

What's new in IBM App Connect Enterprise

David Coles <dcoles@uk.ibm.com>



IBM Integration UK User Group meeting – 6th November 2019

Important Disclaimers

IBM's statements regarding its plans, directions and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Important Disclaimers

- **Content Authority.** The workshops, sessions and materials have been prepared by IBM or the session speakers and reflect their own views. They are provided for informational purposes only, and are neither intended to, nor shall have the effect of being, legal or other guidance or advice to any participant. While efforts were made to verify the completeness and accuracy of the information contained in this presentation, it is provided AS-IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, this presentation or any other materials. Nothing contained in this presentation is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software.
- **Performance.** Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.
- **Customer Examples.** Any customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics may vary by customer. Nothing contained in these materials is intended to, nor shall have the effect of, stating or implying that any activities undertaken by you will result in any specific sales, revenue growth or other results.
- **Availability.** References in this presentation to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates.

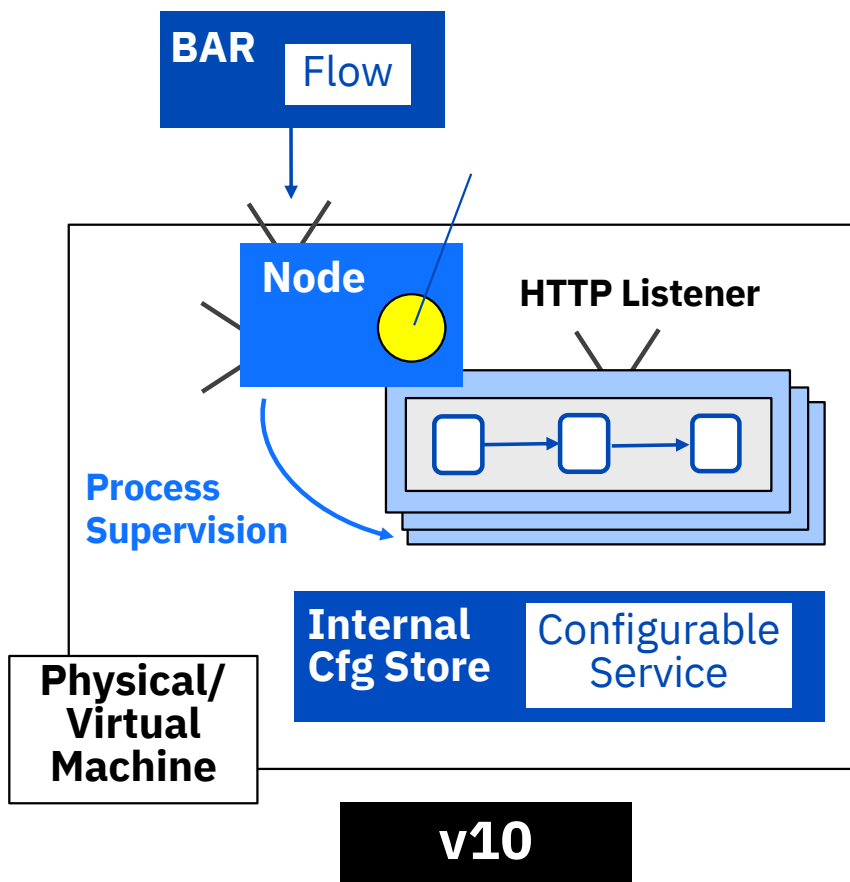
Trademark Acknowledgements

- *IBM, and the IBM logo* are trademarks of International Business Machines Corporation, registered in many jurisdictions.
- Other company, product and service names may be trademarks, registered marks or service marks of their respective owners. A current list of IBM trademarks is available on the web at "Copyright and trademark information" ibm.com/legal/copytrade.shtml

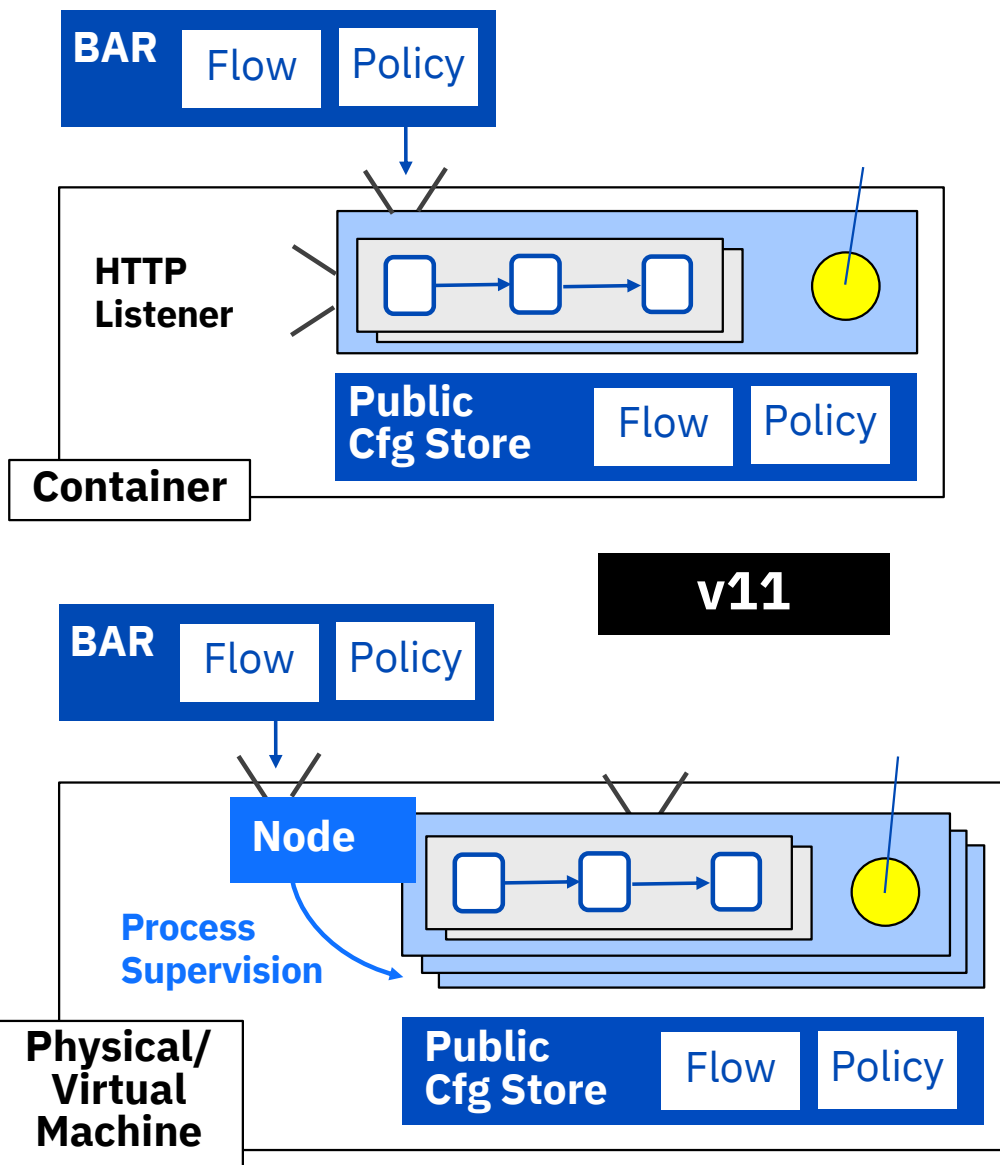


ACE Software

A Quick Reminder!



UNZIP and GO!



```
C:\Program Files\IBM\ACE\11.0.0.4> mqsicreateworkdir C:\myServer
```

```
IntegrationServer
```

```
--work-dir C:\myServer  
--admin-rest-api 7600  
--http-port-number 7900  
--name myServer  
--mq-queue-manager-name myServerQMGr  
--console-log
```

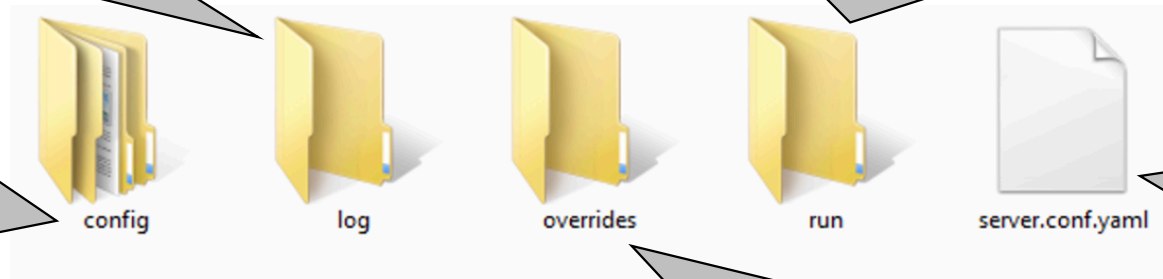
The **log** directory holds event files containing BIP messages.

The **run** directory contains the unzipped deployed content from BAR files.

The **config** directory holds configuration files (eg for loopback, switch, security config etc.)

server.conf.yaml contains configuration for how the Integration Server should run.

The **overrides** directory holds files which override server configuration or policies.



Getting Started – Tutorials and YouTube Videos

Tutorial Gallery

Here you can explore and learn about App Connect Enterprise using tutorials.
What are you interested in?

Tool Capabilities

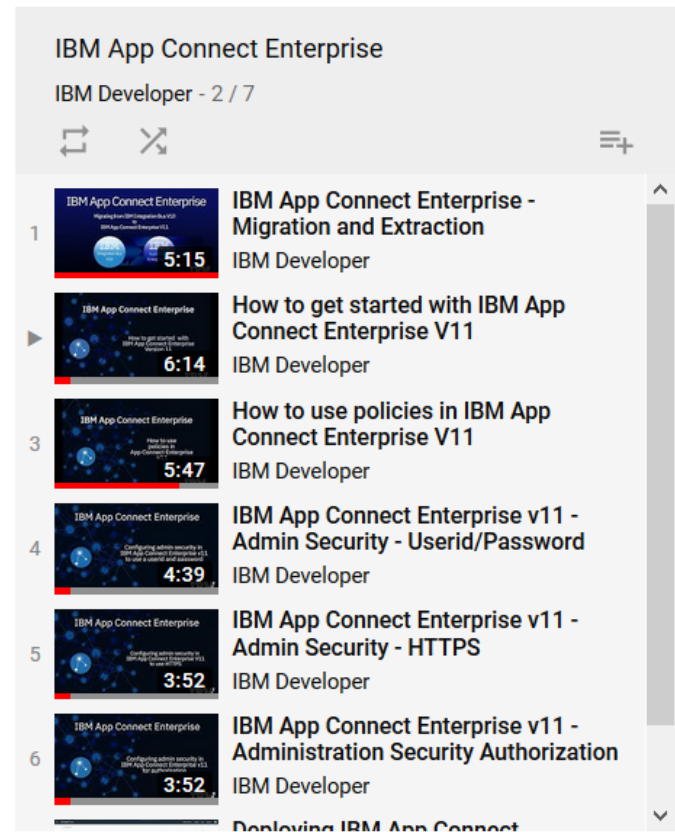
Explore App Connect Enterprise concepts by following simple tutorials

Getting started with ACEv11 - Creating an Integration Server
Getting started with ACEv11 - Exploring the Web UI
Getting started with ACEv11 - Exploring the Admin REST API
Getting started with ACEv11 - Policy Projects and Policies
Getting started with ACEv11 - Policy Projects and Policies with Overrides
Getting started with ACEv11 - Message Flow Statistics
Getting started with ACEv11 - Resource Statistics
Call a REST API using the RESTRequest node
Call a REST API using the RESTAsyncRequest node

Please select a tutorial...

View Details

Start Tutorial



IBM App Connect Enterprise
IBM Developer - 2 / 7

- 1 IBM App Connect Enterprise - Migration and Extraction
IBM Developer 5:15
- ▶ How to get started with IBM App Connect Enterprise V11
IBM Developer 6:14
- 3 How to use policies in IBM App Connect Enterprise V11
IBM Developer 5:47
- 4 IBM App Connect Enterprise v11 - Admin Security - Userid/Password
IBM Developer 4:39
- 5 IBM App Connect Enterprise v11 - Admin Security - HTTPS
IBM Developer 3:52
- 6 IBM App Connect Enterprise v11 - Administration Security Authorization
IBM Developer 3:52

Deploying IBM App Connect

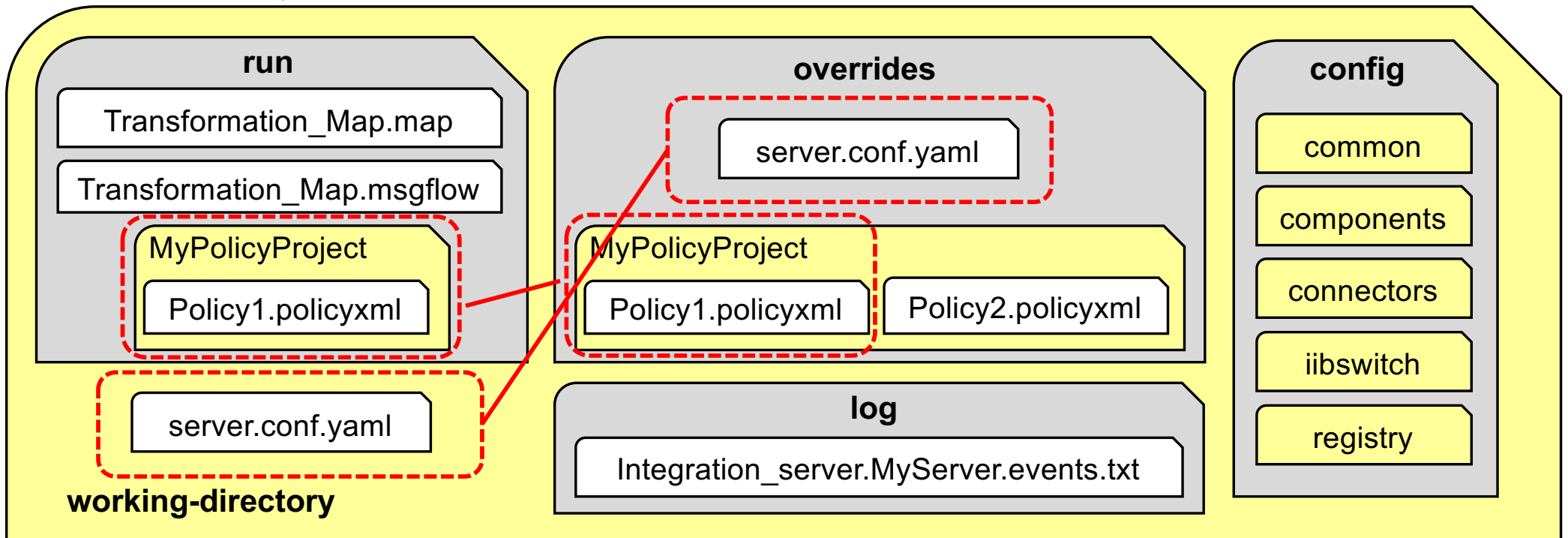
<https://www.youtube.com/playlist?list=PLzpeuWUENMK3ttFsZraPRNN4XhkoS2Hte>

Controlling Container Config with App Connect Enterprise

“Deploy” or unzip when building a Docker image using mqsidebar

Overrides provide an easy method to customise environment configuration

REST admin API PATCH methods can persist changes to overrides



App Connect Enterprise Roadmap

ACE v11.0.0.0

Unzip and Go - stand-alone Integration Servers
Policy creation in Toolkit & Deploy using a BAR
New Web User Interface
New REST APIv2
Server config yaml file for start up config
New App Connect Enterprise Developer edition
New Dockerfile @ github.com/ot4i/ace-docker
New Docker image @ hub.docker.com/r/ibmcom/ace/
New Cloud Connector Plan entitlement
Callable Flows across multi-tenant and dedicated runtimes

ACE v11.0.0.1

Integration Node capabilities (Tech Preview)
Node-wide HTTP Listener (Tech Preview)
Web User Interface enhancements for support of Nodes
Migration from IIBv9 and IIBv10
Monitoring profiles
Additional admin commands and extended REST APIv2
Web User Interface enhancements for support of Nodes
New Group nodes for non-persistent in-memory aggregation

ACE v11.0.0.2

Lifts Tech Preview for Integration Node capabilities
Lifts Tech Preview for Node-wide HTTP Listener
Eclipse Toolkit upgrade to 4.4.2
Standard out system logging
MQ based Auth model for nodes and servers

ACE v11.0.0.3

Multi-instance HA for integration nodes
Support for Global message flow coordination across
ODBC, JDBC, JMS, CICS
User-defined Message Flow Nodes in Java and C
Dynamic Monitoring and Statistics via commands
Policy info accessible from Java outside a JCN
Updated language translation

ACE v11.0.0.4

LDAP Authentication
Global Cache
Record & Replay
Policy Redeploy
Sticky settings for Monitoring & Statistics
Support for zLinux RHEL & Ubuntu

ACE v11.0.0.5

Support for AIX
Keywords
Push REST APIs to APICconnect
Java Integration API
Performance Report – HTTP and SOAP
Command Enhancements
Policy Redeploy Enhancements
User Exit Interface for Transaction Tracking

ACE v11.0.0.6

LDAP Group Authorization
Credentials Encryption for SIS
User Defined Policy Redeploy
Publication node using MQ Client
Integration / REST API Update Flow UDPs
Policies for JDEdwards, PeopleSoft, Siebel
Custom keywords for JAR, ESQ, XSLT
User Defined Properties REST API



Integration

Explore the new features in App Connect Enterprise version 11.0.0.5

BenThompsonIBM

Published on June 28, 2019

0

We're thrilled to announce the availability of [IBM App Connect Enterprise v11.0.0.5](#). This is the fifth fix pack released for App Connect Enterprise software. We provide regular fix packs, approximately once per quarter, a cadence which we intend to continue through 2019. Fix packs provide both regular maintenance for the product, and also new functional content. This blog post summarizes all the latest and greatest capabilities:



- Support for AIX
- Integration API Enhancements
- Push REST APIs to IBM API Connect
- Performance Reports
- Enhanced Policy support
- Support for Keywords on Message Flows
- Command Enhancements
- Toolkit Enhancements
- User Exit Enhancements

Expand the sections below to find out more!

Tags

ACE ACE on Cloud tutorial administration agile-integration-architecture ais-op api API Connect API Management APIs App Connect badge App Connect Enterprise App Connect Enterprise v11 App Connect tutorial betaworks broker BTM cast iron chef cloud configuration develop-integration-solution development dfdl docker docs documentation ESQL festive2015 gdm get-started global-cache graphical-data-mapping healthcare-integration HTTP hybrid integration ibm-application-integration ibm-integration ibm-integration-bus ibm-integration-bus-manufacturing-pack ibm-integration-bus-on-cloud ibm-integration-community ibm-mq IBM App Connect (IBM Cloud) IBM App Connect Enterprise IBM App Connect Professional IBM Cloud IBM Cloud Private iib iib10 iib10lab iiboc iibv9 iibv10 iibv10.0.0.4 integration integration-design-and-architecture integration-solution Integration Bus interconnect Kubernetes Learning Path lightweight-integration LoopBack manufacturing manufacturing-pack microservices migration monitoring mq MQSI optimisation

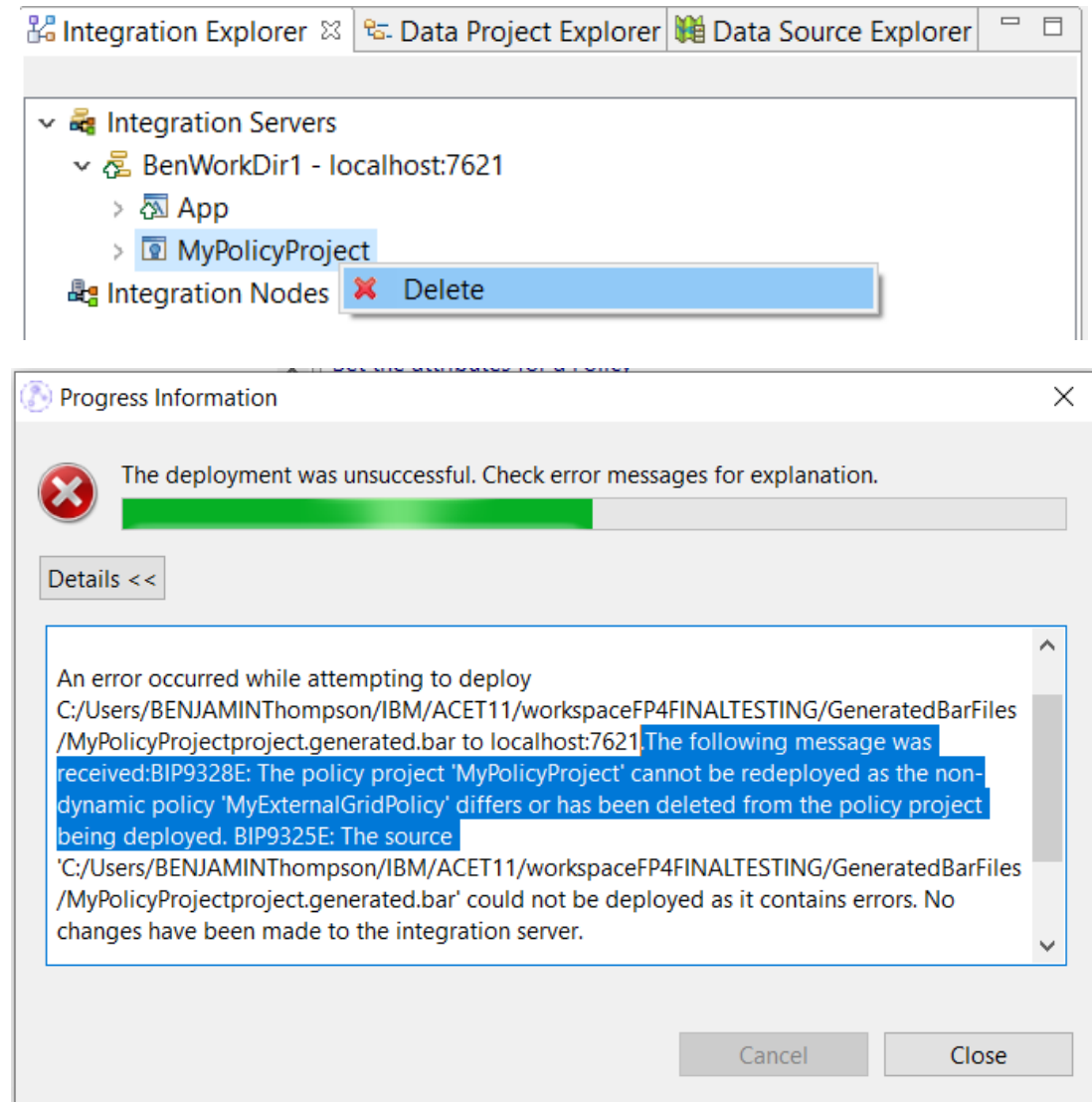


Redeploying Policies

- The following policy types can be redeployed:
 - **Aggregation**
 - **CDServer**
 - **CICSConnection**
 - **Collector**
 - **EmailServer**
 - **FtpServer**
 - **Resequence**
 - **SAPConnection**
 - **SMTP**
 - **Timer**
 - **WorkloadManagement**
 - **ActivityLog (v11.0.0.5)**
 - **MQEndpoint (v11.0.0.5)**
 - **IMSRequest (v11.0.0.5)**
 - **CORBA (v11.0.0.5)**
 - **SAP/Siebel/Peoplesoft /JDEwards (v11.0.0.6)**

When you redeploy a policy project:

- All message flows using the policy are stopped and restarted.
- Other types of policy (not listed above) cannot be redeployed (yet!)
- In this situation you must delete all deployed resources from the integration server and then deploy a new version of the policy.



User Defined Policy + Redeploy

Policy
Set the attributes for a Policy

Name

Type

Template

Property	Value
BensFirstProperty	TottenhamHotspur
BensSecondProperty	Middlesbrough

Add a new property

? Enter the property name and value

Property name

Property value

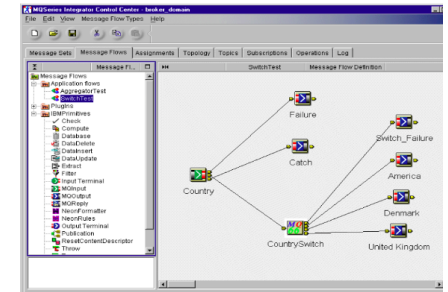
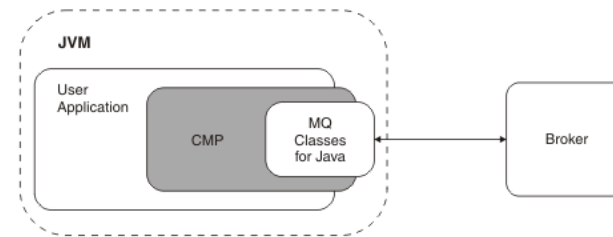


Policy Redeploy Demo

The Evolution of the Integration API

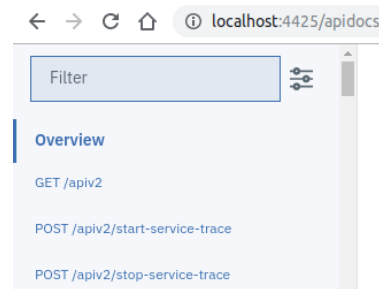
- **Configuration Manager Proxy (CMP)**

- Used internally in WBIMB V5 released in 2003
- Externalised in WMB V6, V6.1 released in 2005
- Configuration Manager hosted inside the Broker
- Eclipse admin toolkit used it for all communication
- Comms using custom XML format over MQ Queue Managers
- Could be used inside Java Compute Node for dynamic administration



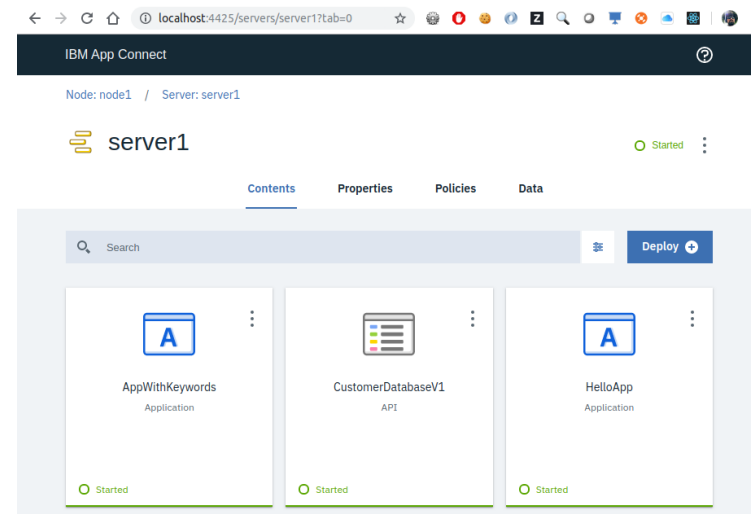
- **REST admin**

- First used in IIB v10 (2015) by the web ui
- No longer MQ dependent
- Cloud driven, programming language agnostic
- Use any language you want with a HTTP Client

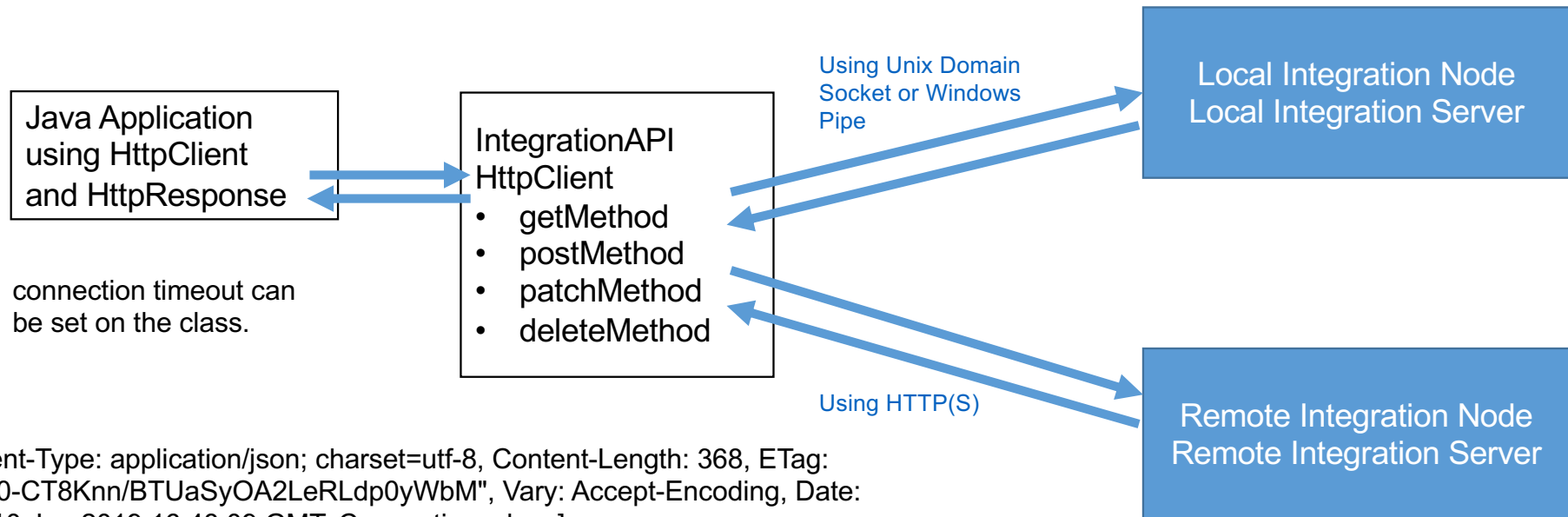


- **Integration API**

- ACE v11 (2019)
- Java administration interface backed by our Integration Admin HTTP Client
- Uses same REST admin layer as the web ui (/apiv2)
- Local direct connection to an Integration Server via unix domain sockets and named pipes (user access needed to the pipe)
- Remote `web` style connection using security as previously available



The HttpClient and HttpResponse Overview



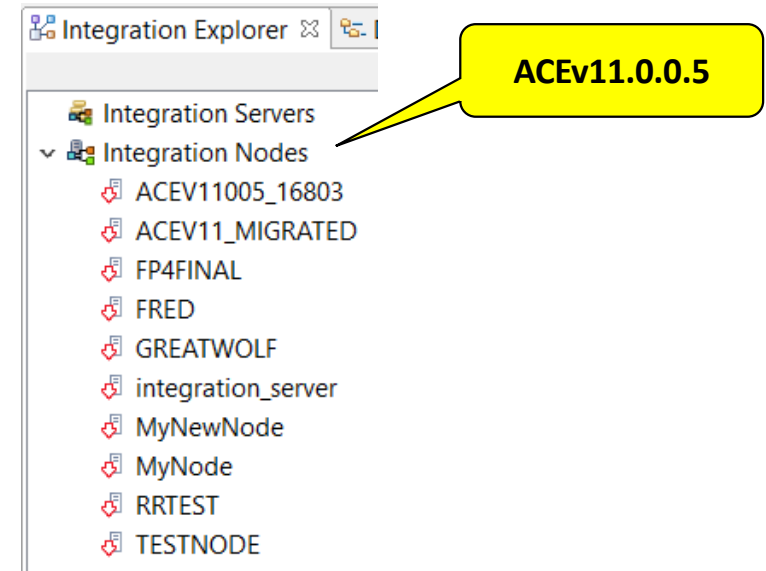
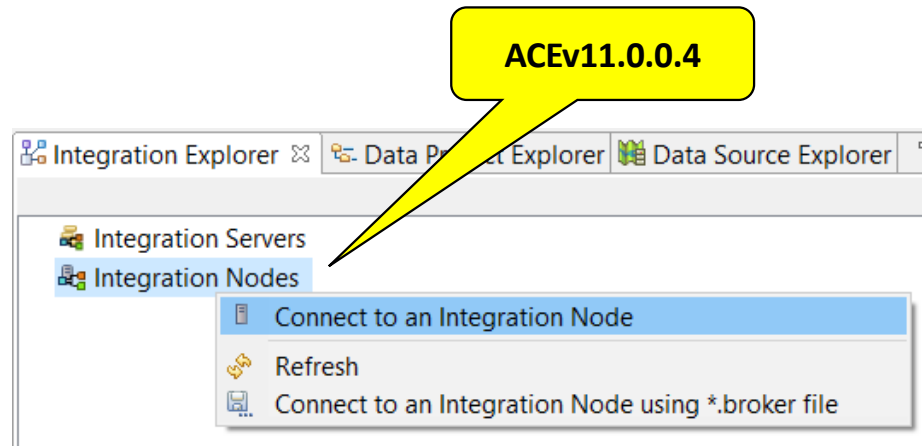
- connection timeout can be set on the class.

```
[Content-Type: application/json; charset=utf-8, Content-Length: 368, ETag:
W/"170-CT8Knn/BTUaSyOA2LeRLdp0yWbM", Vary: Accept-Encoding, Date:
Mon, 10 Jun 2019 16:48:09 GMT, Connection: close]
HTTP/1.1 200 OK
Content-Length: 368
```

HttpResponse can be used to access the status code, reason, header and body.

```
{"type":"integrationServers","children":[{"name":"server1","hasChildren":true,"uri":"/apiv2/servers/server1","type":"integrationServer",
"active":{"processId":43573,"isRunning":true,"state":"started"}},{"name":"serverBeta","hasChildren":true,"uri":"/apiv2/servers/server
Beta","type":"integrationServer","active":{"processId":78716,"isRunning":true,"state":"started"}}]}
```

Toolkit Enhancements driven by the Integration API



- ACEv11.0.0.4 Toolkit connects to local and remote Integration Nodes and Integration Servers using the HTTP administrative REST API

- ACEv11.0.0.5 Toolkit will display local integration nodes without requiring connection details, through restructuring based upon Integration API enhancements

Keywords

Keywords shown in toolkit Properties view

Property	Value
Keyword1	Value1
Keyword10	Value 10 MQSI
Keyword2	Value2
Keyword3	Value 3
Keyword4	Value \$4
Keyword5	Value 5 MQSI
Keyword6	Value6
Keyword7	Value7
Keyword8	Value 8
Keyword9	Value \$9
VERSION	11.0.5

Keywords shown in mqsilist

```

Keywords:
'Keyword1' = 'Value1'
'Keyword10' = 'Value 10 MQSI'
'Keyword2' = 'Value2'
'Keyword3' = 'Value 3'
'Keyword4' = 'Value $4'
'Keyword5' = 'Value 5 MQSI'
'Keyword6' = 'Value6'
'Keyword7' = 'Value7'
'Keyword8' = 'Value 8'
'Keyword9' = 'Value $9'
'VERSION' = '11.0.5'
    
```

```

[sanjayn@sachin HelloApp]$ pwd
/home/sanjayn/aceconfig/components/ACE_FP5_BETA/servers/server1/run/HelloApp
[sanjayn@sachin HelloApp]$
[sanjayn@sachin HelloApp]$ ls -R
.:
application.descriptor HelloFlow_Compute.esql HelloFlow_inputMessage.xml HelloFlow.msgflow HelloFlow_recordedMessage.xml META-INF
./META-INF:
bar-refresh.links broker.xml keywords.txt manifest.mf service.log user.log
    
```

Keywords.txt in Application/META-INF directory

Keywords can also be accessed using Integration API

```

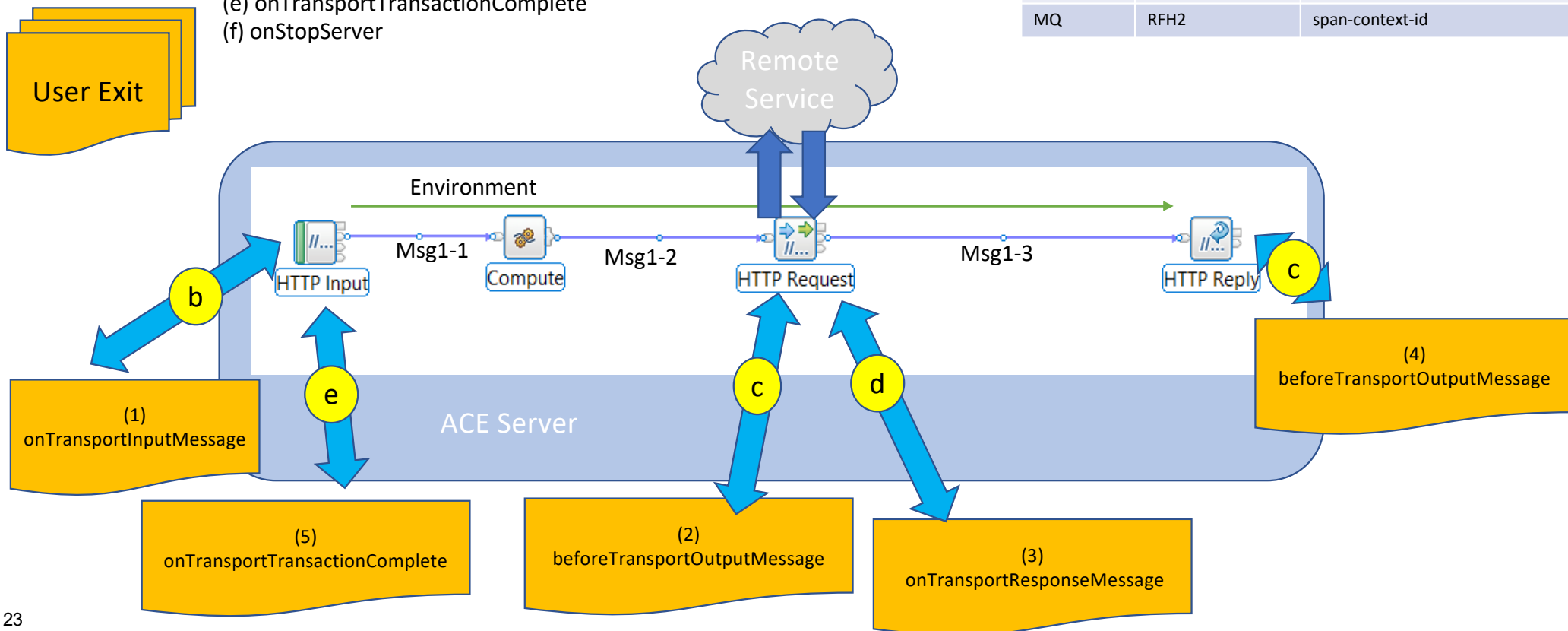
BIP1277I: Message flow 'HelloFlow' on integration server 'se
Additional thread instances: '0'
Last edited: '2019-06-13 15:12:44'
Start mode: 'Maintained'
UUID: '/apiv2/servers/server1/applications/HelloApp/messagef
Long description: ''
User-defined property names:
Keywords:
'FlowKey1' = 'FlowValue1'
'FlowKey2' = 'FlowValue2'
'FlowKey3' = 'FlowValue3'
'VERSION' = '2.4'
    
```

User Exit Callback Invocations for an HTTP Sync Flow

- (a) onStartServer
- (b) onTransportInputMessage
- (c) beforeTransportOutputMessage
- (d) onTransportResponseMessage
- (e) onTransportTransactionComplete
- (f) onStopServer

Transport	Location	FieldName
HTTP	HTTPHeader	span-context-id
HTTP	HTTPHeader	X-Remote-Addr
MQ	RFH2	span-context-id

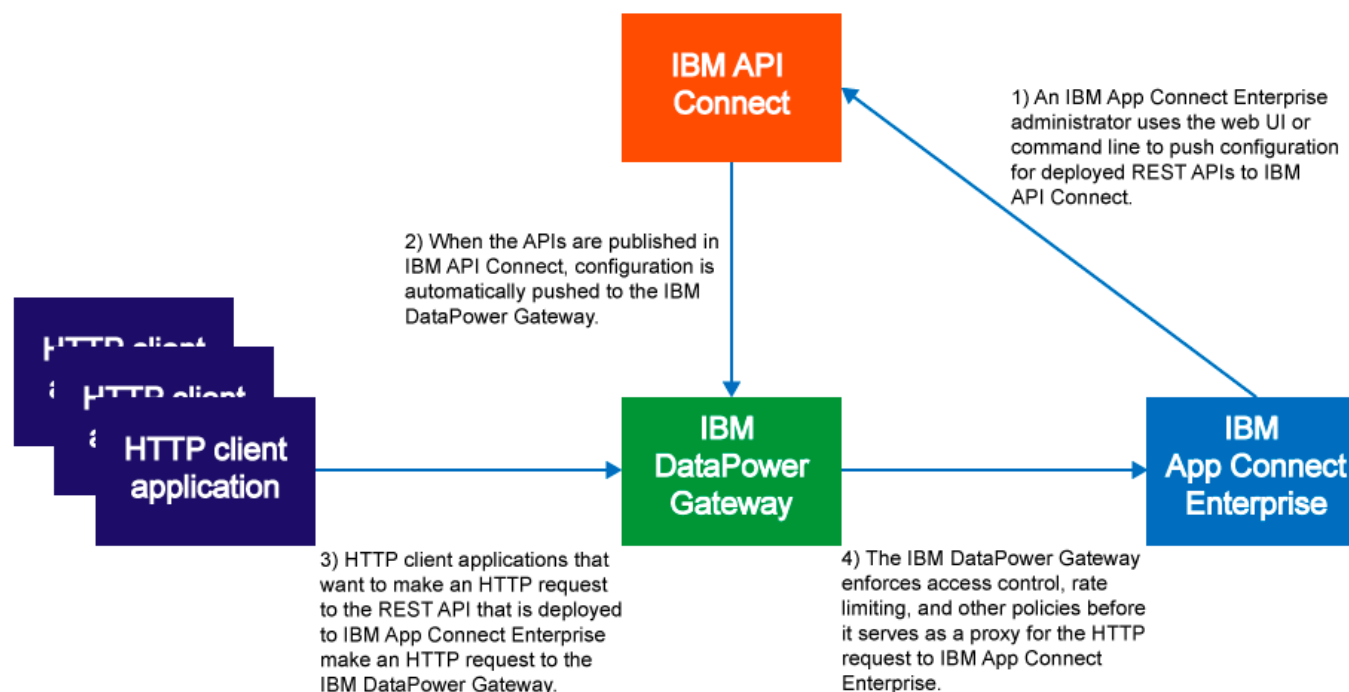
a





Push to API Connect

- Goal: facilitate API Connect management of REST APIs running in ACE



ACE v11 Supported Configurations

- Available from ACE v11 FP5
- ACE client options:
 - Admin REST APIv2 commands
 - CLI
 - Web UI
- Push REST APIs that are deployed to:
 - Standalone integration server
 - Node owned integration servers
- API Connect versions
 - v5
 - v5 on IBM Cloud
 - v2018

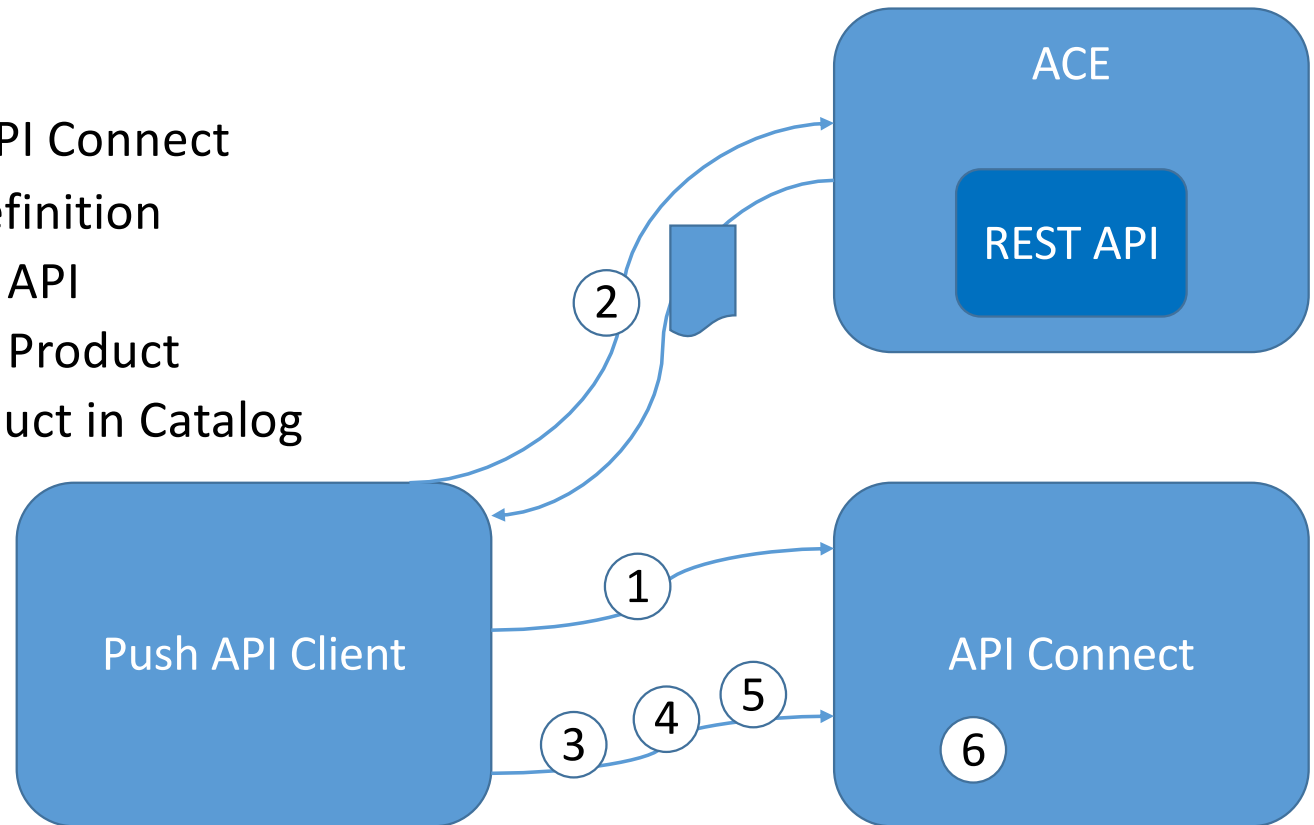
Deployment Push API Logical Process

- ACE

1. Authenticate with API Connect
2. Request REST API definition
3. Create/update draft API
4. Create/update draft Product
5. Optional: stage Product in Catalog

- API Connect

6. Publish Catalog



Clients: Admin REST APIv2 Command Endpoints

- `POST /apiv2/api-session`
 - Connect to a target API Connect environment
 - Augments the admin API server side session with API Connect connection properties
 - Returns:
 - API Connect Organizations, Products & Catalogs
 - `ACE-Session-xxxxxxx` cookie to be set on following commands
- `POST /apiv2/api-push-api`
 - Create or update a single draft API
 - Create or update a draft product
 - Add the draft API to the draft product
- `POST /apiv2/api-stage-product`
 - Stage a product in a catalog

Clients: Web UI

The image shows the IBM App Connect web interface. The main header is "IBM App Connect" with a server name "mySis". Below the header, there are tabs for "Contents", "Properties", "Policies", "Statistics", and "Resource". A search bar is visible. The main content area displays a card for "CustomerDatabaseV1 API" with a "Started" status. A context menu is open over this card, listing actions such as "Deploy onto this server...", "Push REST APIs to API Connect...", "Start statistics", "Start service trace", "Start user trace", "Reset service trace", "Reset user trace", and "Delete all content".

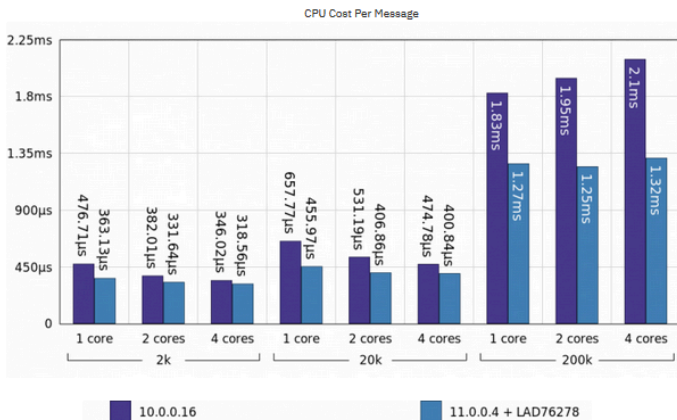
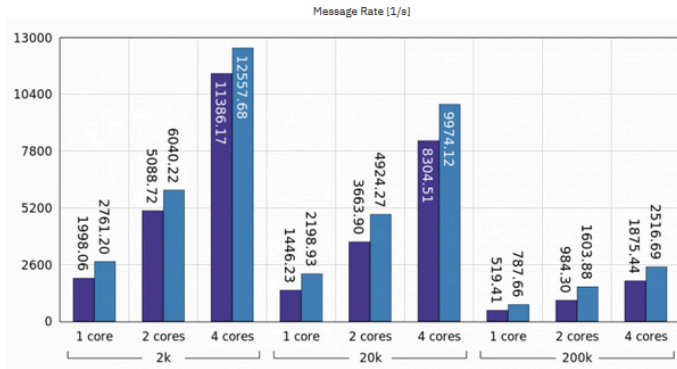
Overlaid on the main interface is a dialog box titled "Push REST APIs to API Connect". The dialog shows a progress bar with five steps: "Connect", "Select product", "Select APIs", "Define proxy", and "Push APIs". The "Select APIs" step is currently active. Below the progress bar, there is a section titled "Select the REST APIs to push to API Connect" with a list of checkboxes and API names:

- REST API name ^
- CustomerDatabaseV1
- PING_Service

At the bottom of the dialog, there are "Back" and "Continue" buttons. The "Continue" button is highlighted in blue.

Performance reports

HTTP Echo scenario with BLOB data



V11 Container Performance Reports

Geza Geleji
Published on May 31, 2019 / Updated on May 31, 2019

Show TOC

In the following, we present results of competitive performance evaluation of IBM App Connect Enterprise Version 11.0.0.4 against IBM Integration Bus Version 10.0.0.16 in Docker container environments on Windows and Linux. As there are numerous advantages of using containers for running integration workloads including but not limited to ease of administration and improved resource utilization, there is considerable interest in the behaviour of the aforementioned products in such environments. This report aims to show differences in performance while using state-of-the-art virtualization technology.

Before using performance information, be sure to read the general information under Notices.

Contents

- Evaluation Methodology
 - Containers
 - Reporting Performance Metrics
- Test Environment
- Optimization and Tuning
- Test Scenarios
 - HTTP BLOB Echo
 - HTTP XMLNSC Echo
 - HTTP XMLNSC ESQ Transformation



Integration

Explore the new features in App Connect Enterprise version 11.0.0.6

BenThompsonIBM

Published on October 7, 2019

5

We're thrilled to announce the availability of [IBM App Connect Enterprise v11.0.0.6](#). This is the sixth fix pack released for App Connect Enterprise software. We provide regular fix packs, approximately once per quarter, a cadence which we intend to continue through 2019. Fix packs provide both regular maintenance for the product, and also new functional content. This blog post summarizes all the latest and greatest capabilities:



- LDAP Authorization
- Encryption of credentials
- User-defined Policy redeploy
- New Policies for PeopleSoft, JDEdwards, and Siebel
- 48 New Tutorials
- Publication node enhancement to use MQ Client
- Command and admin REST API for extracting a monitoring profile
- Dynamically updating Message Flow User Defined Properties

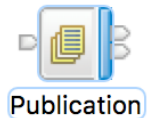
Expand the sections below to find out more!

Tags

ACE ACE on Cloud tutorial administration agile-integration-architecture ais-op api API Connect API Management APIs App Connect badge App Connect Enterprise App Connect Enterprise v11 App Connect tutorial betaworks broker BTM cast iron chef cloud configuration containers develop-integration-solution development dfdl docker docs documentation ESQL export API flow festive2015 gdm get-started global-cache graphical-data-mapping healthcare-integration HTTP hybrid integration ibm-application-integration ibm-integration **ibm-integration-bus** ibm-integration-bus-manufacturing-pack ibm-integration-bus-on-cloud ibm-integration-community ibm-mq **IBM App Connect (IBM Cloud)** IBM App Connect Enterprise IBM App Connect Professional IBM Cloud IBM Cloud Private ICP **iib** iib10 iib10lab iiboc iibv9 iibv10 IIBv10.0.0.4 integration integration-design-and-architecture integration-solution **Integration Bus** interconnect Kubernetes Learning Path lightweight-integration LoopBack manufacturing manufacturing-pack microservices migration



Publication node + MQ Client



Publication Node Properties - Publication

Description Specify the connection details to process a message on a queue for a local or remote queue manager. [More..](#)

Basic Connection* Local queue manager

MQ Connection Destination queue manager name <Integration node queue manager>

policy Queue manager host name

Monitoring Listener port number

Channel name

Security identity

Use SSL

SSL peer name

SSL cipher specification

Publication Node Properties - Publication

Description Use a policy to control the operational behavior of the node at run time. If a policy is specified, the properties in the policy override any properties that are set on the MQ Connection tab in the Integration Toolkit at run time. [More..](#)

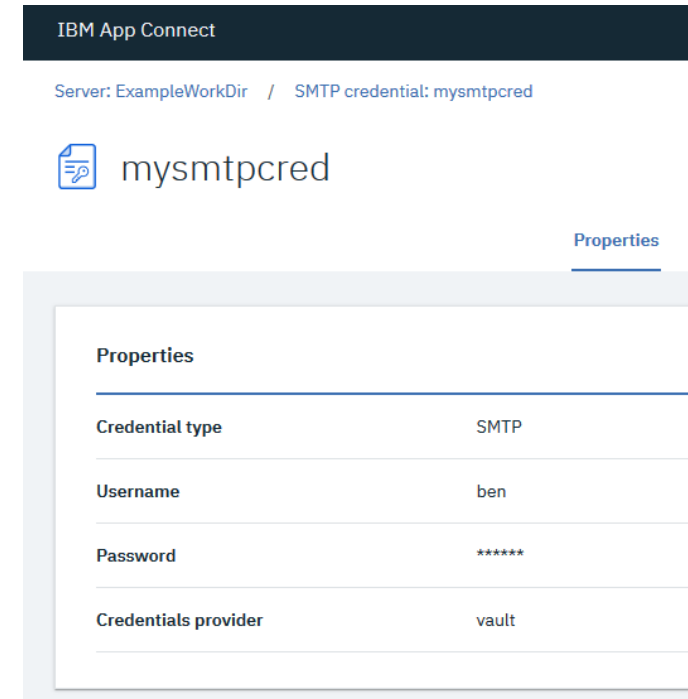
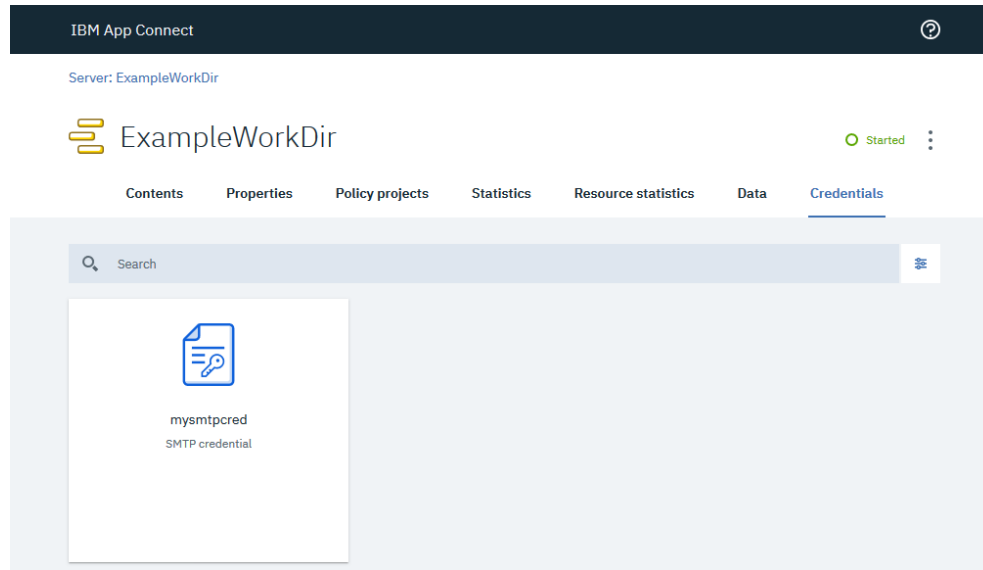
Basic Policy

MQ Connection

policy

Monitoring

The ACE vault and Encrypted Credentials

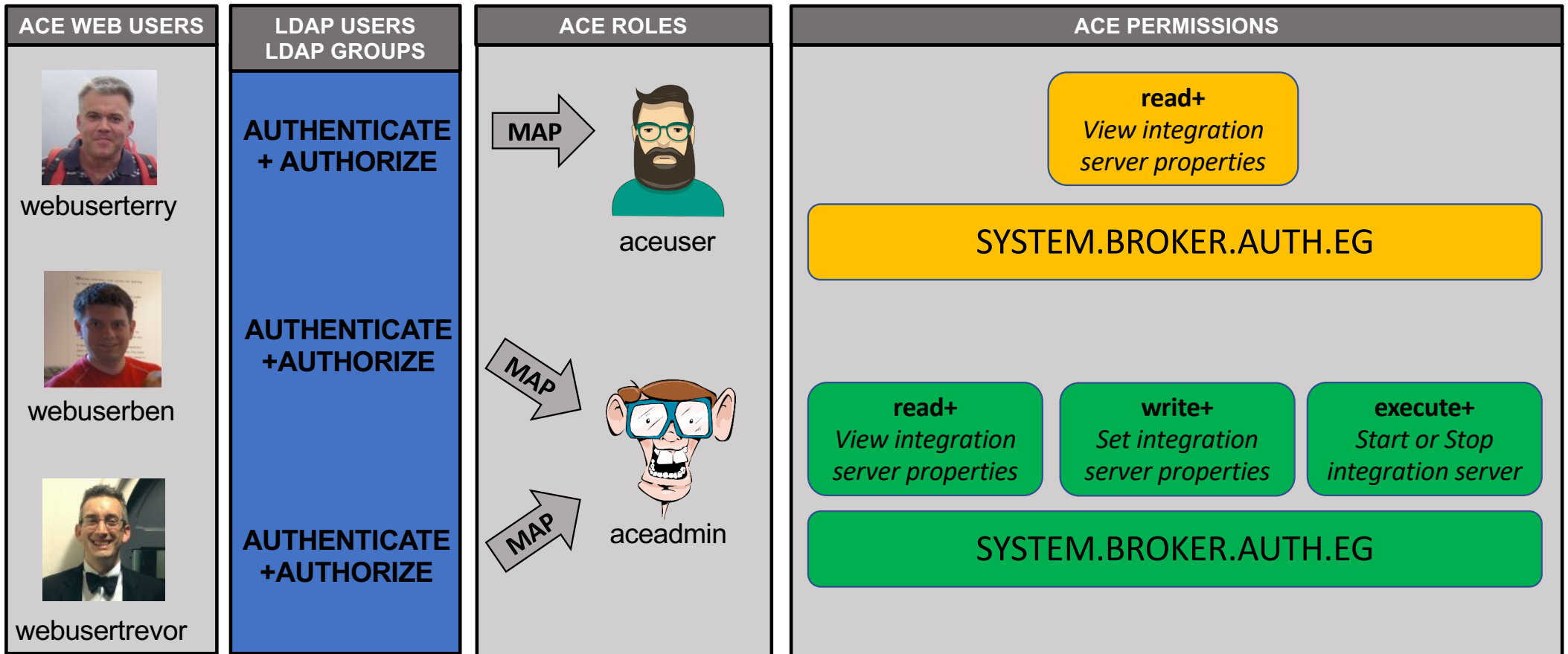


- Create a working directory for an independent integration server:
`mqsicreateworkdir C:\ExampleWorkDir`
- Create a vault which will hold the encrypted credentials:
`mqsivault --work-dir C:\ExampleWorkDir --create --vault-key myvaultkey`
- Start the independent integration server (remembering to pass in the value of your vault key!):
`IntegrationServer --work-dir C:\ExampleWorkDir --vault-key myvaultkey`
- Create a credential in the vault:
`mqsicredentials --work-dir C:\ExampleWorkDir --vault-key myvaultkey -create --credential-type smtp --credential-name mysmtpcred --username ben --password mysmtppassword`



Credentials Demo

Configuration of LDAP Authorization



LDAP - cn=Ben Thompson,dc=example,dc=com - ibmexample1 - Apache Directory Studio

File Edit Navigate Search LDAP Window Help



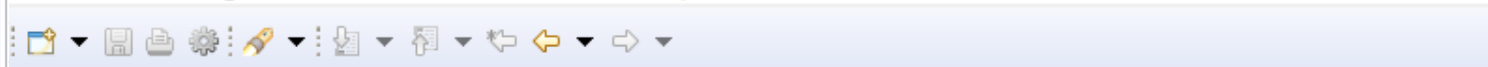
LDAP Browser

LDAP - cn=Ben Thompson,dc=example,dc=com

- DIT
 - Root DSE (5)
 - dc=example,dc=com (6)
 - cn=Ben Thompson
 - cn=Graham Haxby
 - cn=Martin Boag
 - cn=Trevor Dolby
 - ou=businessgroup1
 - ou=businessgroup2
 - ou=config
 - ou=schema
 - ou=system
- Searches
- Bookmarks

LDAP - cn=Graham Haxby,dc=example,dc=com - ibmexample1 - Apache Directory Studio

File Edit Navigate Search LDAP Window Help



LDAP Browser

LDAP - cn=Graham Haxby,dc=example,dc=com

- DIT
 - Root DSE (5)
 - dc=example,dc=com (6)
 - cn=Ben Thompson
 - cn=Graham Haxby
 - cn=Martin Boag
 - cn=Trevor Dolby
 - ou=businessgroup1
 - ou=businessgroup2
 - ou=config
 - ou=schema
 - ou=system
- Searches
- Bookmarks

LDAP Browser

LDAP - cn=Graham Haxby,dc=example,dc=com

DN: cn=Graham Haxby,dc=example,dc=com

Attribute Description	Value
objectClass	inetOrgPerson (structural)
objectClass	organizationalPerson (structural)
objectClass	person (structural)
objectClass	top (abstract)
cn	Graham Haxby
sn	Haxby
ou	businessgroup2
uid	ghaxby
userPassword	SSHA hashed password

Configuration of LDAP Authorization

```
57 # Admin Security
58 # Authentication
59 basicAuth: true # Clients web user name and password will be authenticated when set true
60 ldapUrl: ldap://ibmexample1:10389/dc=example,dc=com # ldap authentication url
61 ldapBindDn: ldap::alias # Resource alias or full bind dn
62 ldapBindPassword: ldap::alias # Resource alias or bind password
63 # Authorization
64 authorizationEnabled: true # Clients web user role will be authorized when set true
65 authorizationMode: 'ldap' # Set authorization mode. Choose 1 of : ldap, file or mq
66 ldapAuthorizeUrl: ldap://ibmexample1:10389/dc=example,dc=com?ou=sub?(cn={{username}}) # ldap authorization search url
67
68 Security:
69 LdapAuthorizeAttributeToRoleMap:
70 # When 'authMode' is ldap, set the mapping from a matched LDAP authorization attribute, as
71 # configured in 'ldapAuthorizeUrl' to the ACE web user role name
72 # e.g. map the following LDAP group DN's to web user roles 'adminRole', 'viewRole'
73 'businessgroup1': 'adminRole'
74 'businessgroup2': 'viewRole'
75 Permissions:
76 # Set Admin Security Authorization file permissions by web user role using 'read+:write+:execute+' , or 'all+'
77 # '+' grants permission, '-' denies permission
78 # e.g. define the following web user roles 'viewRole' and 'adminRole'
79 viewRole: 'read+:write-:execute-'
80 adminRole: 'all+'
```



LDAP Authorization Demo

User Defined Properties

User Defined Properties

User Property Hierarchy

- Example_UDPs
 - Basic
 - MyUserDefinedProperty1

Details

View and edit the item selected in the property hierarchy.

Type: String

Default Value: Default

Mandatory

```
DECLARE MyUserDefinedProperty1 EXTERNAL CHARACTER 'Default';

CREATE COMPUTE MODULE Example_UDPs_Compute
CREATE FUNCTION Main() RETURNS BOOLEAN
BEGIN
    CALL CopyMessageHeaders();
    CREATE LASTCHILD OF OutputRoot DOMAIN('JSON');
    SET OutputRoot.JSON.Data.MyUserDefinedProperty1 = MyUserDefinedProperty1;
    RETURN TRUE;
END;
```

- Once deployed you can query the value of UDPs through the REST API
- Using the REST API you can update the values dynamically for the current process

```
IBM App Connect Enterprise Console 11.0.0.6

C:\Program Files\IBM\ACE\11.0.0.6>curl -X POST http://localhost:7800/Example_UDPs
{"MyUserDefinedProperty1":"Ben"}

C:\Program Files\IBM\ACE\11.0.0.6>curl -X POST "http://localhost:4432/apiv2/servers/default/applications/Example_UDPs/messageflows/Example_UDPs/apply-global-udp-override?name=MyUserDefinedProperty1&value=Joe"

C:\Program Files\IBM\ACE\11.0.0.6>curl -X POST http://localhost:7800/Example_UDPs
{"MyUserDefinedProperty1":"Joe"}

C:\Program Files\IBM\ACE\11.0.0.6>curl -X POST http://localhost:4432/apiv2/servers/default/applications/Example_UDPs/messageflows/Example_UDPs/remove-global-udp-override?name=MyUserDefinedProperty1

C:\Program Files\IBM\ACE\11.0.0.6>curl -X POST http://localhost:7800/Example_UDPs
{"MyUserDefinedProperty1":"Ben"}

C:\Program Files\IBM\ACE\11.0.0.6>
```

Flow Exerciser: HTTP Input -> Compute -> HTTP Reply

User Defined Properties




Default Values for Message Flow Properties - Example_UDPs

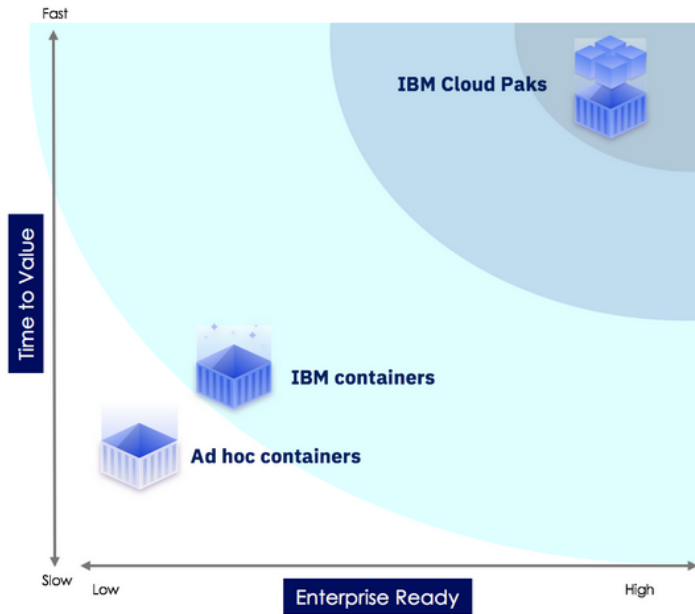
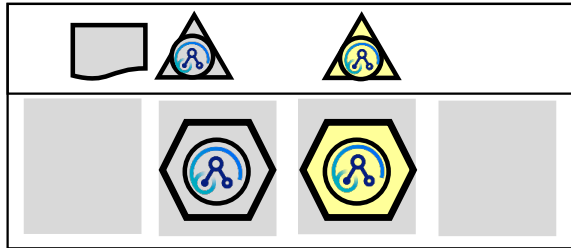
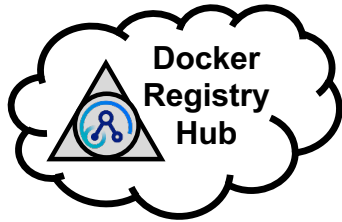
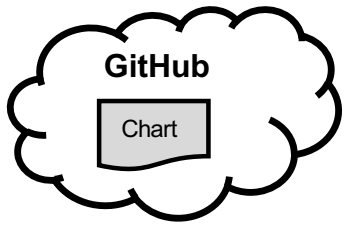
Description	Value
Basic MyUserDefinedProperty1	Ben
Monitoring	



ACE Certified Containers

IBM Certified Containers and IBM Cloud Paks

Container delivery models Capabilities & Value	 Ad hoc containers Client takes software binaries, Creates their own containers	 IBM provided containers Client receives IBM Software in the form of container(s)	 Certified IBM Cloud Paks on IBM Cloud Private Easy, Enterprise grade, Fully supported
IBM Software supported	Depends on product	Yes	Yes
Full stack support by IBM <small>(Base OS, software, deployment on cloud platform)</small>	No	No	Yes
Vulnerability Scanned <small>(Manages image vulnerabilities)</small>	Scan yourself	Yes	Yes
Orchestrated for Production <small>(Built for Kubernetes by product experts)</small>	None	None	Yes
Management and Operations	Roll your own	Roll your own	Built-in
License Metering Integration	Do it yourself	Do it yourself	Yes
Lifecycle Management	Manage it yourself	Manage it yourself	Tested upgrade & rollback



IBM Passport Advantage

ACEv11

ACE Certified Container v2.1.0

IBM Cloud Pak for Integration

Helm Chart Catalog

Chart

Chart

Chart

Dashboard ACE ACE + MQ

Docker Images

Dashboard ACE ACE + MQ ACE + MQClient

Dashboard

ACE

ACE + MQ

ACE + MQClient

IBM App Connect Enterprise Certified Container v2.0.0 available on ICP

IBM_Rob

Published on July 19, 2019

0

We have just released v2.0.0 of the IBM App Connect Enterprise Certified Container, which picks up the latest IBM App Connect Enterprise fix pack release as well as other enhancements. This is available both as a production edition, available in a PPA via IBM Passport Advantage (Part CC2MKML), and a developer edition. For the latter, re-syncing your Helm repos in ICP should result in the dashboard chart appearing in the catalog.

New Features

The updates in this release include:

- IBM Cloud Private Level 2 certification
- Includes IBM App Connect Enterprise v11.0.0.5
- Includes IBM MQ v9.1.2
- Use of UBI Base images
- All images certified by Red Hat – see [Red Hat Container Catalog](#)
- Changes in permission requirements
 - You no longer need to be an ICP clusteradmin to install, administrator is now sufficient
 - Images that use App Connect Enterprise and MQ images no longer need to run as root or with the privileged role, and can run under any uid
- Support for configuring callable flows
- We've hidden the server tile from the catalog to present a simpler first user experience

The latest certified container supports IBM Cloud Private v3.2.0.1906.

We have deprecated the `ibm-ace-server-rhel*` and `ibm-ace-server-rhel*` charts as there is no longer a requirement to run specific charts when running on Red Hat OpenShift Container Platform (RHOCP). As a result of rebasing onto [UBI images](#), we can now ship a single set of charts which are suitable for users on RHOCP and those on other Kubernetes distributions.

Tags

ACE ACE on Cloud tutorial administration agile-integration-architecture ais-op api API Connect API Management APIs App Connect badge App Connect Enterprise App Connect Enterprise v11 App Connect tutorial betaworks broker BTM cast iron chef cloud configuration containers develop-integration-solution development dfdl docker docs documentation ESQL festive2015 gdm get-started global-cache graphical-data-mapping healthcare-integration HTTP hybrid integration ibm-application-integration ibm-integration **ibm-integration-bus** ibm-integration-bus-manufacturing-pack ibm-integration-bus-on-cloud ibm-integration-community ibm-mq **IBM App Connect (IBM Cloud)** IBM App Connect Enterprise IBM App Connect Professional IBM Cloud IBM Cloud Private ICP **iib** iib10 iib10lab iiboc iibv9 iibv10 IIBv10.0.0.4 integration integration-design-and-architecture integration-solution Integration Bus interconnect Kubernetes Learning Path lightweight-integration LoopBack manufacturing-manufacturing-pack microservices migration monitoring mq MQSI optimisation overview performance problem-determination redbooks resources RestAPI runtime Salesforce SAP Scaling SOAP softlayer toolkit topology troubleshooting tuning tutorial V10 webaphere-message-broker weab-conversion weab-conversion-tool whats-new wmb wsrr Zero to Hero

IBM App Connect Enterprise Certified Container 2.1.0 is now available

Matt Bailey

Published on September 27, 2019 / Updated on September 27, 2019

0

We have just released v2.1.0 of the IBM App Connect Enterprise Certified Container which includes a number of enhancements. This is available both as a production edition, available in a PPA via IBM Passport Advantage (Part CC2MKML), and a developer edition. For the latter, re-syncing your Helm repos in the IBM Cloud Private management console should result in the dashboard chart appearing in the catalog.

New Features

The updates in this release include:

- New IBM App Connect Enterprise image that includes an IBM MQ client
- Images updated to use IBM MQ 9.1.3
- Support for sharing REST APIs with API Connect
- Support for defining custom ports
- Support for running Switch connectivity agents for connecting IBM App Connect Enterprise flows running in containers and on the cloud
- Simplified permissions configuration on Red Hat OpenShift Container Platform

This release includes IBM App Connect Enterprise 11.0.0.5, and supports IBM Cloud Private 3.2.0.1906 and 3.2.0.1907.

TAGS CONTAINERS, ICP, IBM CLOUD PRIVATE, APP CONNECT ENTERPRISE

Matt Bailey

Tags

ACE ACE on Cloud tutorial administration agile-integration-architecture ais-op api API Connect API Management APIs App Connect badge App Connect Enterprise App Connect Enterprise v11 App Connect tutorial betaworks broker BTM cast iron chef cloud configuration containers develop-integration-solution development dfdl docker docs documentation ESQL export API flow festive2015 gdm get-started global-cache graphical-data-mapping healthcare-integration HTTP hybrid integration ibm-application-integration ibm-integration ibm-integration-bus ibm-integration-bus-manufacturing-pack ibm-integration-bus-on-cloud ibm-integration-community ibm-mq **IBM App Connect (IBM Cloud)** IBM App Connect Enterprise IBM App Connect Professional IBM Cloud IBM Cloud Private ICP **iib** iib10 iib10lab iiboc iibv9 iibv10 IIBv10.0.0.4 integration integration-design-and-architecture integration-solution Integration Bus interconnect Kubernetes Learning Path lightweight-integration LoopBack manufacturing manufacturing-pack microservices migration monitoring mq mqsi optimisation overview performance problem-determination redbooks resources RestAPI runtime Salesforce SAP Scaling SOAP softlayer toolkit topology troubleshooting tuning tutorial V10 websphere-message-broker weeb-conversion weeb-conversion-tool whats-new wmb wsrr Zero to Hero

App Connect Enterprise Integration

IBM App Connect Enterprise certified container 2.2.0 is now available

Matt Bailey

Published on October 31, 2019



0

We have just released v2.2.0 of the IBM App Connect Enterprise certified container which includes IBM App Connect Enterprise 11.0.0.6, the latest fix pack.

This release is available both as a production edition, available in a PPA via IBM Passport Advantage (Part CC45QIE), and a developer edition. For the latter, [re-syncing your Helm repos in the IBM Cloud Private management console](#) should result in the dashboard chart appearing in the catalog.

IBM App Connect Enterprise certified container 2.2.0 supports IBM Cloud Private 3.2.0.1906 and 3.2.0.1907 on Red Hat OpenShift 3.11.

TAGS CONTAINERS, ICP, IBM CLOUD PRIVATE, APP CONNECT ENTERPRISE, OPENSIFT

Matt Bailey

Tags

ACE ACE on Cloud tutorial administration agile-integration-architecture ais-op api API Connect API Management APIs App Connect badge App Connect Enterprise App Connect Enterprise v11 App Connect tutorial betaworks broker BTM cast iron chef cloud configuration containers develop-integration-solution development dfdl docker docs documentation ESQL export API flow festive2015 gdm get-started global-cache graphical-data-mapping healthcare-integration HTTP hybrid integration ibm-application-integration ibm-integration **ibm-integration-bus** ibm-integration-bus-manufacturing-pack ibm-integration-bus-on-cloud ibm-integration-community ibm-mq **IBM App Connect (IBM Cloud)** IBM App Connect Enterprise IBM App Connect Professional IBM Cloud IBM Cloud Private ICP **iib** iib10 iib10lab iiboc iibv9 iibv10 IIBv10.0.0.4 integration integration-design-and-architecture



IBM Cloud Pak for Integration

Easily build powerful integrations with unmatched end-to-end capabilities and enterprise-grade security.

Skip welcome

Do not show this page again



API Connect

Unlock business data and assets as APIs



App Connect

Connect your cloud and on-prem applications



MQ

Reliable, scalable and secure messaging between applications and systems



Event Streams

Apache Kafka for the Enterprise



Aspera

Transfer, exchange and deliver big data at maximum speed



DataPower

Control access to vital resources wherever they are

Thank you!

Questions ?

David Coles <dcoles@uk.ibm.com>

