

Getting started with ICP4I

IBM Cloud Pak for Integration

-
Cloud native solution for your integration needs



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About me

Vedran Vidović @ CROZ d.o.o.

- 18 years in IT industry – development, analysis, design & architecture
- 11 years working on enterprise integration projects
- Java / J2EE / Spring
- IBM DataPower
- IBM Integration Bus (App Connect)
- IBM API Connect

Overview

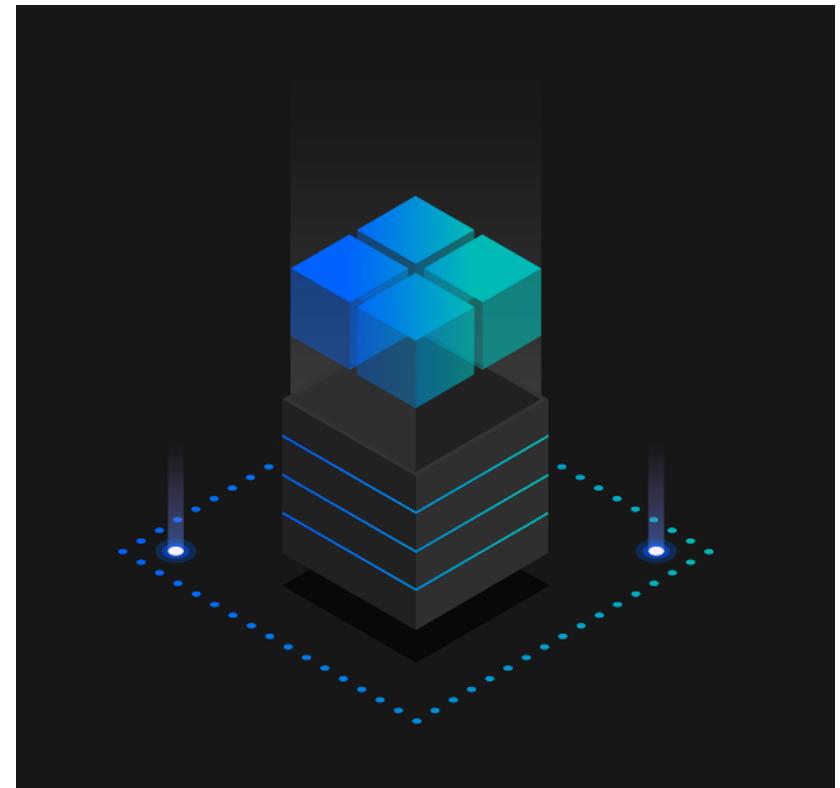
- IBM Cloud Paks
- IBM Cloud Pak for Integration
- Demo



IBM Cloud Paks

Cotainerized middleware & services
on OpenShift
on RHEL

- Applications
- Data
- Integration
- Automation
- Multicloud Management



Red Hat OpenShift

OPENSHIFT CONTAINER PLATFORM Service Catalog

Search Catalog

Browse Catalog

Deploy Image Import YAML / JSON Select from Project

All Languages Databases Middleware CI/CD Other

Filter ▾ 188 Items

.NET .NET .NET .NET 3scale-gateway

.NET Core .NET Core + PostgreSQL (Persistent) .NET Core Example .NET Core Runtime Example 3scale-gateway

amp-apicast-wildcard-router amp-pvc Apache HTTP Server Apache HTTP Server (httpd) CakePHP + MySQL

CakePHP + MySQL (Ephemeral) Dancer + MySQL Dancer + MySQL (Ephemeral) Django + PostgreSQL Django + PostgreSQL (Ephemeral)

My Projects

+ Create Project

5 of 29 Projects View All

ace created a month ago

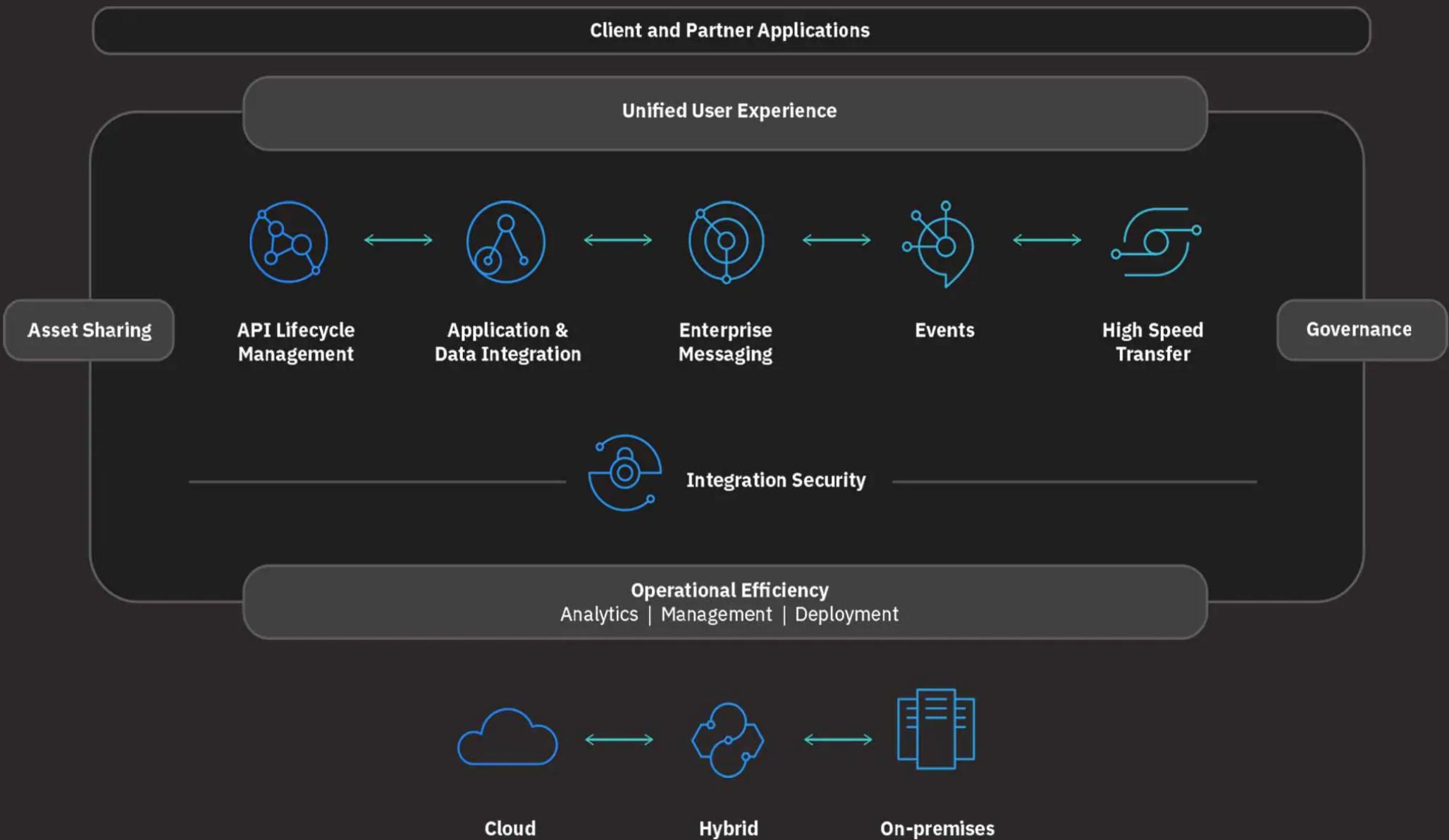
apic created a month ago

aspera created a month ago

cert-manager created a month ago

datapower created a month ago

IBM Cloud Pak for Integration

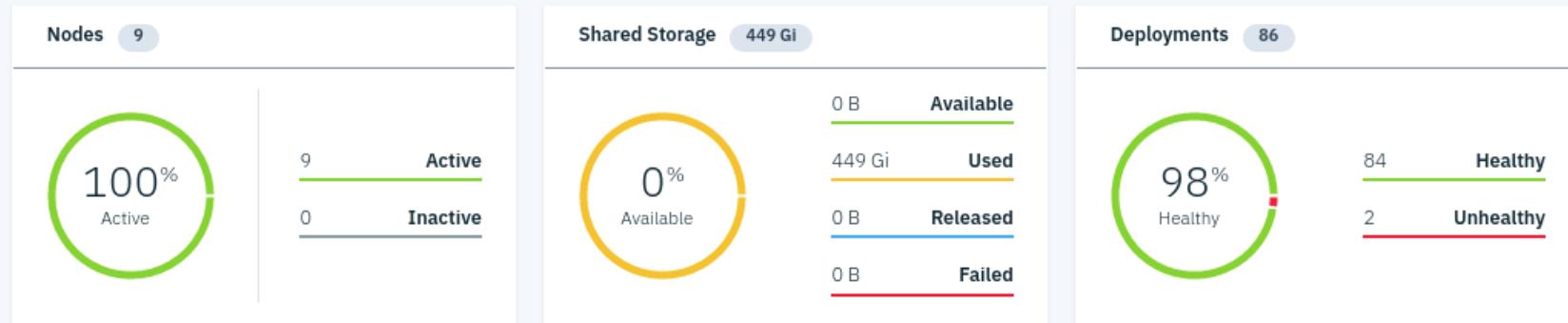


IBM Cloud Private

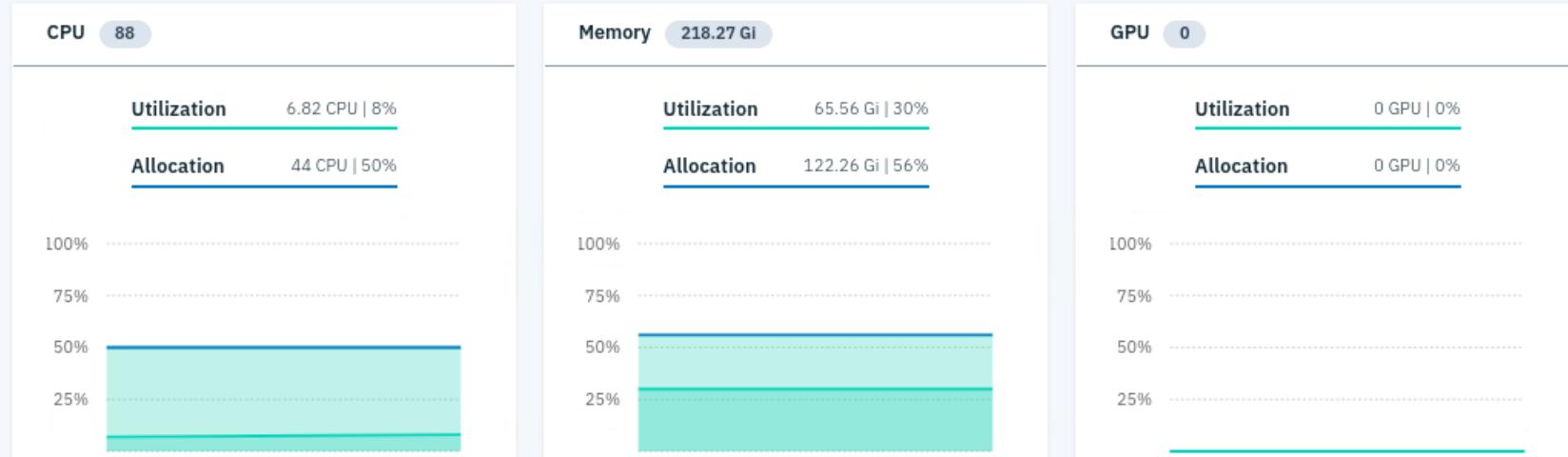


Overview

System Overview



Resource Overview



IBM Cloud Pak for Integration Platform navigator

The screenshot shows the IBM Cloud Pak for Integration Platform navigator interface. At the top, there is a header bar with the title "IBM Cloud Pak for Integration" and "Platform home". Below the header is a search bar labeled "Find". The main area contains six service cards arranged in two rows of three:

- API Connect**: Shows one instance named "apic" and one named "apic-1". Buttons for "Add new instance" and "Edit" are present.
- App Connect**: Shows one instance named "ace" and one named "ace-1". Buttons for "Add new instance" and "Edit" are present.
- MQ**: Shows one instance named "mq" and one named "mq-1". Buttons for "Add new instance" and "Edit" are present.
- Event Streams**: Shows one instance named "eventstreams" and one named "es-1". A warning icon is shown next to "es-1". Buttons for "Add new instance" and "Edit" are present.
- Aspera**: Shows one instance named "aspera" and one named "aspera-1". A warning icon is shown next to "aspera-1". Buttons for "Add new instance" and "Edit" are present.
- DataPower**: Shows one instance named "datapower" and one named "dp-1". Buttons for "Add new instance" and "Edit" are present.

IBM Cloud Pak for Integration

APIC

IBM Cloud Pak for Integration | API Connect apic | apic-1 Organization: Think

Welcome to the API Manager

Choose an option to get started

The dashboard features a sidebar with navigation icons and a top bar with organization information. The main area contains six cards:

- Develop APIs and Products**: Edit, assemble, secure and test APIs. Package APIs using products for publishing to consumers.
- Manage Catalogs**: Manage active APIs and consumers.
- Manage Resources**: Configure user registries, OAuth providers and TLS.
- Manage Settings**: Edit settings for roles, notifications and more.
- Learn more**: Documentation and tutorials with step-by-step instructions.
- Connect**: Find expert answers in the API Connect community forum.

IBM Cloud Pak for Integration

Event Streams (Kafka)

IBM Cloud Pak for Integration | Event Streams | eventstreams | es-1 | ? | @

es-1

Getting started Topics Consumer groups Schemas Monitoring Toolbox Connect to this cluster

Welcome to IBM Event Streams, let's get you up and running...

 Use a simulated topic
Start exploring what IBM Event Streams has to offer with our simulated topic. You can do this even if your brokers aren't ready

 Generate a starter application
Download and install our starter Kafka application and view data flowing to and from IBM Event Streams in just a few minutes

 Kafka basics
Learn the basics of Apache Kafka, the heart of Event Streams.

 Schema basics
Learn about the

System is healthy

IBM Cloud Pak for Integration

App Connect (ACE)

IBM Cloud Pak for Integration | App Connect ace | ace-1 ⚙️ 🎉

Last refreshed: 11/8/2019, 10:27:38 AM Refresh

Servers Integrations Servers

Search Add server +



Hmm, nothing here yet!

There are no servers defined. Once you define some, they'll appear here.

IBM Cloud Pak for Integration

MQ

The screenshot shows the IBM Cloud Pak for Integration interface for the MQ service. The top navigation bar includes the IBM Cloud Pak for Integration logo, the MQ tab, and a search bar with the query "mq | mq-1". Below the navigation is a toolbar with tabs ("Tab 1" and "+"), a settings gear icon, a help question mark icon, and a user profile icon. A "Local Queue Managers" section contains a table with one entry: "mq" in the Name column and "Running" in the Status column, accompanied by a green circular status indicator. A search bar labeled "Search" is positioned above the table. At the bottom of the table, it says "Total: 1" and "Last updated: 10:29:51 AM". To the right of the table is a button labeled "Add widget".

Name	Status
mq	Running

Total: 1 Last updated: 10:29:51 AM

Add widget

Demo



Demo REST API

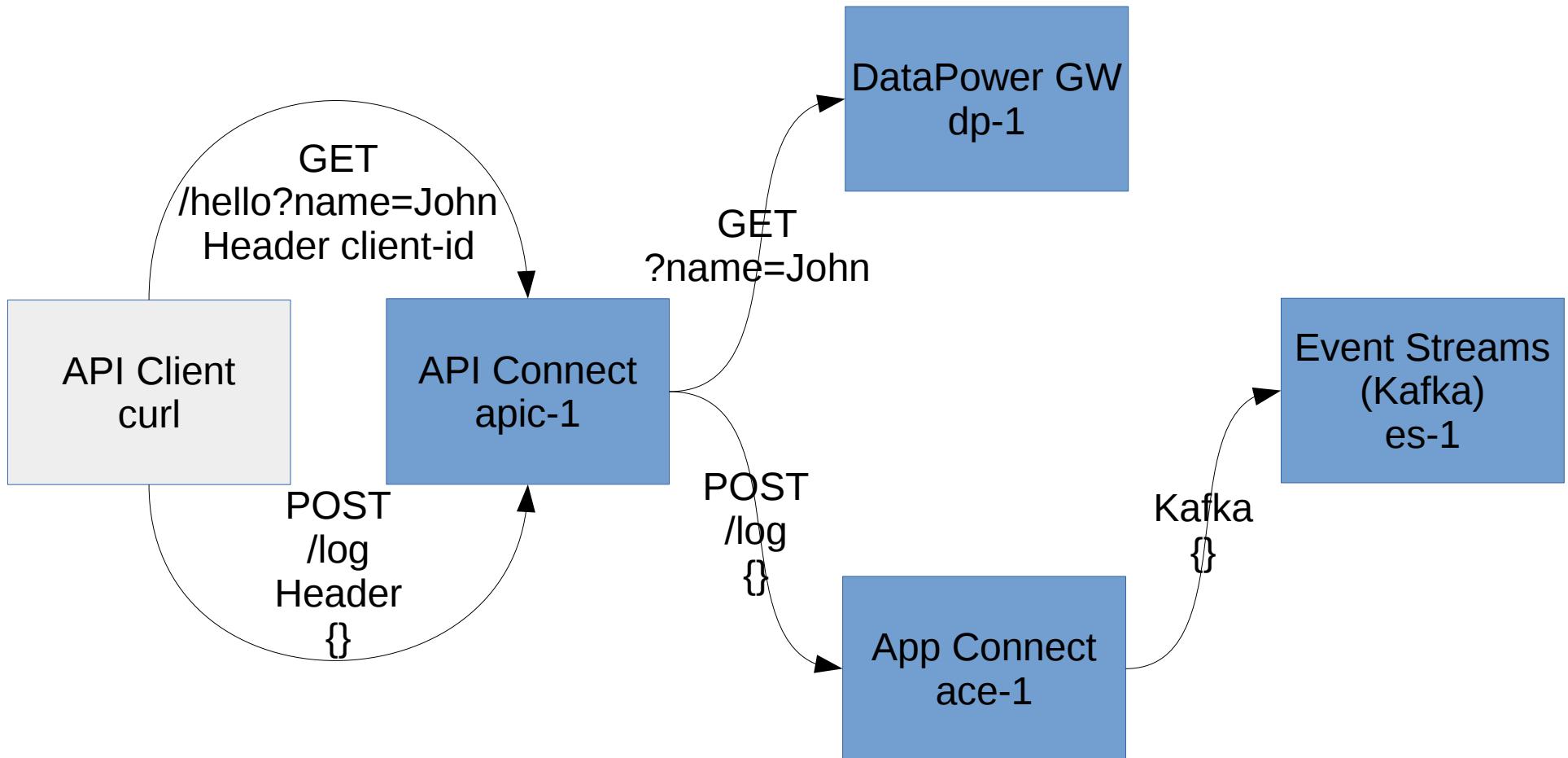
APIC GET /hello -> dpgw (loopback)

APIC POST /log -> ace -> es (Kafka)

~~APIC POST /message -> dpgw -> mq (TODO)~~



Demo: /hello + /log





500 mL

400

350
250
150 mL



Demo details follow...

REST echo DataPower loopback application

In this part of demo we will create DataPower loopback XML proxy application which will use GatwayScript to send back hello JSON messages based on received “name” query parameter.

After that we will expose this service as API using IBM API Connect.

DataPower appliance local access setup

```
$ oc get pods -n datapower
```

NAME	READY	STATUS	RESTARTS	AGE
dp-1-ibm-datapower-icp4i-756d999fbb-zzhv2	1/1	Running	13	34d

```
$ oc port-forward -n datapower dp-1-ibm-datapower-icp4i-756d999fbb-zzhv2  
9090:9090 5554:5554
```

```
Forwarding from 127.0.0.1:9090 -> 9090
```

```
Forwarding from [::1]:9090 -> 9090
```

```
Forwarding from 127.0.0.1:5554 -> 5554
```

```
Forwarding from [::1]:5554 -> 5554
```

Accessing ICP4I datapower appliance – browser / REST API
(<https://github.com/croz-ltd/dpcmder>):

- 1) Web browser: <https://localhost:9090> (username/password: admin/admin)
- 2) REST (cmd) : \$ dpcmder -r <https://localhost:5554> -u admin -p admin

Access DataPower Web Mgmt enabling REST Mgmt

The screenshot shows the IBM DataPower Gateways interface. The left sidebar has a blue navigation bar with icons for Cloud, Metrics, Health, and Other. The main menu under Network includes Interface, Management (Telnet Service, SSH Service, Web Management Service, XML Management Interface, REST Management Interface), and Other. The REST Management Interface is selected. The top header shows the title "IBM DataPower Gateways | IDG console at dp-1-ibm-datapower-icp4i-", user "admin", and a status bar with "default" and "IBM".

REST Management Interface
Status: down - Object is disabled

Main

Enable administrative state:	<input checked="" type="checkbox"/>
* Local address:	0.0.0.0
* Port Number:	5554
Custom SSL server type:	Server Profile
Custom SSL server profile:	<input type="text"/> <input type="button" value="edit"/> <input type="button" value="new"/>
Access Control List:	rest-mgmt <input type="button" value="edit"/> <input type="button" value="new"/>
Comments:	<input type="text"/>

Actions

Access DataPower Web Mgmt creation of new domain

The screenshot shows the 'Application Domain' configuration dialog. On the left is a vertical toolbar with icons for Home, Applications, Services, and Monitoring. The main area has a title bar 'Application Domain' and a sub-header 'Application Domain VCD *'. The 'Main' section contains fields for 'Name' (set to 'VCD'), 'Enable administrative state' (checked), 'Comments' (empty), and 'Visible application domains' (set to 'default'). Below this are sections for 'File permission to the local directory' and 'File-monitoring of the local directory', each with several checkboxes. At the bottom are 'Apply' and 'Cancel' buttons.

Application Domain

Application Domain
VCD *

Name:

Main

Enable administrative state:

Comments:

Visible application domains:

File permission to the local directory:

Allow files to be copied from
 Allow files to be copied to
 Allow files to be deleted
 Allow file content to be displayed
 Allow files to be run as scripts
 Allow subdirectories to be created

File-monitoring of the local directory:

Enable auditing
 Enable logging

Access DataPower Web Mgmt switching to new domain

IBM DataPower Gateways | IDG console at dp-1-ibm-datapower-icp4i-

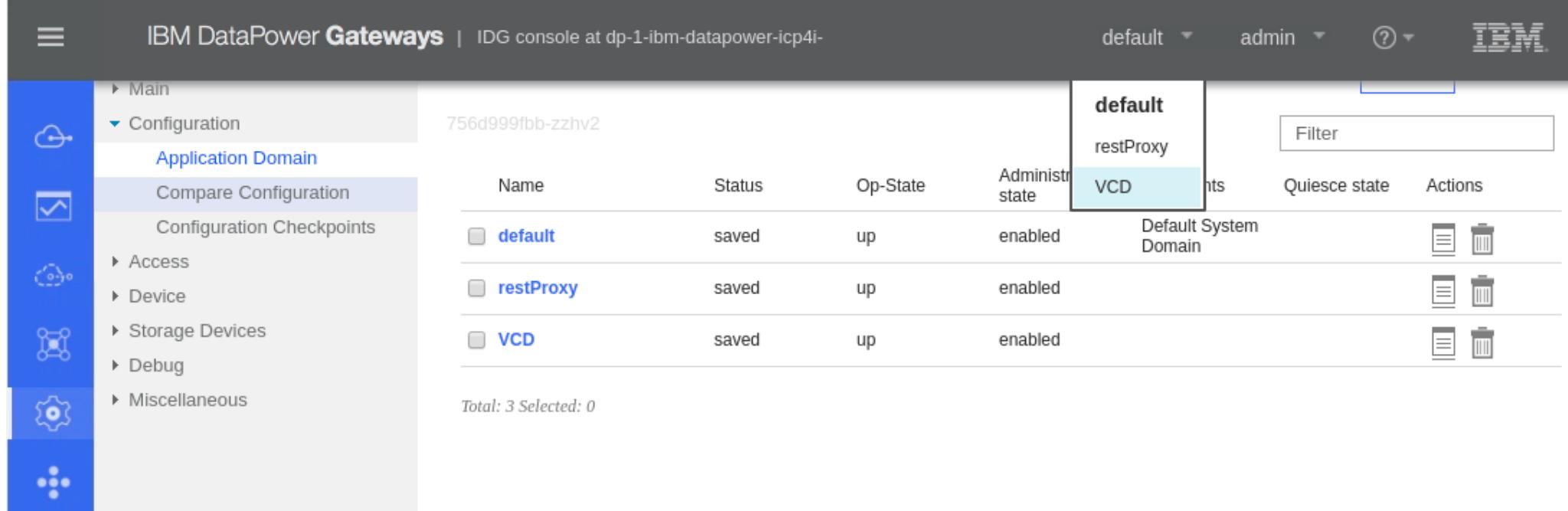
default admin ? IBM

Main Configuration Application Domain Compare Configuration Configuration Checkpoints Access Device Storage Devices Debug Miscellaneous

756d999fbb-zzhv2

Name	Status	Op-State	Administrative state	VCD	Default System Domain	Quiesce state	Actions
<input type="checkbox"/> default	saved	up	enabled				 
<input type="checkbox"/> restProxy	saved	up	enabled				 
<input type="checkbox"/> VCD	saved	up	enabled				 

Total: 3 Selected: 0



Access DataPower Web Mgmt importing demo service

Import configuration

Details about the configuration data to import

Domain name:	vvidovic
Comment:	
User name:	admin
Appliance name:	dptf
Firmware version:	XI52.7.5.2.13
Export time stamp:	2019-11-06

The following configurations are new:

Matching:match-all
 StylePolicyAction:vcd-demo-xmlfw-policy_rule_gatewayscript_0
 StylePolicyRule:vcd-demo-xmlfw-policy_rule
 StylePolicy:vcd-demo-xmlfw-policy
 XMLFirewallService:vcd-demo-xmlfw

The following configurations already exist:

HTTPUserAgent:default
 XMLManager:default

The following files are new:

local:///vcd-cpi-echo.js

DataPower appliance cluster port access setup

```
$ oc get service -n datapower
NAME          ... PORT(S)
dp-1-ibm-datapower-icp4i  ... 8443:30200/TCP

$ oc get service dp-1-ibm-datapower-icp4i -n datapower -o yaml > tmp.yaml

$ vi tmp.yaml
ports:
- name: helloproxy-datapower
  nodePort: 30201
  port: 20001
  protocol: TCP
  targetPort: 20001
- name: restproxy-datapower
  nodePort: 30200
  port: 8443
  protocol: TCP
  targetPort: 8443

$ oc apply -f tmp.yaml

$ oc get service -n datapower
NAME          ... PORT(S)
dp-1-ibm-datapower-icp4i  ... 20001:30201/TCP,8443:30200/TCP
```

Access DataPower demo service

The screenshot shows the IBM Cloud Pak for Integration platform home page. On the left, there's a sidebar with links: Platform home, IBM Cloud Private, Logging, Monitoring, and Asset repository (0 instances). The main area displays a DataPower service entry. A context menu is open over the service name "dp-1", with options like "Logs" and "Release details". An arrow points from the "Release details" option to the bottom right of the screenshot, where a detailed view of the service is shown.

Platform home

DataPower

Find

datapower

dp-1

Logs

Release details

IBM Cloud Private CLUSTER mycluster

[View All](#)

dp-1 ● Deployed

UPDATED: October 3, 2019 at 9:04 PM

Details and Upgrades

CHART NAME	CURRENT VERSION	AVAILABLE VERSION
ibm-datapower-icp4i	1.0.3	1.0.4 •
NAMESPACE	Installed: October 3, 2019 → ReadMe	Released: September 25, 2019 → Release Notes
datapower		

Launch ▾

helloproxy-datapower

restproxy-datapower

Open link in new tab

Open link in new window

Open link in incognito mode

Save link as...

Copy link address

Inspect

Upgrade

Rollback

Access DataPower REST Mgmt dpcmder

```
ibmuser@developer:~/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
File Edit View Search Terminal Help
admin @ https://localhost:5554 ()          /home/ibmuser/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
.
.
.
default
restProxy
VCD
d 29 2019-11-08 07:18:27 ..
f 3332 2019-11-08 09:12:38 dp-demo.zip
f 9494 2019-11-08 07:18:27 export.xml
```

```
ibmuser@developer:~/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
File Edit View Search Terminal Help
admin @ https://localhost:5554 (VCD)          /home/ibmuser/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
.
.
.
cert:
chkpoints:
config:
export:
local:
logstore:
logtemp:
policyframework:
pubcert:
sharedcert:
store:
temporary:
d 29 2019-11-08 07:18:27 ..
f 3332 2019-11-08 09:12:38 dp-demo.zip
f 9494 2019-11-08 07:18:27 export.xml
```

```
ibmuser@developer:~/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
File Edit View Search Terminal Help
admin @ https://localhost:5554 (VCD) local:          /home/ibmuser/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
d 363 2019-11-08 04:19:04 ..
f vcd-cpi-echo.js
d 29 2019-11-08 07:18:27 ..
f 3332 2019-11-08 09:12:38 dp-demo.zip
f 9494 2019-11-08 07:18:27 export.xml
```

curl -> DataPower (live changes in GatewayScript)

```
ibmuser@developer:~/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
File Edit View Search Terminal Help
[ibmuser@developer dp]$ curl http://icp-proxy.10.0.10.2.nip.io:30201 ; echo
{"msg":"Hello","name":"","client":"10.128.0.1:40850"}
[ibmuser@developer dp]$ curl http://icp-proxy.10.0.10.2.nip.io:30201?name=DpCaller1 ; echo
{"msg":"Hello","name":"DpCaller1","client":"10.128.0.1:40868"}
[ibmuser@developer dp]$
```

```
ibmuser@developer:~/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
File Edit View Search Terminal Help
// var://service/URI      string '/?name=John'
const sm = require('service-metadata');
const uri = sm.URI;
const name = uri.substr(uri.indexOf('name=')+ 'name='.length)
// var://service/client-service-address string '10.0.16.84:52338'
const client_host_port = sm.clientServiceAddress;
session.output.write({"msg": "Hello", "fullname": name, "client": client_host_port});
~
```

```
ibmuser@developer:~/Downloads/vcd-cloud-migration-icp4i-master/demo/dp
File Edit View Search Terminal Help
[ibmuser@developer dp]$ curl http://icp-proxy.10.0.10.2.nip.io:30201 ; echo
{"msg":"Hello","name":"","client":"10.128.0.1:40850"}
[ibmuser@developer dp]$ curl http://icp-proxy.10.0.10.2.nip.io:30201?name=DpCaller1 ; echo
{"msg":"Hello","name":"DpCaller1","client":"10.128.0.1:40868"}
[ibmuser@developer dp]$ curl http://icp-proxy.10.0.10.2.nip.io:30201?name=DpCaller2 ; echo
{"msg":"Hello","fullname":"DpCaller2","client":"10.128.0.1:40948"}
[ibmuser@developer dp]$
```

APIC - Import existing API + Product

IBM Cloud Pak for Integration | **API Connect** apic | apic-1 Organization: Think

Develop

APIs and Products

Add

API
Product

The screenshot shows the IBM Cloud Pak for Integration API Connect interface. The top navigation bar includes the organization name "IBM Cloud Pak for Integration", the product "API Connect", and the workspace "apic | apic-1". On the far right, it shows the current organization "Think" and a user icon. The main area is titled "Develop" and contains a sidebar with various icons. The central panel is titled "APIs and Products" and features a large blue "Add" button with "API" and "Product" options. Below the button, there is a placeholder icon of an open box with stars and the text "You haven't added any APIs or Products".

APIC - Import existing API



IBM Cloud Pak for Integration

API Connect

apic | apic-1

Add API



Create a REST proxy based upon a WSDL described target service



New OpenAPI

Compose a new REST proxy by defining paths and operations

Import



Existing OpenAPI

Use an existing definition of a REST proxy



From asset repository

Import OpenAPI definition from asset repository

Cancel

Next

APIC - Import existing API

The screenshot shows the 'Import API' dialog box from the IBM Cloud Pak for Integration API Connect interface. At the top, the navigation bar includes the IBM Cloud Pak for Integration logo, 'API Connect', and the workspace name 'apic | apic-1'. The main title 'Import API' is centered above a large input area. To the left of this area is a blue button with a white left-pointing arrow. The input area contains a dashed rectangular outline where a file named 'vcd-cp4i-demo-api.yaml' has been dropped. A green circular icon with a white checkmark is positioned inside this outline. Below the input area, a green notification bar displays the message 'YAML has been successfully validated' next to a green checkmark icon. In the bottom right corner of the dialog, there are two buttons: 'Cancel' and 'Next'.

APIC - Import existing API

The screenshot shows a web-based interface for managing APIs in IBM Cloud Pak for Integration's API Connect service. At the top, a dark header bar displays the navigation menu (three horizontal bars), the product name "IBM Cloud Pak for Integration", the service name "API Connect", and the specific instance "apic | apic-1". Below the header, the main content area has a light gray background. On the left, there is a vertical sidebar with a blue button containing a white left-pointing arrow. The main title "Import API" is centered at the top of the content area. A sub-section titled "Activate API" is highlighted with a light gray background. The text "This API will be available to be invoked when the following option is enabled." is displayed above a checkbox labeled "Activate API". At the bottom right of the content area, there are three buttons: "Cancel" (light blue), "Back" (light blue), and "Next" (dark blue).

IBM Cloud Pak for Integration | API Connect apic | apic-1

Import API

←

Activate API

This API will be available to be invoked when the following option is enabled.

Activate API

Cancel Back Next

APIC - Import existing API

The screenshot shows a web-based interface for managing APIs in IBM Cloud Pak for Integration. At the top, a dark header bar displays the navigation menu (three horizontal bars), the product name "IBM Cloud Pak for Integration", the sub-product "API Connect", and the specific instance "apic | apic-1". Below the header, the main content area has a light gray background. On the left, there is a vertical sidebar with a blue button containing a white left-pointing arrow. The main content area features a title "Import API" at the top center. Below the title, a section titled "Summary" is visible, containing a green circular icon with a white checkmark and the text "Generated OpenAPI 2.0 definition". In the bottom right corner of the main content area, there is a blue rectangular button labeled "Edit API".

APIC - Import existing Product

IBM Cloud Pak for Integration | API Connect apic | apic-1 Organization: Think 

Add Product

[←](#)

Create

New product
Compose a new product by adding rate limits and plans

Import

Existing product
Use an existing definition of a product

[Cancel](#) [Next](#)

APIC - Import existing Product

The screenshot shows a web-based interface for importing an existing product. At the top, a dark header bar displays the navigation menu, the text "IBM Cloud Pak for Integration | API Connect", and the workspace name "apic | apic-1". Below the header, the main title "Import an Existing Product" is centered above a large input area. This input area features a dashed blue border and contains a green circular icon with a white checkmark in the center. In the bottom-left corner of this area, the file path "vcd-cp4i-demo-product.yaml" is visible, with a small "X" icon to its right. A green horizontal banner at the bottom of the input area states "YAML has been successfully validated" next to a green checkmark icon. At the very bottom of the page, there are two buttons: "Cancel" on the left and "Next" on the right.

APIC - Import existing Product

The screenshot shows a web-based interface for IBM Cloud Pak for Integration's API Connect. At the top, there is a dark header bar with the text "IBM Cloud Pak for Integration" and "API Connect" followed by a workspace identifier "apic | apic-1". Below the header, the main content area has a title "Import an Existing Product" and a blue back arrow button on the left. A central panel is titled "Publish" and contains the sub-instruction "Enable publishing of this product". Below this, there is a checkbox labeled "Publish product". At the bottom right of the main content area, there are three buttons: "Cancel", "Back", and a blue "Next" button.

IBM Cloud Pak for Integration | API Connect apic | apic-1

Import an Existing Product

←

Publish

Enable publishing of this product

Publish product

Cancel Back Next

APIC - Import existing Product

The screenshot shows a user interface for importing an existing product. At the top, a dark header bar displays the navigation menu (three horizontal lines), the text "IBM Cloud Pak for Integration", the "API Connect" service name, and the specific instance "apic | apic-1". Below the header, the main title "Import an Existing Product" is centered above a blue navigation bar with a left arrow icon. The main content area is titled "Summary" and contains a green circular icon with a checkmark followed by the text "Created new product". In the bottom right corner of the main content area, there is a blue button labeled "Edit Product".

IBM Cloud Pak for Integration | API Connect apic | apic-1

Import an Existing Product

←

Summary

✓ Created new product

Edit Product

APIC – Publish product

IBM Cloud Pak for Integration | API Connect apic | apic-1 Organization: Think

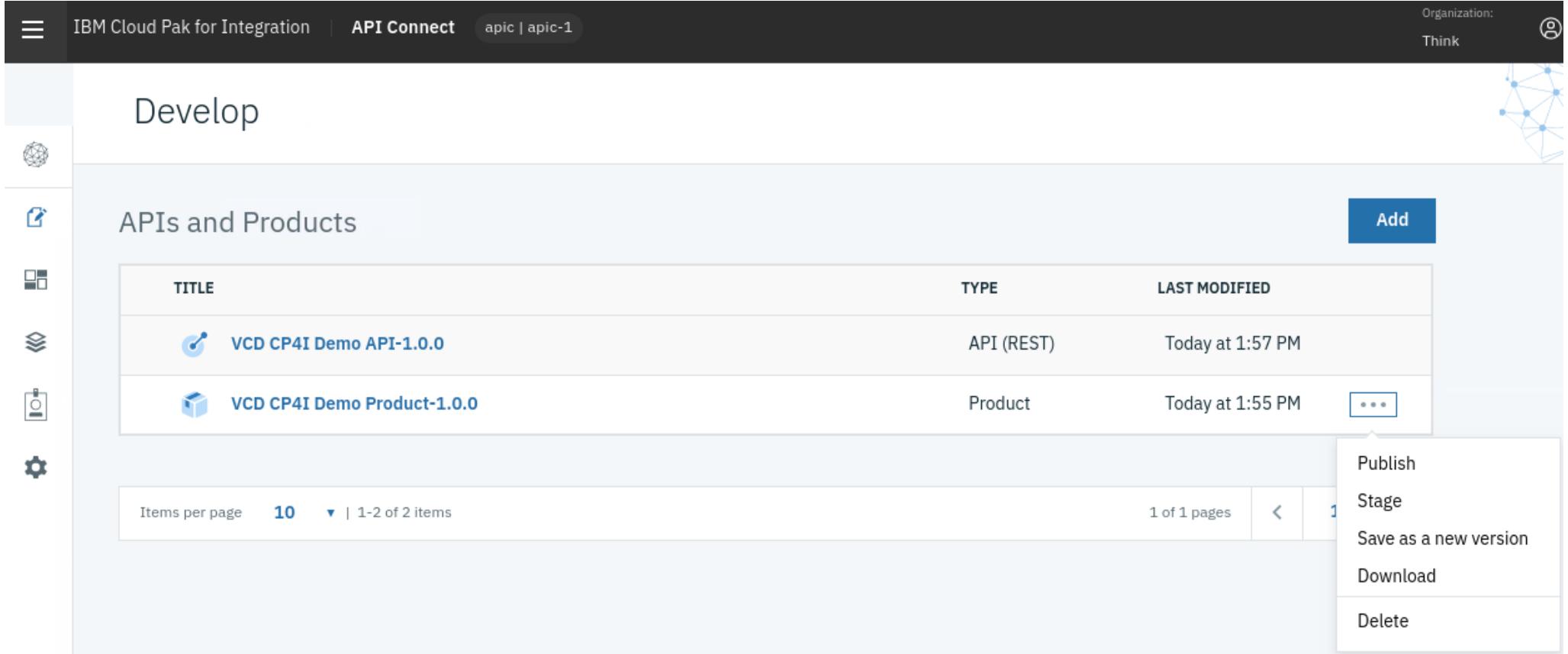
Develop

APIs and Products Add

TITLE	TYPE	LAST MODIFIED
VCD CP4I Demo API-1.0.0	API (REST)	Today at 1:57 PM
VCD CP4I Demo Product-1.0.0	Product	Today at 1:55 PM

Items per page **10** | 1-2 of 2 items 1 of 1 pages

Publish
Stage
Save as a new version
Download
Delete



APIC – Publish product

The screenshot shows the 'Publish Product' screen in the IBM Cloud Pak for Integration API Connect interface. The top navigation bar includes the IBM Cloud Pak for Integration logo, 'API Connect', and a workspace identifier 'apic | apic-1'. On the left, there's a blue sidebar with a back arrow. The main area has a light gray background. A large title 'Publish Product' is centered at the top. Below it is a 'Publish To' section with a dropdown menu set to 'Sandbox'. Underneath is a 'Catalog' section with a dropdown menu also set to 'Sandbox'. At the bottom, there's a checkbox labeled 'Publish to specific gateway services' with a descriptive note below it. At the very bottom right are two buttons: 'Cancel' and 'Publish'.

IBM Cloud Pak for Integration | API Connect apic | apic-1

Publish Product

←

Publish To

Catalog

Sandbox ▾

Publish to specific gateway services

By default, this product is published to all gateway services. You can also publish to specific gateway services by enabling this option.

Cancel Publish

APIC – Publish product

IBM Cloud Pak for Integration | API Connect apic | apic-1 Organization: Think

Manage

A catalog hosts a collection of API products that are visible in the associated developer portal when published

Add

Sandbox Catalog

The screenshot shows the 'Manage' section of the API Connect interface. At the top, there's a navigation bar with 'IBM Cloud Pak for Integration' and 'API Connect' tabs, and an organization dropdown set to 'Think'. On the left is a sidebar with icons for Home, Catalogs, Products, Developers, and Settings. The main area has a heading 'Manage' and a descriptive text about catalogs. A prominent blue 'Add' button is on the right. Below it is a card for a catalog named 'Sandbox', featuring a circular icon with two books and the text 'Sandbox Catalog'.

APIC – Publish product

The screenshot shows the IBM Cloud Pak for Integration API Connect interface. The top navigation bar includes 'IBM Cloud Pak for Integration' and 'API Connect' with a session ID 'apic | apic-1'. The left sidebar has a blue header and various icons: a back arrow, a gear, two people, a document with a checkmark, a list, a clipboard, and a gear. The main content area is titled 'Manage / Sandbox Products'. It displays a table for a product named 'VCD CP4I Demo Product' (ID: vcd-cp4i-demo-product 1.0.0). The product is listed as 'published' with its last state change at 'Today at 1:58 PM'. Below the table, sections for 'APIs' (listing 'VCD CP4I Demo API:1.0.0' in 'online' state), 'PLANS' (listing 'Default Plan'), and 'GATEWAY SERVICES' (listing 'API Gateway' under 'DataPower API Gateway') are shown. At the bottom, pagination controls indicate '10' items per page, '1-1 of 1 items', '1 of 1 pages', and page numbers '1' and '2'.

TITLE	NAME	STATE	LAST STATE CHANGED
VCD CP4I Demo Product	vcd-cp4i-demo-product 1.0.0	published	Today at 1:58 PM

APIs

STATE
online

PLANS

Default Plan

GATEWAY SERVICES

GATEWAY TYPE
DataPower API Gateway

Items per page: 10 | 1-1 of 1 items
1 of 1 pages
1 >

APIC – Subscribe to product

The screenshot shows the 'Applications' page in the IBM Cloud Pak for Integration API Connect interface. The top navigation bar includes 'IBM Cloud Pak for Integration' and 'API Connect' with the URL 'apic | apic-1'. The left sidebar has icons for 'Manage', 'Sandbox', 'Applications', 'APIs', 'Organizations', and 'Jobs'. The main content area displays a table with one row:

TITLE	APPLICATION TYPE	CONSUMER ORGANIZATION	STATE
Sandbox Test App	Production	Sandbox Test Organization	Enabled

A context menu is open over the first row, containing 'Credentials' and 'Create subscription' options. At the bottom, there are pagination controls for 'Items per page' (set to 10), and navigation arrows.

APIC – Subscribe to product

The screenshot shows the IBM Cloud Pak for Integration API Connect interface. The top navigation bar includes the IBM Cloud Pak for Integration logo, the API Connect section, and a user account indicator. Below the navigation, a breadcrumb trail shows 'Manage / Sandbox' and the current page 'Credentials'. A blue sidebar button with a left arrow is visible. The main content area has a title 'Credentials' and a 'Add' button. A table lists a single credential entry:

TITLE	CLIENT ID
Sandbox Test App Credentials	97ed3ef1cb61650212b191933d874942

APIC – Subscribe to product

The screenshot shows a web interface for creating a subscription. At the top, there is a dark header bar with the IBM Cloud Pak for Integration logo, the API Connect section, and a workspace identifier "apic | apic-1". Below the header, the main page title is "Create Subscription". On the left, there is a vertical sidebar with a blue button containing a white arrow pointing left. The main content area has a title "Product/Plan" and a subtitle "Select the product and plan for the application subscription". A list of products is shown, with the first item selected: "VCD CP4I Demo Product:1.0.0/Default Plan". At the bottom right of the content area, there are two buttons: "Cancel" and "Create".

IBM Cloud Pak for Integration | API Connect apic | apic-1

Manage / Sandbox

Create Subscription

←

Product/Plan

Select the product and plan for the application subscription

VCD CP4I Demo Product:1.0.0/Default Plan

Cancel Create

curl -> APIC -> DataPower

The screenshot shows the IBM Cloud Pak for Integration API Connect interface. The top navigation bar includes 'IBM Cloud Pak for Integration' and 'API Connect' with a selected 'apic | apic-1' workspace. The left sidebar has sections for 'Manage / Sandbox' and 'Settings'. The main content area is titled 'Gateway Services' with tabs for 'Overview', 'Gateway Services' (which is selected), and 'Lifecycle Approvals'. An 'Edit' button is visible. A table lists one gateway service: 'API Gateway' of type 'DataPower API Gateway' with URL 'https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox'.

```
[ibmuser@developer dp]$ curl -k https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox/vcd-cp4i-demo-api/hello
{"httpCode": "400", "httpMessage": "Bad Request", "moreInformation": "One or more required API parameters are missing in the API request."}
[ibmuser@developer dp]$ curl -k https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox/vcd-cp4i-demo-api/hello ; echo
{"httpCode": "400", "httpMessage": "Bad Request", "moreInformation": "One or more required API parameters are missing in the API request."}
[ibmuser@developer dp]$ curl -k https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox/vcd-cp4i-demo-api/hello?name=ApiCaller ; echo
{"httpCode": "401", "httpMessage": "Unauthorized", "moreInformation": "Invalid client id or secret."}
[ibmuser@developer dp]$ curl -k https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox/vcd-cp4i-demo-api/hello?name=ApiCaller -H "x-ib
m-client-id: 97ed3ef1cb61650212b191933d874942" ; echo
>{"msg": "Hello", "fullname": "ApiCaller", "client": "10.128.0.1:44646"}
[ibmuser@developer dp]$ █
```

Sending logs to Kafka through ACE

In this part of demo we will create ACE REST service which will receive JSON log messages and send them to Kafka (ES) Topic.

After that we will expose this service as API using IBM API Connect.

Configuration of ES / Kafka Topic

IBM Cloud Pak for Integration | Platform home

Find

 API Connect apic apic-1   + Add new instance	 App Connect ace ace-1  + Add new instance	 MQ mq mq-1  + Add new instance
 Event Streams eventstreams es-1  + Add new instance	 Aspera aspera aspera-1  + Add new instance	 DataPower datapower dp-1  + Add new instance

es-1

Getting started

Topics

Consumer groups

Schemas

Monitoring

Toolbox

Connect to this cluster

Type to search topics

Geo-replication

Create topic

Name

Replicas

Partitions



You don't have any topics yet.

A topic is a named stream of messages. You'll need to create one to get going.

[← Topics](#)

Create topic

[Advanced](#)**Topic name**

This is the unique name used to recognize your topic.

It will also be used by your producers and consumers as part of the connection information, so make it something easy to recognize.

[Cancel](#)[Next](#)

[← Topics](#)

Create topic

[Advanced](#)

Partitions

1



1 partition is sufficient for getting started, but production systems often have more.

One or more partitions make up a topic. A partition is an ordered list of messages.

Partitions are distributed across the brokers in order to increase the scalability of your topic. You can also use them to distribute messages across the members of a consumer group.

[Back](#)[Next](#)

[← Topics](#)

Create topic

[Advanced](#)

Message Retention

- A day
- A week
- A month
- 30

This is how long messages are retained before they are deleted.

If your messages are not read by a consumer within this time, they will be missed.

[Back](#)[Next](#)

[← Topics](#)

Create topic

[Advanced](#)

Replicas

- Replication factor: 1
Minimum in-sync replicas: 1
- Replication factor: 3
Minimum in-sync replicas: 2

This is how many copies of a topic will be made for high availability.

The partitions of each topic can be replicated across a configurable number of brokers.

Replication factor



3



Minimum in-sync replicas

2

[Back](#)[Create topic](#)

IBM Cloud Pak for Integration | Event Streams eventstreams | es-1

Topic creation requested X

A request to create topic 'eslogtopic' has been made.

11/12/2019, 6:35:32 AM

es-1

Getting started **Topics** Consumer groups Schemas Monitoring Toolbox Connect to this cluster

Type to search topics

Geo-replication ? Create topic +

Name	Replicas	Partitions	⋮
eslogtopic	3	1	⋮



IBM Cloud Pak for Integration

Event Streams

eventstreams | es-1

[← Topics](#)

eslogtopic

[Producers](#)[Messages](#)[Consumer groups](#)[Connect to this topic](#) Producer metrics timeframe **8 hours** 

Producers
sending
messages

0

11/12/2019 12:00:00 AM

11/12/2019 3:00:00 AM

11/12/2019 6:00:00 AM

[Topics](#)

X

eslogtopic

Producers Messages

Producers
sending
messages

0

produced per second

Topic connection

[Connect a client](#)[Sample code](#)[Geo-replication](#)

To connect an application or tool to this cluster, you will need the address of a bootstrap server, a certificate and an API key.

Bootstrap server

Your application or tool will make its initial connection to the cluster using the bootstrap server.

icp-proxy.10.0.10.2.nip.io:32639



API key

To connect securely to Event Streams, your application or tool needs an API key with permission to access the cluster and resources such as topics.

PEM certificate

Use this for anything else



[Topics](#)

eslogtopic

[Producers](#) [Messages](#)

Producers
sending
messages

0

Type to filter producers

0 B
produced per second

Topic connection

[Connect a client](#)[Sample code](#)[Geo-replication](#)

To connect an application or tool to this cluster, you will need the address of a bootstrap server, a certificate and an API key.

Bootstrap server

Your application or tool will make its initial connection to the cluster using the bootstrap server.

tcp-proxy.10.0.10.2.nip.io:32639



Certificates

A certificate is required by your Kafka clients to connect securely to this cluster.

Java truststore

Use this for a Java client



Truststore password: password

PEM certificate

Use this for anything else

API key

To connect securely to Event Streams, your application or tool needs an API key with permission to access the cluster and resources such as topics.



Name your application

eslogclient

What do you want it to do?

[Produce only](#) [Consume only](#) [Produce and consume](#) [Produce, consume, create topics and schemas](#)

API key

To connect securely to Event Streams, your application or tool needs an API key with permission to access the cluster and resources such as topics.

The screenshot shows a step in a wizard titled 'Generate API key'. It features a circular icon with a checkmark and a connection line. To the right is a 'Start again' button with a circular arrow icon. Below this is a section labeled 'Which topic?' with a dropdown menu set to 'eslogtopic'. A toggle switch labeled 'All topics' is shown as off. At the bottom is a large blue button labeled 'Generate API key'.

API key

To connect securely to Event Streams, your application or tool needs an API key with permission to access the cluster and resources such as topics.

Successful API key generation!

The following API key will allow an application to produce to topic eslogtopic. Take a copy of it or download it now.

Please make a note of this API key now



You will not be able to recover this later!

nmIEZaf9zI6Du9iPOYJzgboHlyUGv56GQ9

A service ID has been generated in IBM Cloud Private with your application name. This can be managed in the IBM Cloud Private Cluster Management Console or CLI.

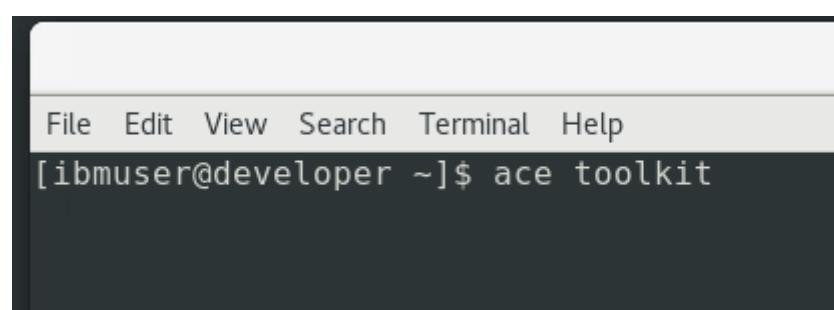
Security used for ACE -> Kafka

```
ibmuser@developer:~/config_services
File Edit View Search Terminal Help
[ibmuser@developer config_services]$ ls -l es-cert.pem setdbparms.txt keystore-mykey.crt
-rw-rw-r--. 1 ibmuser ibmuser 1330 Nov 12 06:38 es-cert.pem
-rwxr-xr-x. 1 ibmuser ibmuser 0 Nov 12 06:48 keystore-mykey.crt
-rwxr-xr-x. 1 ibmuser ibmuser 127 Nov 12 06:41 setdbparms.txt
[ibmuser@developer config_services]$ cat setdbparms.txt
# resource user password
kafka::KAFKA token nmIEZaf9zI6Du9iP0YJzgboHlyUGv56GQ9exWdGW0LlF
setdbparms::truststore dummy password
[ibmuser@developer config_services]$ cp es-cert.pem keystore-mykey.crt
[ibmuser@developer config_services]$ ./generateSecrets.sh my-secret
Creating secret
kubectl create secret generic my-secret --from-literal=mcsc= --from-literal=adminPassword= --from-literal=appPassword= --from-literal=keystorePassword= --from-literal=keystoreKey-mykey= --from-file=keystoreCert-mykey=./keystore-mykey.crt --from-literal=keystorePass-mykey= --from-file=truststorePassword=./truststorePassword.txt --from-file=truststoreCert-mykey=./truststoreCert-mykey.crt --from-literal=odbcini= --from-literal=policy= --from-literal=descriptor= --from-file=serverconf=./serverconf.yaml --from-file=setdbparms=./setdbparms.txt
secret/my-secret created
[ibmuser@developer config_services]$
```

For more details see:

- ICP4I ES docs
- IBM hands on labs for ACE to ES integration

Buiding ACE BAR



A screenshot of a terminal window. The window has a light gray header bar with a thin black border at the top. Below the header, there is a dark gray main area. In the header, there are several menu items: File, Edit, View, Search, Terminal, and Help. In the main dark area, the command `[ibmuser@developer ~]$ ace toolkit` is visible, indicating the user is running an ACE toolkit command.

- New Shift+Alt+N ▶
- Open File... ▾
- Close Ctrl+W
- Close All Shift+Ctrl+W
- Save Ctrl+S
- Save As... ▾
- Save All Shift+Ctrl+S
- Revert
- Move... ▾
- Rename... F2
- Refresh F5
- Convert Line Delimiters To ▶
- Print... Ctrl+P
- Switch Workspace ▶
- Restart
- Import... ▾
- Export... ▾
- Properties Alt+Enter
- IBM App Connect Enterprise Toolkit
- Exit

started - IBM App Connect Enterprise Toolkit

Quick Starts

Start building your application with one of the following tasks.

[Start by exploring tutorials](#)
Use the **Tutorials** to learn more about the features in IBM App Connect Enterprise. [More...](#)

[Start by creating an application](#)
An **Application** is a container for all the resources that are required to create a solution. [More...](#)

[Start by creating an integration service](#)
An **Integration Service** is an application with a well-defined interface and structure. [More...](#)

[Start by creating a REST API](#)

s Problems Outline Tasks Deployment Log

Value



Import

Select

Create new projects from an archive file or directory.

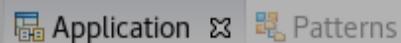
Select an import source:

ex

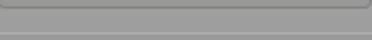
- ▼ General
 - Existing Projects into Workspace
- ▼ Install
 - From Existing Installation
- ▼ Maven
 - Existing Maven Projects

?

< Back Next > Cancel Finish



Application Development

[New Application...](#)[New Integration Service...](#)[New REST API...](#)[New Library...](#)[New Policy project...](#)[Integration Servers](#)[Integration Nodes](#)

tasks.

BM

are

Import

Import Projects

Select a directory to search for existing Eclipse projects.



Select root directory:

Select archive file:

Projects:

log (/home/ibmuser/Downloads/vcd-cloud-migration-icp4i-master/d)

Options

Search for nested projects

Copy projects into workspace

Hide projects that already exist in the workspace

Working sets

Add project to working sets

Working sets:

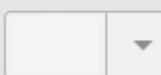


< Back

Next >

Cancel

Finish



Quick Access



Integration Development

Application Patterns E

Application Development New...

- log
 - REST API Description
- Resources
 - Flows
 - gen
 - Subflows
 - message.subflow
 - REST API Catalog
 - Other Resources

message.subflow

Palette



Input

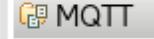


Output



KafkaProducer

Flow Exerciser:



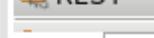
Favorites



IBM MQ



MQTT



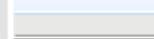
Kafka



JMS



HTTP



REST



Graph

User Defined Properties



Properties



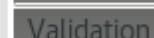
Problems



Outline



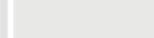
Tasks



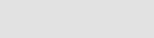
Deployment Log



Integ



Data



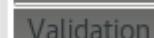
Data



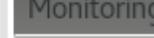
Basic



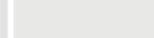
Security



Validation



Monitoring



Client ID

Topic name*

eslogtopic

Bootstrap servers*

icp-proxy.10.0.10.2.nip.io:32639

Client ID

e.g. bootstrap.server.com:9092 (multiple serv

File Edit Flow View Palette Navigate Search Project Run Window Help

**New**

Manage Library references
Manage included projects

Focus on REST API

Convert to Library

Export XSDs from Application

Migrate

Go Into

Copy

Paste

Delete

Move...

Rename...

Import...

Export...

Refresh

Build for mqsipackagebar

Test ...

Deploy...

Team

Restore from Local History...

Configure

Source

Message Flow

Subflow

Message Model ...

Message Map

ESQL File

Broker Schema

Adapter Connection

Database Definition

Data Lineage Documents

BAR file

Policy

WS Policy Sets and Bindings

Application

Integration Service

Library

REST API

Data Analysis Project

Example...

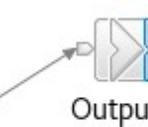
Other...

Ctrl+N

Project

, 2019 at 6:26:43 AM

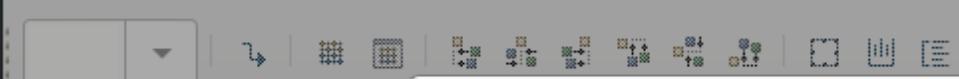
ESS



Producer

Deployment Log





Quick Access

Integration Development

Application Patterns

Application Development

- log
 - REST API Description
 - Resources
 - Flows
 - gen - Subflows
 - message.subfl
 - REST API Catalog
 - Other Resources

Integ Data Data

Integration Servers

Integration Nodes

log

New BAR file

Create a new BAR file resource

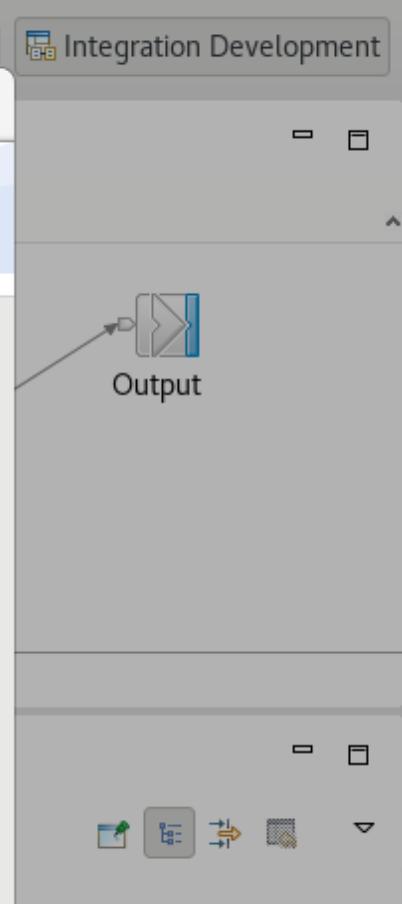
Container: **BARfiles**

Folder: <default>

Name: **eslogservice**

?

Cancel Finish



path	/log
type	Project



Quick Access



Integration Development

Application Development

- Resources
 - Flows
 - gen
 - Subflows
 - message.subflow
 - REST API Catalog
 - Other Resources
- BARs
 - eslogservice.bar -> BARfiles/eslo
- Independent Resources
 - BARfiles

Inte Data Data

- Integration Servers
- Integration Nodes

message.subflow eslogservice.bar

Prepare

Select deployable resources to include in the BAR

Deployable Resources

Build and Save...

Select an application to package all its contained resources. Resources within an application are isolated from other applications.

- Applications, shared libraries, services, and REST APIs
- Policies
- Message flows, static libraries and other message flow dependencies

Text filter: type filter text

- REST APIs
 - log

(*)-Resource types marked with * will be automatically added to the BAR if referenced by another selected artifact.

Prepare Manage User Log Service Log



Quick Access



Integration Development

Application Development

- Resources
 - Flows
 - gen
 - Subflows
 - message.subflow
 - REST API Catalog
 - Other Resources
- BARs
 - eslogservice.bar -> BARfiles/eslo
- Independent Resources
 - BARfiles

Inte Data Data

- Integration Servers
- Integration Nodes

message.subflow eslogservice.bar

Prepare

Select deployable resources to include in the BAR

Deployable Resources

Build and Save...

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Text filter: type filter text

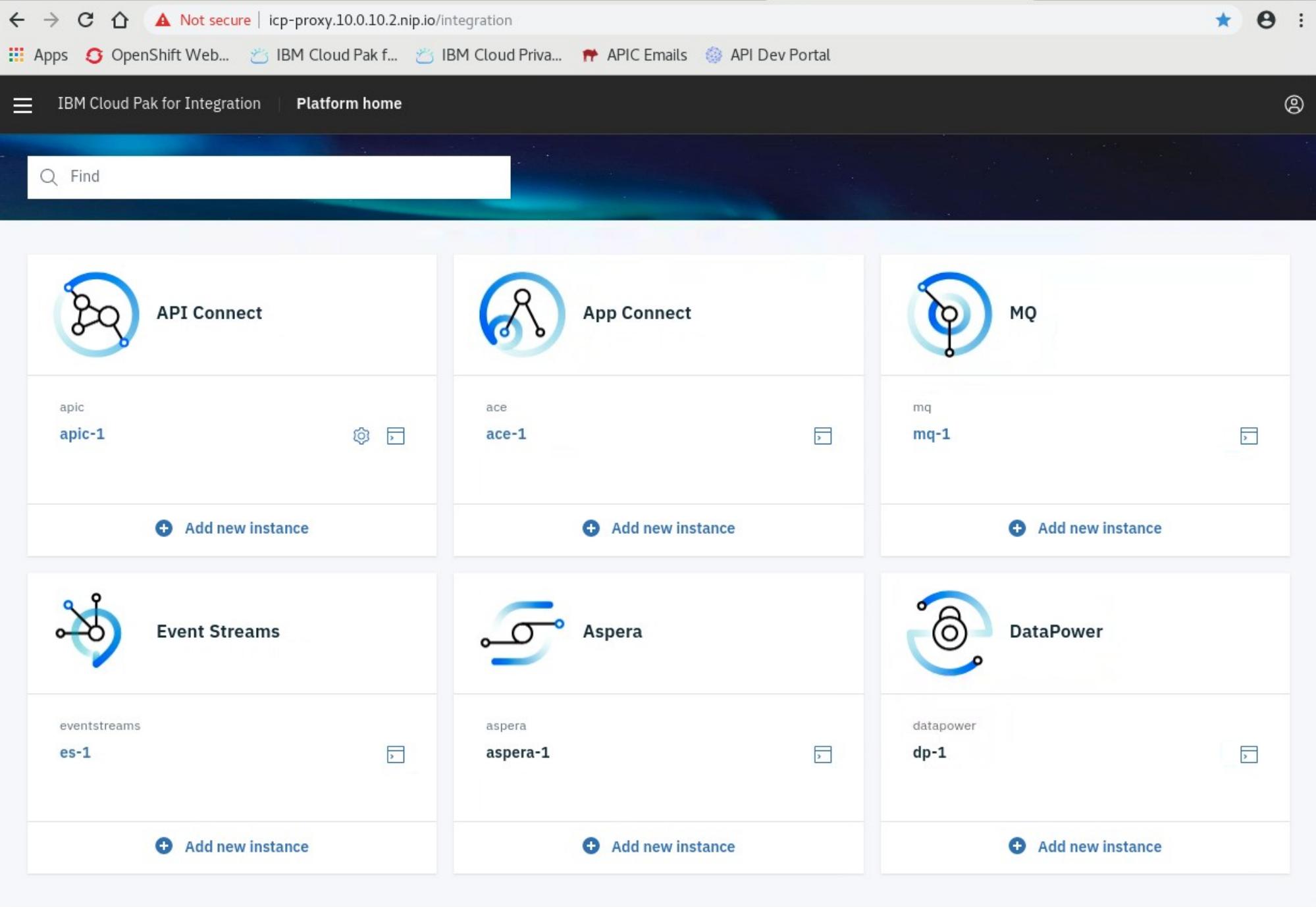
- REST APIs
 - log

(*)-Resource types marked with * will be automatically added to the BAR if referenced by another selected artifact.

Prepare Manage User Log Service Log

Deployment of created BAR to ICP4I ACE instance

BAR we created have to be deployed to ACE instance by creation of new server through ACE admin interface.





Add server

Provide a BAR file to deploy to the server



eslogservice.bar

or use existing BAR file:

Select BAR...

Cancel

Continue



Add server

You will now configure and install a Helm release to deploy to the server. It is important to copy the Content URL and select the current Namespace.

Content URL:

`https://ace-1-ibm-ace-dashboard-icp4i-prod:3443/v1/directories/eslogservice?7a82d287-ceb1-4b88-979b-9cbf983532ff`



Namespace:

ace

If the integration server requires any configuration to be applied then you will need to use the following download to provide the configuration prior to install. Refer to the README.md inside the download on how to create the required secrets:

[Download configuration package](#)

Cancel

Configure release

[View All](#)

ibm-ace-server-icp4i-prod V 2.0.0

[Overview](#)[Configuration](#)

This helm chart is used by the IBM App Connect Dashboard for IBM Cloud Pak for Integration to deploy servers

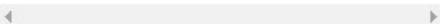
[local-charts](#)[Licenses](#) | [Release Notes](#) | [Qualification](#)**CLOUD PAK VERSION**

2.0.0

DETAILS & LINKS

Type Certified IBM Cloud Pak

Published November 12, 2019

**SOURCE & TAR FILES**

IBM APP CONNECT ENTERPRISE

**Introduction**

IBM® App Connect Enterprise is a market-leading lightweight enterprise integration engine that offers a fast, simple way for systems and applications to communicate with each other. As a result, it can help you achieve business value, reduce IT complexity and save money. IBM App Connect Enterprise supports a range of integration choices, skills and interfaces to optimize the value of existing technology investments.

Chart Details

This chart deploys a single IBM App Connect Enterprise Integration Server into a Kubernetes environment.

[Configure](#)

[View All](#)

ibm-ace-server-icp4i-prod V 2.0.0

[Overview](#)[Configuration](#)

Pod Security Conflict This chart requires a namespace with a ibm-anyuid-psp pod security policy.

Pod Security Warning Your ICP cluster is running all namespaces Unrestricted (ibm-anyuid-hostpath-psp) by default. This could pose a security risk.

Configuration

This helm chart is used by the IBM App Connect Dashboard for IBM Cloud Pak for Integration to deploy servers. Edit these parameters for configuration.

Helm release name *

eslogservice

Target namespace *

ace

Target Cluster *

local-cluster

License * I have read and agreed to the License agreement



Select Namespace Above

Parameters

To install this chart, additional configuration is needed in Quick start. To customize installation, view and edit All parameters.

Quick start

Required and recommended parameters to view and edit.

Content Server URL *

`https://ace-1-ibm-ace-dashboard-icp4i-prod:3443/v1/directories/eslogservice?7a82d287-ceb1-4b88-979b-9cbf983532ff`

Service

Service settings

Proxy Node IP or FQDN *

`icp-proxy.10.0.10.2.nip.io`

Image pull secret

`deployer-dockercfg-bnjx2`

List of certificate aliases for the truststore

`mykey`

Name of the default application

Enter value

The name of the secret to create or to use that contains the server configuration

`my-secret`

File system group ID

Enter value

Cancel

Install



Service type *

NodePort

web ui port *

7600

http port *

7800

https port *

7843

Proxy Node IP or FQDN *

icp-proxy.10.0.10.2.nip.io

Integration Server

Define configuration for the Integration

Integration Server name

Enter value

List of certificate aliases for the truststore

mykey

The name of the secret to create or to use that contains the server configuration

my-secret

Name of the default application

Enter value

File system group ID

Enter value

Cancel

Install



Installation started. For progress view your Helm releases.

[View Helm Releases](#)[Return to Catalog](#)

ibmuser@developer:~

File Edit View Search Terminal Help

[ibmuser@developer ~]\$ oc get pods -n ace

NAME	READY	STATUS	RESTARTS	AGE
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-2s5gz	2/2	Running	34	42d
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-pxvpd	2/2	Running	40	46d
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-r48k9	2/2	Running	34	42d
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-jmp8q	0/1	Error	2	23s
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-k6vnl	0/1	ContainerCreating	0	23s
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-x4p8k	0/1	ContainerCreating	0	23s

[ibmuser@developer ~]\$ oc get pods -n ace

NAME	READY	STATUS	RESTARTS	AGE
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-2s5gz	2/2	Running	34	42d
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-pxvpd	2/2	Running	40	46d
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-r48k9	2/2	Running	34	42d
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-jmp8q	1/1	Running	3	13m
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-k6vnl	1/1	Running	2	13m
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-x4p8k	1/1	Running	2	13m

[ibmuser@developer ~]\$ █



Add server

You will now configure and install a Helm release to deploy to the server. It is important to copy the Content URL and select the current Namespace.

Content URL:

`https://ace-1-ibm-ace-dashboard-icp4i-prod:3443/v1/directories/eslogservice?7a82d287-ceb1-4b88-979b-9cbf983532ff`



Namespace:

ace

If the integration server requires any configuration to be applied then you will need to use the following download to provide the configuration prior to install. Refer to the README.md inside the download on how to create the required secrets:

Done



IBM Cloud Pak for Integration

| App Connect

ace | ace-1

Servers

Search



eslogservice

Server

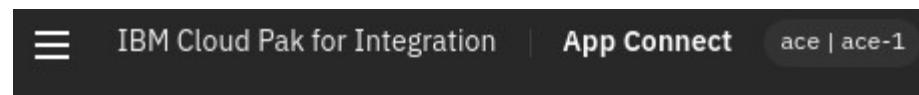
Release name: eslogservice
1/3 replicas

Started

!

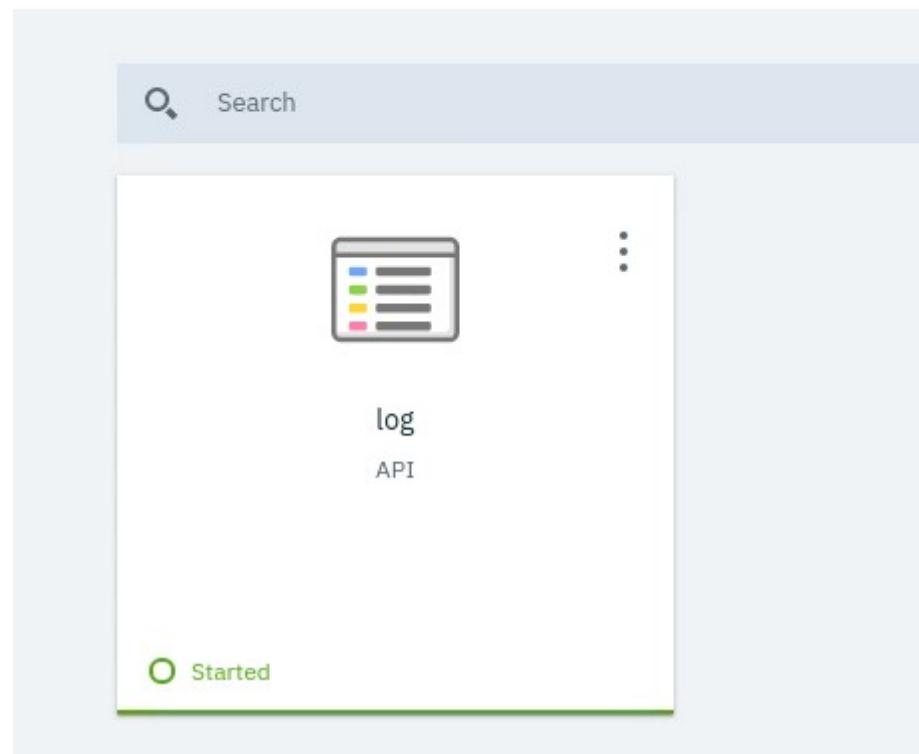
It takes some time to start all pods...

```
ibmuser@developer:~ -  
File Edit View Search Terminal Help  
[ibmuser@developer ~]$ oc get pods -n ace  
NAME                                         READY   STATUS    RESTARTS   AGE  
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-2s5gz   2/2     Running   34          42d  
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-pxvpd   2/2     Running   40          46d  
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-r48k9   2/2     Running   34          42d  
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-jmp8q 0/1     Error      2          23s  
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-k6vnl  0/1     ContainerCreating  0          23s  
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-x4p8k  0/1     ContainerCreating  0          23s  
[ibmuser@developer ~]$ oc get pods -n ace  
NAME                                         READY   STATUS    RESTARTS   AGE  
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-2s5gz   2/2     Running   34          42d  
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-pxvpd   2/2     Running   40          46d  
ace-1-ibm-ace-dashboard-icp4i-prod-68b7b4b9b4-r48k9   2/2     Running   34          42d  
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-jmp8q 1/1     Running   3          13m  
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-k6vnl  1/1     Running   2          13m  
eslogservice-ibm-ace-server-icp4i-prod-8654747f66-x4p8k  1/1     Running   2          13m  
[ibmuser@developer ~]$ █
```



Dashboard / Server: eslogservice

eslogservice Release name: eslogservice



A detailed view of the "eslogservice" service instance card. At the top is a search bar with a magnifying glass icon and the word "Search". Below the search bar is a white rectangular card containing a log icon (a notepad with horizontal lines) and three vertical dots on the right. The word "log" is centered below the icon, followed by "API" in smaller text. At the bottom left of the card is a green circular icon with a white circle inside, labeled "Started". The entire card has a thin green border at the bottom.

 log[Documentation](#) [Contents](#) [Properties](#) [Other resources](#)

REST API Base URL

<http://icp-proxy.10.0.10.2.nip.io:31626/log/v1>

OpenAPI document

<http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/swagger.json> Search[/message](#)[POST](#)[postMessage](#)

Parameter

Type

Required?

Description

body

LogMessage

Yes

The request body for the operation

```
[ibmuser@developer ~]$ ace toolkit
Starting App Connect Enterprise Toolkit interactively
[ibmuser@developer ~]$ curl http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/message -d '{}'
{}[ibmuser@developer ~]$ curl http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/message -d '{"msg":"First non-empty message"}'
{"msg":"First non-empty message"}[ibmuser@developer ~]$
```

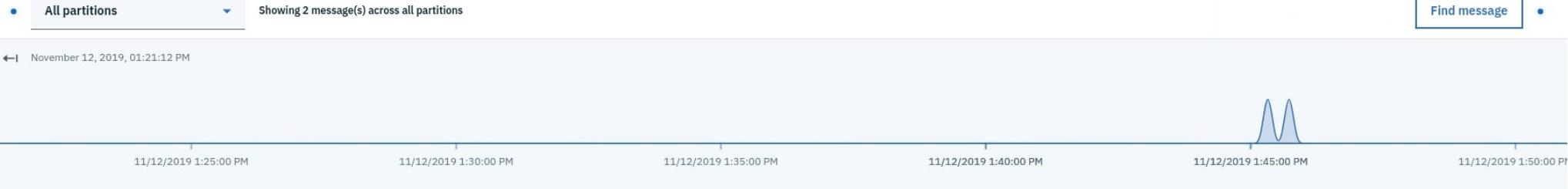
```
[ibmuser@developer ~]$ ace toolkit
Starting App Connect Enterprise Toolkit interactively
[ibmuser@developer ~]$ curl http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/message -d '{}'
{}[ibmuser@developer ~]$ curl http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/message -d '{"msg":"First non-empty message"}'
{"msg":"First non-empty message"}[ibmuser@developer ~]$
```

Topics

eslogtopic

Producers Messages Consumer groups

Connect to this topic 



Topics

eslogtopic

Producers Messages Consumer groups

Topic: eslogtopic 

< Previous offset Next offset >

Partition	Offset
0	1

Message size  33 B

Kafka timestamp  11/12/2019, 1:45:43 PM

Key 

Parsed payload Raw payload

{"msg":"First non-empty message"} 

View live data 	Indexed timestamp 	Partition	Offset
Select timeframe of data to display			
Hours 	11/12/2019, 1:45:23 PM	0	0
Select start date of data	11/12/2019, 1:45:44 PM	0	1



Develop

Vcd-c... 1.0.0

Design

Source

Assemble



Stopped



No Errors

Save



API Setup

Security Definitions

Security

Paths

Definitions

Properties

Properties

Add

PROPERTY NAME	ENCODED	DESCRIPTION
echoUrl	false	⋮
logUrl	false	⋮

```
logUrl:  
  value: 'http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/message'  
  encoded: false
```



Develop

Vcd-c... 1.0.0

Design

Source

Assemble



Stopped



No Errors

Save



Edit Property

Name

logUrl

Default value (optional)

http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/message

Manage / Sandbox

Create Subscription



Product/Plan

Select the product and plan for the application subscription

 VCD CP4I Demo Product:1.0.0/Default Plan[Cancel](#)[Create](#)

Manage / Sandbox

Applications

[Add](#)

TITLE	APPLICATION TYPE	CONSUMER ORGANIZATION	STATE	
Sandbox Test App	Production	Sandbox Test Organization	Enabled	

TITLE

NAME

PLAN

VCD CP4I Demo Product

vcd-cp4i-demo-product:1.0.0

Default Plan



POST log message testing (ACE / APIC -> ACE)

```
$ curl http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/message -d '{}' ; echo
{}

$ curl http://icp-proxy.10.0.10.2.nip.io:31626/log/v1/message -d '{"msg":"First non-empty message"}' ; echo
{"msg":"First non-empty message"}

$ curl -k https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox/vcd-cp4i-demo-api/log ; echo
{"httpCode": "405", "httpMessage": "Method Not Allowed", "moreInformation": "The method is not allowed for the requested URL"}

$ curl -k https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox/vcd-cp4i-demo-api/log -d '{"apic-msg":"First API msg."}' ; echo
{"httpCode": "401", "httpMessage": "Unauthorized", "moreInformation": "Invalid client id or secret."}

$ curl -k https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox/vcd-cp4i-demo-api/log -d '{"apic-msg":"First API msg."}' -H 'x-ibm-client-id: 97ed3ef1cb61650212b191933d874942' ; echo
{"httpCode": "401", "httpMessage": "Unauthorized", "moreInformation": "Not registered to plan."}

$ curl -k https://apigwy.icp-proxy.10.0.10.2.nip.io/think/sandbox/vcd-cp4i-demo-api/log -d '{"apic-msg":"First API msg."}' -H 'x-ibm-client-id: 97ed3ef1cb61650212b191933d874942' ; echo
{"apic-msg":"First API msg."}

$
```



Demo – IBM resources useful for this demo

For ACE to ES setup check:

<https://www.ibm.com/cloud/garage/dte/producttour/connect-ibm-mq-ibm-event-streams-using-kafka-source-connector>

<https://www.ibm.com/cloud/garage/dte/tutorial/how-build-apis-utilize-kafka-event-streams>

For APIC setup check:

<https://www.ibm.com/cloud/garage/dte/producttour/deploy-app-integration-and-expose-it-securely-apis>

<https://www.ibm.com/cloud/garage/dte/tutorial/connect-app-integration-message-queue-using-cloud-pak-integration>

CP4I – useful info & tools

- <https://www.ibm.com/demos/collection/Cloud-Pak-for-Integration/>
 - Demos & Hands on Labs
- <https://github.com/IBM/charts>
 - Helm charts used by IBM Cloud Paks
- <https://github.com/vvidovic/vcd-cloud-migration-icp4i>
 - This talk GitHub repo with all demo sources and notes of setup of ICP4I capabilites used in demo
- <https://github.com/croz-ltd/dpcmder>
 - DataPower command line admin tool useful for development, maintenance and testing of DataPower applications

Source of images used in presentation

<https://www.ibm.com/cloud/paks/>

<https://www.ibm.com/cloud/cloud-pak-for-integration>

<https://www.ibm.com/products/datapower-gateway>

<https://www.pexels.com/@inspiredimages>

<https://www.pexels.com/@ihsanaditya>

<https://www.pexels.com/@rodolfoclix>

<https://www.pexels.com/@pixabay>

<https://www.pexels.com/@freeimages9>