

App Connect Overview

—
Developer Advocacy

Tech Talk: Karan Chaturvedi

IBM Developer



Simple
Fast
Secure



IBM Cloud Pak For Integration – CP4i 

Premier Integration Experience



API Connect
Lifecycle &
Management



DataPower
Secure
Access



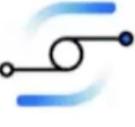
App Connect
Application
Integration



MQ
Enterprise
Messaging



Event
Streams
Kafka



Aspera
High Speed
File Transfer

Analytics | Security | Governance

On Cloud | Hybrid | On Premises

A Recap on Integration

What is Integration:

Integration is how systems and applications are connected to enable the systems and applications to exchange data with each other or with other connected and integrated applications and systems no matter what the data and/or protocols are being used between them

Why is Integration required:

Integration is required when 2 or more systems and applications need to communicate with each other. Systems need to be integrated for many reasons, such as

- ✓ *getting a single view of customer data that is located across many systems and applications*
- ✓ *Two or more companies merging into a single company that have disparate systems would benefit all the companies by integration of the applications and data*
- ✓ *Digital enablement of systems of records that are hosting company data and transactions*
- ✓ *Gather inflight data such as that used in banking applications cleanse the data, integrate the data into dashboards rendered from analytics engines offering users enhanced views of their data, adding value to customer insights*



A Recap on Integration

Who provides integration solutions

Integration solution providers:

Many companies provide integration solutions varying in capability, performance, out of the box experience, deployment options etc.

How to choose an Integration solution & vendor:

Don't focus on an initial project that might be a simple integration point

A vendor solution may do an initial project well but may be limited in extending to other integration points & projects

Do focus on other potential future integration points & projects

Finding out that a vendor cannot do other integration points will lead to higher costs, additional integration products, additional management and skills

Do choose a vendor that has a strong history and support for integration solutions

A vendor that can provide integration for initial and future projects will allow the solution to be extended and scaled to meet future needs

Don't choose a vendor that has limited deployment options

Choosing a vendor that only supports a limited set of deployment options creates lock-in & inflexible architectures

Do choose a vendor that provides flexibility

A vendor that provides integration across many different deployment and architectures will provide proof points for future integration needs, flexibility in moving integration as business needs change

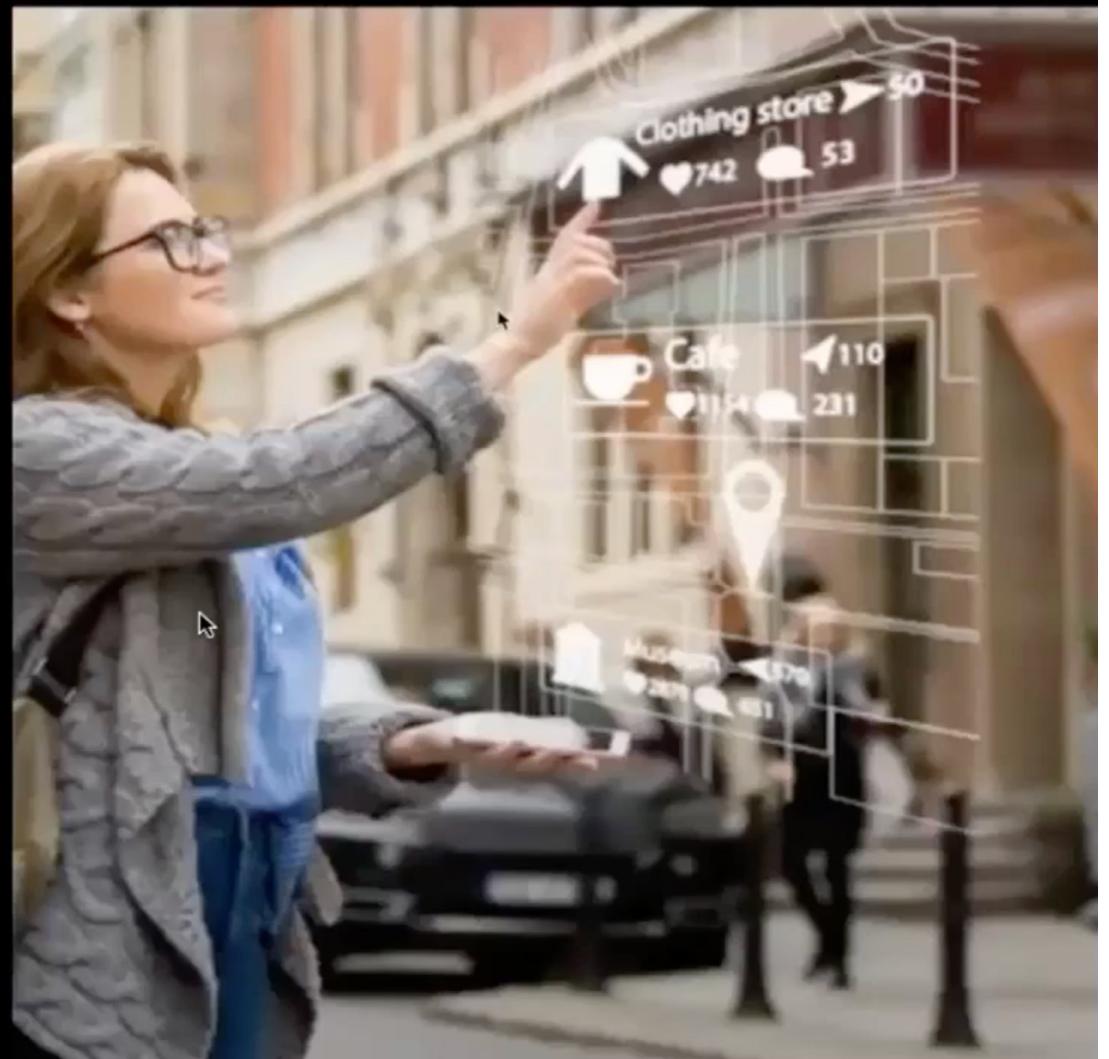


Integration in our everyday life

In real life you may or not realize but integration flows are triggered all the time such as:

- When you place an order from your favourite shopping app, the order data then flows to shipping and accounting.
- When you book a hotel from your favourite travel app, the booking data then flows to the hotel's reservation system and to the payment app and to your bank and so on...
- Then the marketing starts notifying you for more deals based on your booking/shopping preferences.

In the modern digital era the flow of data is not only limited in the enterprise boundaries, but also could span different entities or could trigger another flow.



IBM App Connect

Integrate anything.
Automate everything



Accelerate your journey
to the next level with
***IBM Cloud Pak for
Integration***



IBM

Application Integration

Integrate applications, build APIs and act on events



IBM App Connect connects your apps, events, data and APIs to quickly automate your business landscape

- **Connect** - securely connect to 100s of apps with out-of-the-box smart connectors
- **Transform** - leverage AI to help map fields and intelligently structure the format of your information
- **Test** - validate flows and ensure quality with visual debugging and generated test cases as part of automated pipelines
- **Operate** - end to end visibility of integration flow operations from any deployment—cloud managed, private cloud, ESB, or microservice

The screenshot shows the IBM App Connect user interface. At the top, there's a navigation bar with 'IBM App Connect', a back arrow, 'Dashboard / Untitled flow 8', a search bar, and 'Create' and 'Exit and switch on' buttons. Below the navigation is a flow editor with three connected nodes: 'IBM Watson Tone Analyze' (Account 1), 'Innately' (Remove opportunities), and 'Salesforce' (Account 1). A cursor is hovering over the connection between the Innately and Salesforce nodes. To the right of the flow editor is a configuration panel for the 'Create order' step in Salesforce. It includes a section titled 'Populate the target fields in Salesforce' with an 'Auto-match fields' button, a 'Filter the target fields' search bar, and a table of target fields with dropdown menus for mapping. The fields listed are: Owner ID, Contact ID, Account ID, Price Book ID, Order ID, 'Order Start Date' (with a value of '2018-01-12'), Order End Date, and Reduction Order.

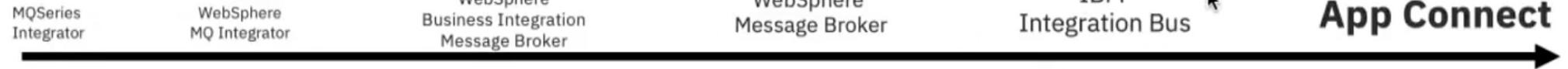
Powering Enterprises for past **20 years**

Continuous innovation and investment

Undisputed market leader in integration space for past 20 years in a row!

Given the size and relevancy in the market, we continue to invest aggressively to build on our strong heritage as a consistent leader.

Evolving rapidly over 2018, delivering new features every quarter in each successive release.

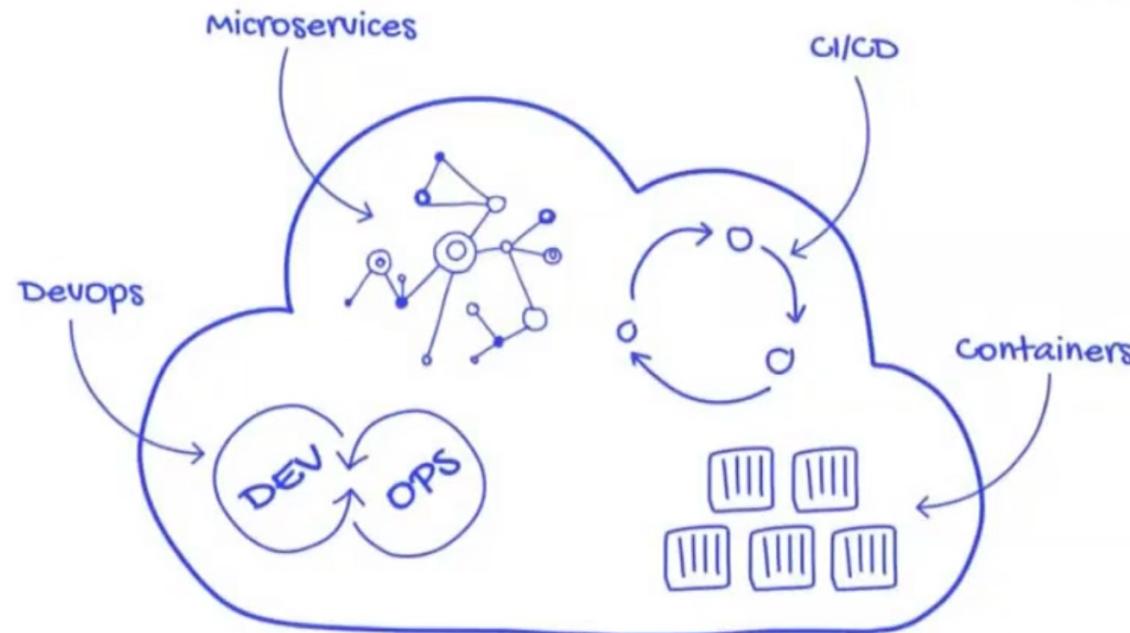




App Connect Enterprise

*IBM's High Performance
Integration Solution to integrate
applications and systems Hybrid,
On-Prem & Cloud*

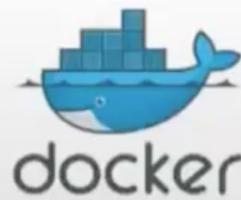
Re-engineered to be completely Cloud-native ready



- ✓ New micro-service architecture
- ✓ Kubernetes and container native
- ✓ Easy upgrade from IIB v9, v10
- ✓ Automated pipeline deployment ready
- ✓ **Now supported on OpenShift v4.2**

Long and successful history of running App Connect Enterprise Certified Containers

IBM integration supported Docker containers in 2015



Our certified container is developed in the open available on GitHub:
github.com/ot4i/ace-docker



GitHub

It was one of the first certified containers available on IBM's Kubernetes platform, showing how to run integration in a managed container environment.



kubernetes

IBM App Connect is a core component of IBM's Cloud Pak for Integration, providing **integration** for the Integration Platform solution



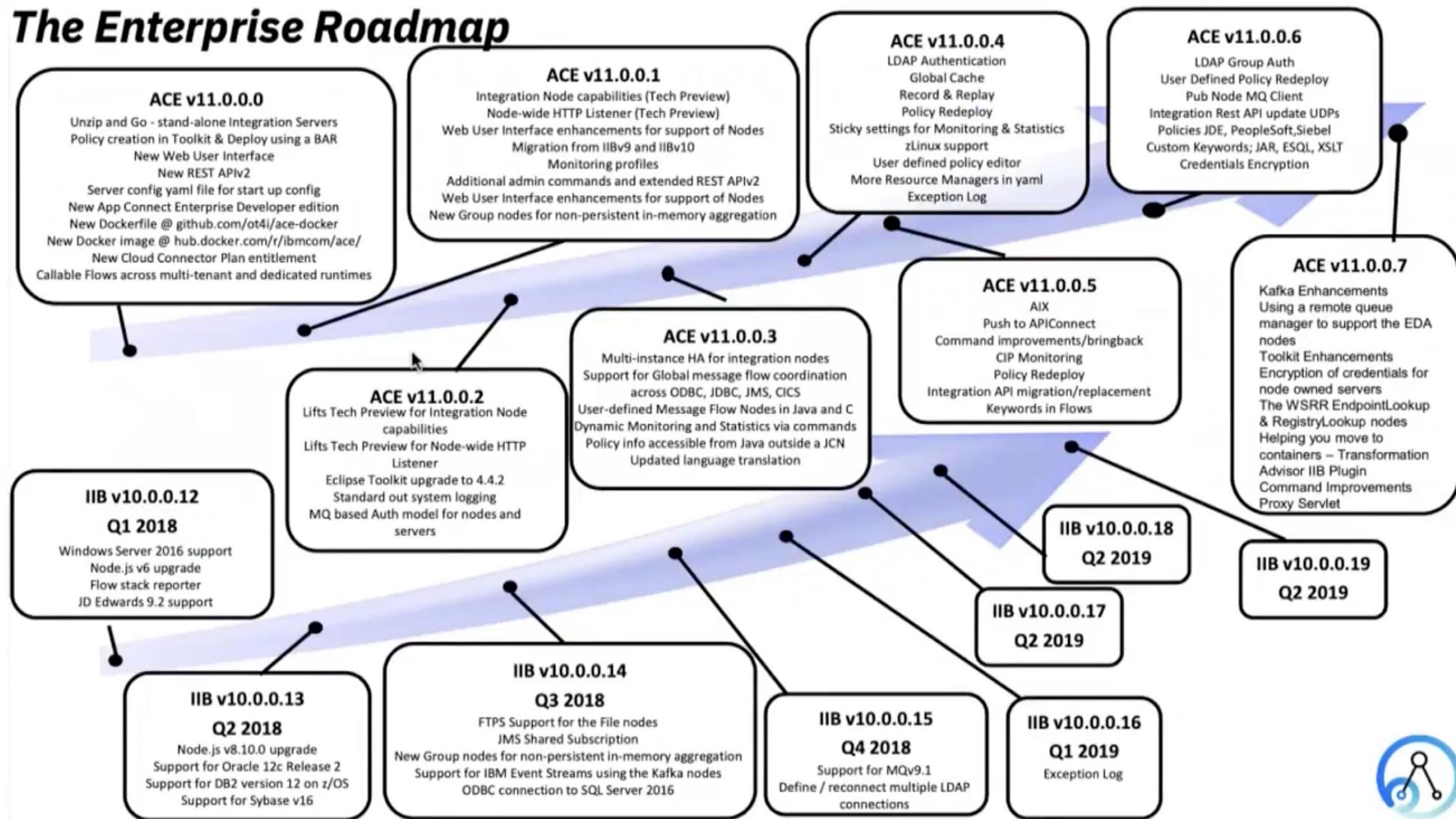
2015

hub.docker.com/r/ibmcom/ace

github.com/ot4i/ace-docker

2020

The Enterprise Roadmap



Choose your Containerization journey

IBM Software
(Core product functionality)

Base OS Container Image

Deployment/Orchestration
(Helm chart, Operator)

Platform Services
(Logging, monitoring etc)

Additional Services
(asset repo, cross-product tracing)

Ad-hoc Container

Build your own integration server Docker image.

Dockerfile on github.com/ot4i/ace-docker

Use ACE supported base Operating System image.

Use ACEv11 Linux package from Passport Advantage or free Developer Edition

Be Cautious: Issues relating to the running integration server, but not for the custom container



GitHub



docker

IBM Certified Container

Use IBM provided integration Docker images

IBM provided Docker image using UBI (RHEL) available either from the IBM Cloud Entitled Registry as a supported release, or as a free version from Dockerhub.

Designed to be run with the App Connect Operator on OpenShift.

Only integration server image is supported for use outside of the Operator and OpenShift, e.g. using Docker or Kubernetes



kubernetes



RED HAT
OPENSHIFT
Container Platform

IBM Cloud Pak for Integration

Go beyond application integration!

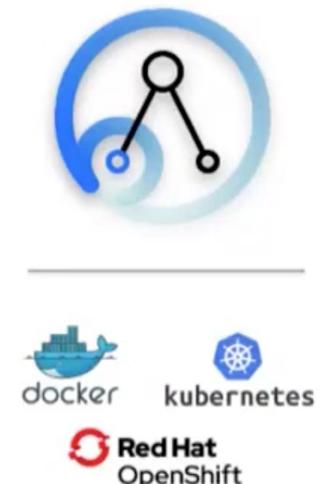
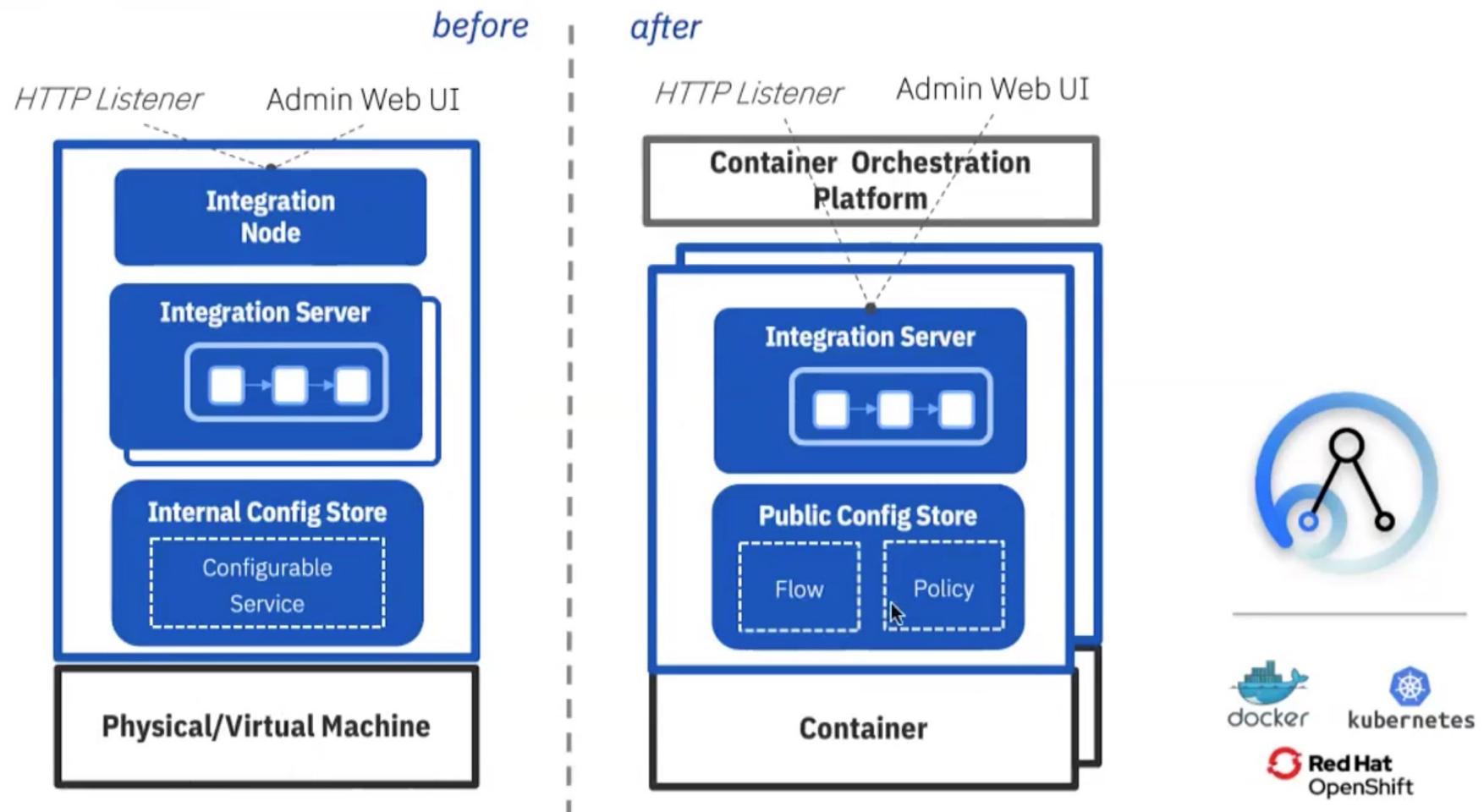
with API lifecycle, messaging and events, high-speed transfer, and integration security.

With unified experience, operational efficiency & reuse



Fully engineered 12 factor integration micro services

How the IIB/ACE architecture has evolved to embrace containers

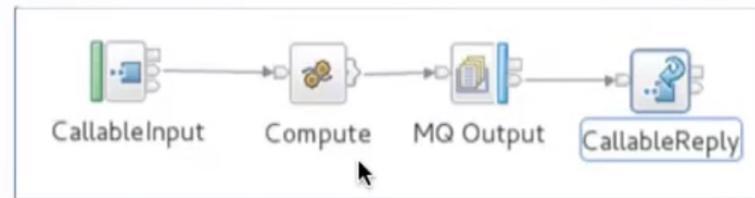
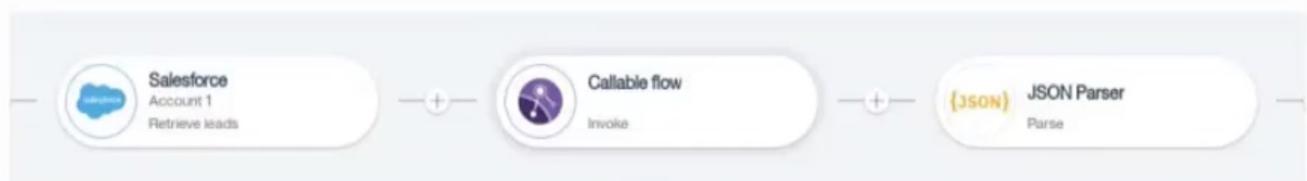


App Connect – Callable flows



Supports frictionless collaboration between personas

- Extends pre-v11 capabilities for to interact across a hybrid deployment
- Allows scenarios such as Enterprise flows being triggered by cloud connectors
- Enterprise flows can be on-prem or cloud hosted
- Simpler alternative to publishing a REST API



Architecture

