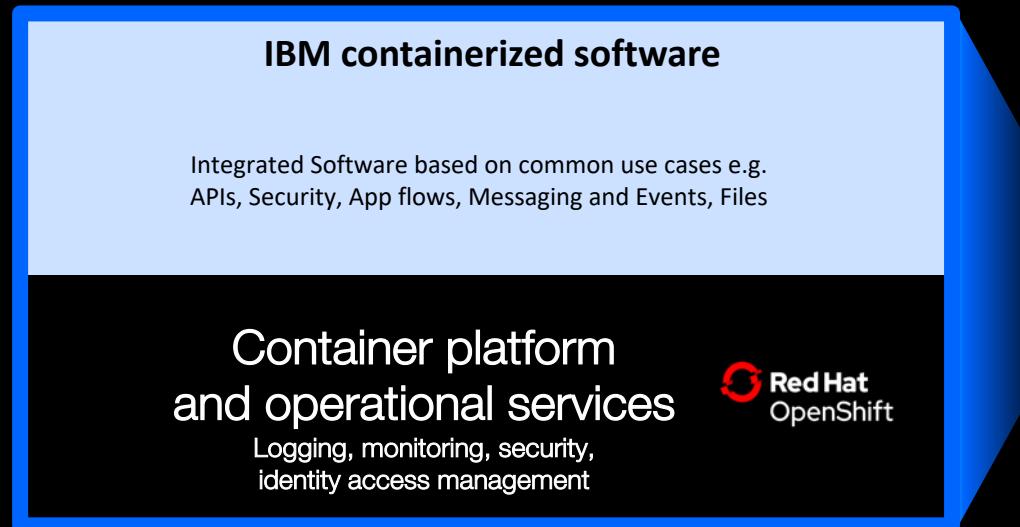


People & Process

Decentralized ownership

Empower teams to build, re-use, and govern integrations and best practices

Concept Of A Cloud Pak



Complete yet simple

IBM certified

Run anywhere



Cloud Pak – Speed to Market. Enterprise Grade



Containerized
software alone

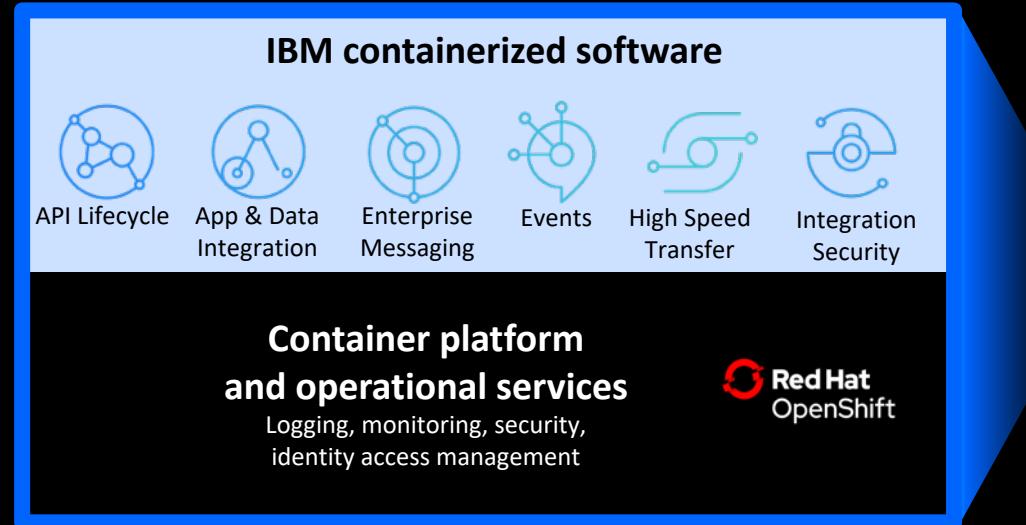


Cloud Paks

	Containers Alone <small>Client creates containers or receives software as standalone container(s)</small>	IBM Cloud Paks <small>Complete solutions certified for enterprise use cases</small>
Runs anywhere	Yes	Yes
Vulnerability scanned	Yes	Yes
Red Hat container certification	Depends on product	Yes
Complete solution w/ container platform	No	Yes
IBM certified/orchestrated for production (Built for Kubernetes by experts; certified against 250+ criteria)	No	Yes
Multicloud validation	No	Yes
Integrated deployment experience	No	Yes
Full stack support by IBM (Base OS, software, and container platform)	No	Yes
License metering integration	No	Yes
Scalable and resilient	No	Yes
Encrypted secrets / limited privileges	Do it yourself	Yes
Management and operations	Build your own	Yes
Lifecycle Management	Manage it yourself	Yes

Cloud Pak for Integration

A faster, more secure way to move your core business applications to any cloud through enterprise-ready containerized software solutions



Complete yet simple

IBM certified

Run anywhere

License also allows software deployment outside of containers

IBM Cloud Pak for Integration

Brings together industry-leading integration capabilities to form the industry's **most complete hybrid integration platform (HIP)**

Supports the scale, security, and economics required **for all integration and digital transformation initiatives**

API Lifecycle



IBM API Connect is industry's first multicloud API solution delivering high scalability & performance.

Application & Data Integration



IBM App Connect delivers breadth of application integration needs across a modern digital business.

Messaging & Events



IBM MQ is the proven and trusted market leader.

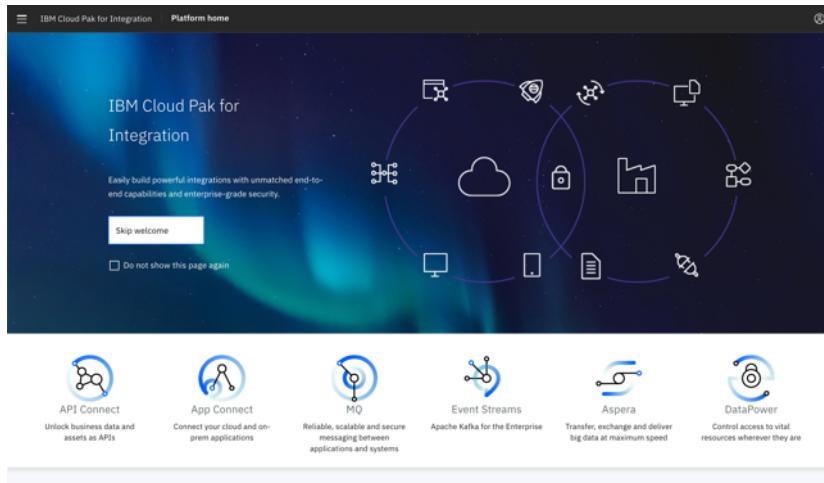
IBM Event Streams delivers real-time Kafka event interaction.

High Speed Data Transfer



IBM Aspera to send, share, stream and sync large files and data sets more securely, reliably and at maximum speed over global IP networks.

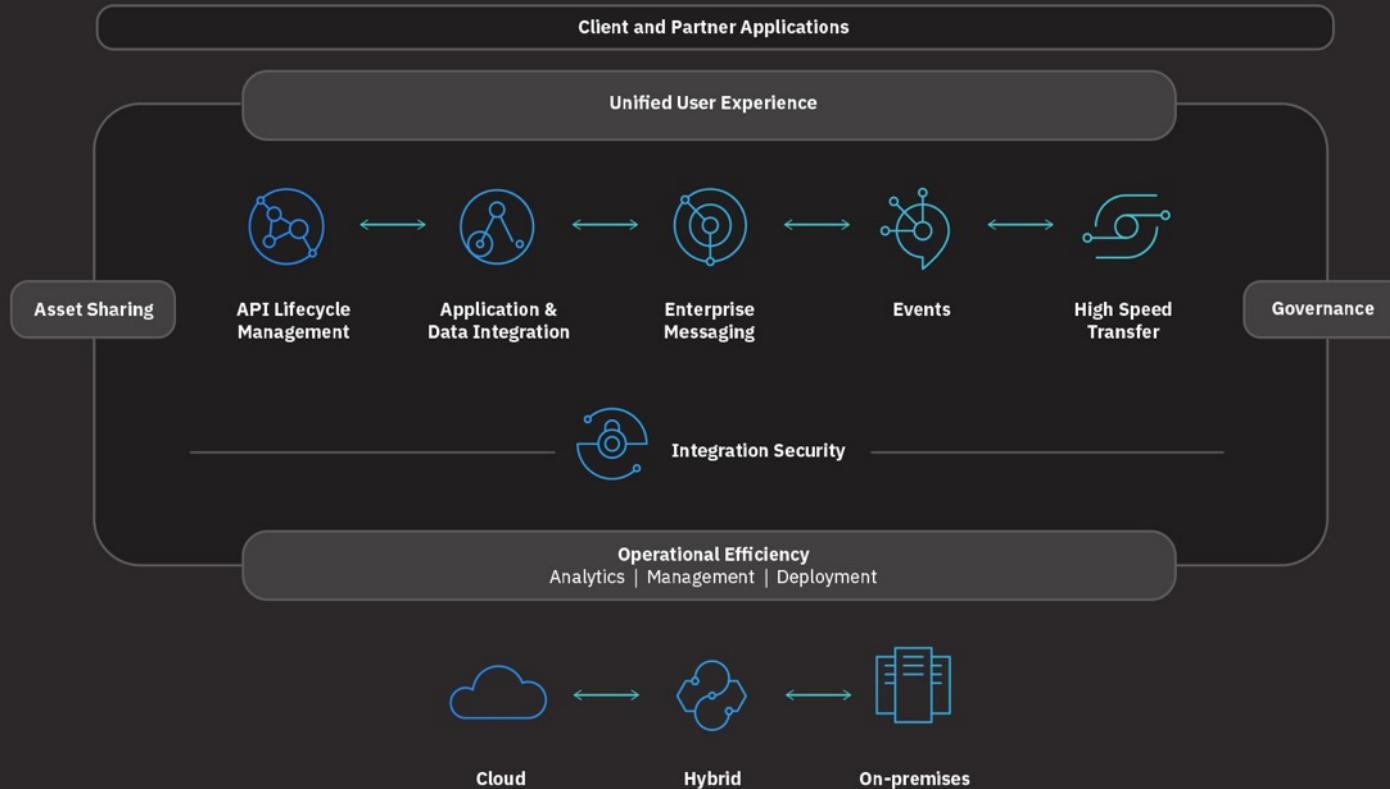
What is IBM Cloud Pak for Integration (CP4I)



IBM Cloud Pak for Integration
Multi-Cloud, Secure, Enterprise-proven Platform

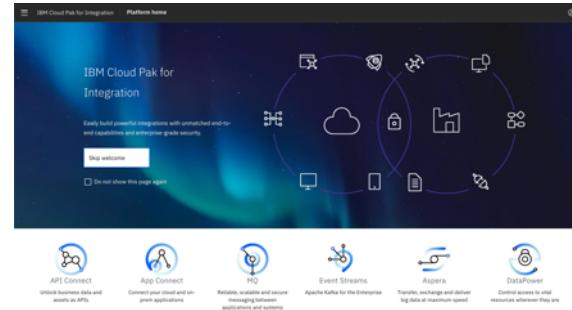
- **Create** all types of Integrations *quickly* using ***simple*** tools following modern development practice
- **Manage** secure integration deployments across any cloud leveraging cloud-native practices & architecture, consistent operational services.
- **Re-use** integration assets, skills to speed up development and time-to-market maintaining the right governance

IBM Cloud Pak for Integration



CP4I Cloud-Native Architecture

- Cloud agnostic to run virtually anywhere on Red Hat OpenShift.
- Unmatched **scalability and resiliency** through container and microservices based design
- Development and operations **Agility** through consistent deployment onto Red Hat OpenShift Kubernetes



CP4I product components

Simple

Fast

Secure



API Lifecycle

Unlock business data and assets as APIs



Data Integration

Understand, cleanse, transform and deliver quality data



Application Integration

Connect your cloud and on-prem applications



High Speed Transfer

Super fast & secure data transport across any cloud



Messaging & Events

Deliver msgs reliably with enterprise-grade messaging

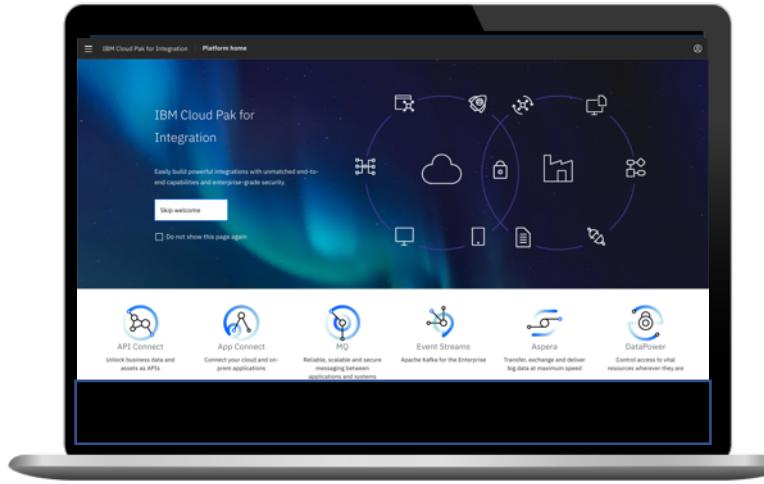


Secure Access

Control access to vital resources wherever they are

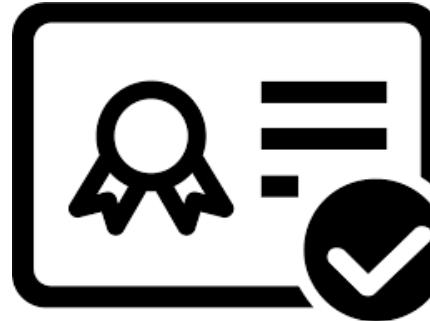
CP4I Integration and Platform Services

- **Asset Repository** – Integration goldmine to store all types of integration assets for re-use of assets, skills across the organization
- **Logging** – Common logging built-in the platform for all components
- **Metering** – Platform wide metering of products for licensing and audit readiness
- **Security** – Identity and access management service for common onboarding of users / groups



CP4I Flexible & Deployment-Friendly Licensing Model

- **Flexibility** of single license allowing to deploy any or all capabilities such as APIs, Events, Messaging, App Integration, File transfer
- **Grow with your use cases** by incrementally adding capabilities and consuming what you use
- **Re-use** licenses to de-commission one capability to provision another
- **Deployment choice** to deploy capabilities within CP4I or outside in a standalone environment



CP4I includes no-charge entitlements to OpenShift for CP4I use cases

Next Generation Hybrid Multicloud Platform



Services

Advise

Move

Build

Manage

Certified
Offerings

Applications

Data

Integration

Automation

Multicloud
Management

Cloud Paks

Foundation



Common Services

OpenShift

Open Hybrid
Multicloud
Platform

Multi-cluster Management

RHEL

Infrastructure



IBM Power & Z

CP4I Strategic Investments in 2019-2020

Multi-Cloud Fabric

Scalability and flexibility via micro service architecture & containers managed across any cloud

Integration & Platform Services

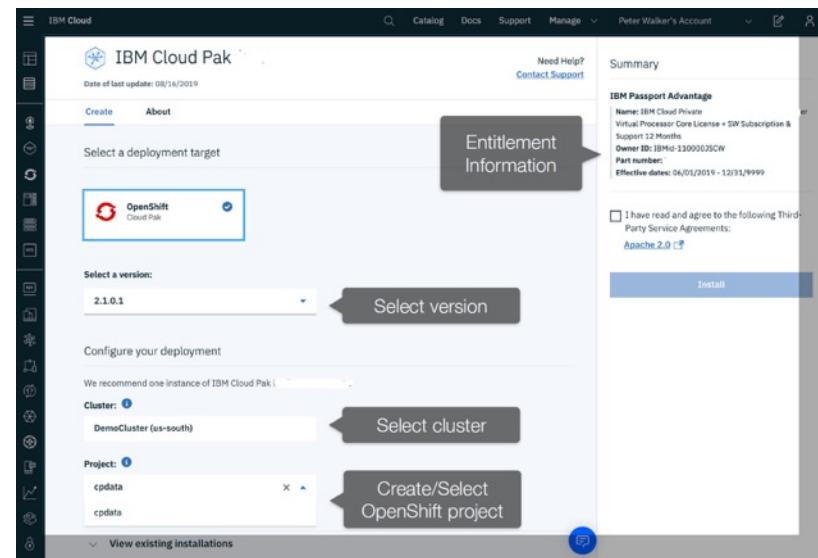
Asset re-use across disciplines. Common logging, monitoring, troubleshooting, security. All in a consistent toolbox

Transformative Integration Experience

Simplicity and speedy integration development for full stack squads.
Precision deployment using CI/CD and declarative Ops

Easy Install on OpenShift on IBM Cloud

- Simplified, rapid install of Cloud Pak on OpenShift in IBM Cloud
- No download of Cloud Pak binaries on local machine.
- Direct provisioning of cloud pak image from within IBM Cloud
- Fully automated install on OpenShift on IBM Cloud
- Built-in entitlement check with PPA for validated provisioning



Multi-Cloud Manager with CP4I

Currently Available

- **Automation** of CP4I components across multiple clusters in multiple private and public clouds.
- **Operational Visibility** of CP4I components
- **Governance** of CP4I platform.

Roadmap

- Fine-grained automation visibility, governance & control for CP4I objects
 - MQ Queues
 - Event stream topics,
 - API deployments

Cloud Pak for Integration

Integrate applications, data, cloud services, and APIs

IBM containerized software



Container platform and operational services 

Cloud Pak for Multicloud Management

Multicloud visibility, governance, and automation

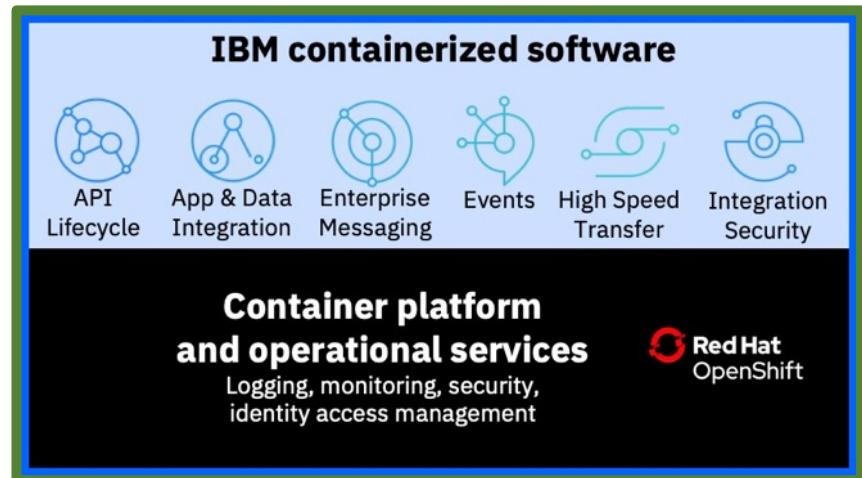
IBM containerized software



Container platform and operational services 

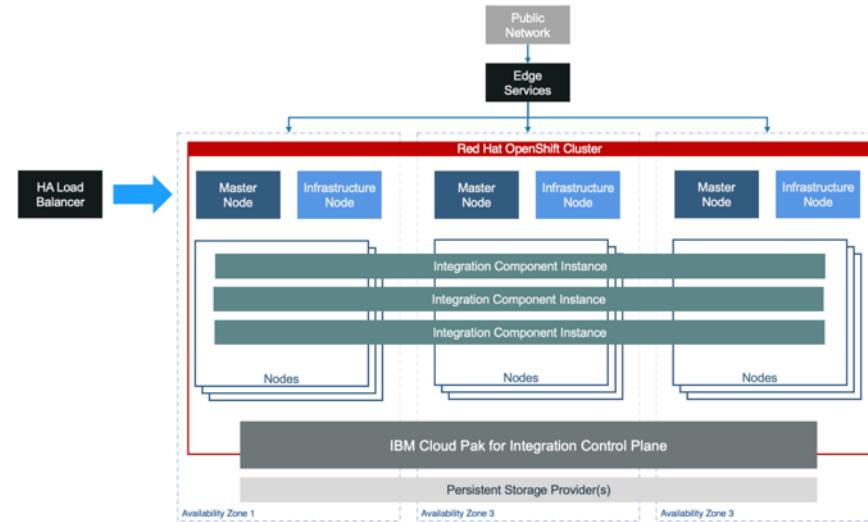
CP4I Includes OpenShift Entitlements

- OpenShift Entitlements included within the Cloud Pak for Integration
- No additional charge for OpenShift to deploy Cloud Pak for Integration
- Deploy Cloud Pak on any OpenShift supported 3rd party cloud
- OpenShift v3.11 supported for customer managed deployments
- Restricted use of OpenShift for CP4I components only



CP4I Cloud Native Deployment

- Cloud-native continuous availability by underlying OpenShift and K8 platform
- Single availability zone (AZ) or multi-AZs deployments in on-premise or public cloud
- Fault tolerance driven by quorum-based K8 requirements and deployments i.e. node failure tolerance of $(N-1)/2$ in a cluster



CP4I Integration & Platform Services

1. CP4I Integration Services

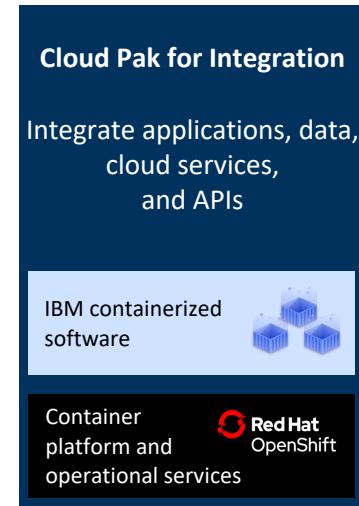
Accelerate integration development & deployment

- Platform Navigator
- Asset Repository
- End to end tracing (*futures)

2. Cross Pak Common Services

Provide consistency across cloud paks

- Logging, Monitoring, Metering
- Catalog & Helm chart deployment
- Identity and Access Management
- Multi-cluster management



Git Integration With Asset Repository

- First class integration of Git with Asset repository
- Fine-grained granularity to select Git branch, specific files into Asset repository
- Flexibility to link up multiple Git repo into Asset repository
- Auto-sync between Asset Repo and Git keeping assets up to date
- Powerful search based on metadata tagged in Asset repo for Git assets

The screenshot shows the 'Asset repository' section of the IBM Cloud Integration Platform. At the top, there are tabs for 'Browse Assets' and 'Settings'. A search bar asks 'What assets are you looking for?'. Below this, there are two main sections: 'Recently Added' and 'Highly Rated'. Under 'Recently Added', there are five asset cards: 'mortgage_API.json' (Open API), 'mortgage_generate.schema.json' (JSON Schema), 'customer.schema.json' (JSON Schema), and 'portfolio_optimization_service_d...' (Document). Each card includes details like owner (Constance Green), modified date, and a star rating. Under 'Available Assets', there is a table showing 24 assets with columns for NAME, OWNER, TAGS, TYPE, and DATE ADDED. The table lists various assets like 'Consumer API Microservice-1.0.0.pak', 'CurrencyConverter.xlsx', and 'Instrument_Universe.xlsx', each with its respective owner, tags (e.g., client, mobile app, application, consumer, mortgage, international, investment, savings), type (e.g., Open API, JSON Schema, Document), and date added.

NAME	OWNER	TAGS	TYPE	DATE ADDED
Consumer API Microservice-1.0.0.pak	Constance Green	client, services, consumer	Open API	7Feb 2019
CurrencyConverter.xlsx	Constance Green	mobile, mortgage, application	Document	7Feb 2019
CurrencyConverter_ConsumerSchema.xlsx	Constance Green	international	JSON Schema	7Feb 2019
ISA_Accounts.yaml	Constance Green	investment, savings	Open API	7Feb 2019
InputXMLSchema.xlsx	Constance Green	mobile app, mortgage	JSON Schema	7Feb 2019
Instrument_Universe.xlsx	Constance Green	mobile app, application, savings	Document	7Feb 2019



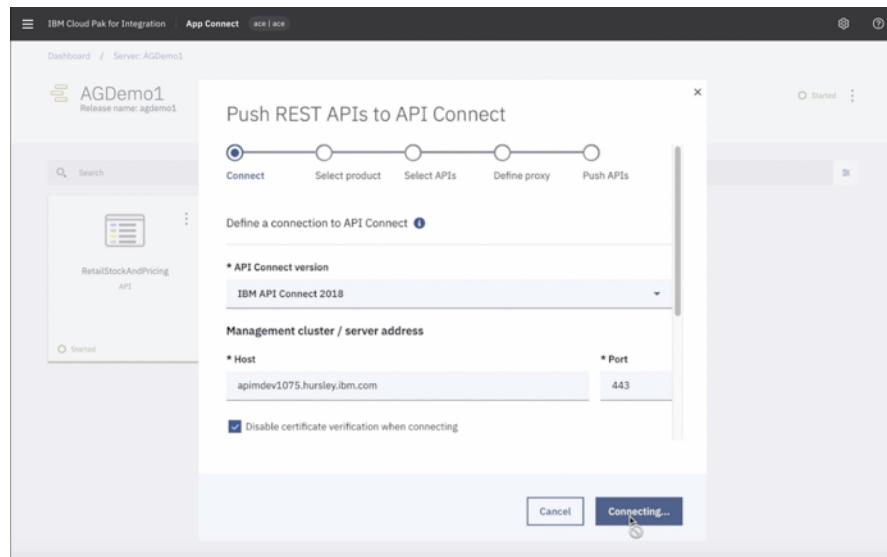
Enhanced Monitoring Dashboard

- Consistent monitoring dashboards across CP4I products
- Design-driven consistency of metrics across CP4I products
- Simpler navigation to instance specific monitoring dashboards (e.g. API Connect, App Connect, MQ, Event Stream, Aspera etc.)



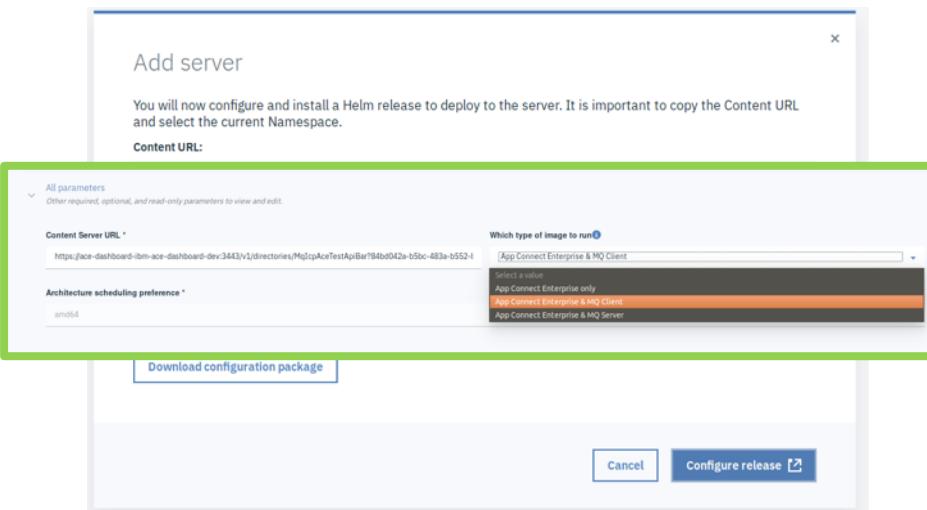
Seamless Integration for APIs and Application Flows

- Frictionless design-time experience in App Connect to publish APIs in API Connect
- Developer-oriented design to create flows, expose and manage as APIs
- Without leaving App Connect, in just 5 steps, publish APIs from App Connect into API Connect
- Increased developer productivity during design time with no switching between App Connect & API Connect consoles



Efficient MQ Connectivity From App Connect

- Efficient MQ connectivity in App Connect without deploying a queue manager
- Flexibility install App Connect with just MQ client image option with libraries to connect to any queue manager
- Optimized install footprint, avoiding deployment of local queue manager and persistent volumes, in order to have MQ client libraries



Deploy ACE with MQ Client libraries

Let's talk more! Contact Us



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