



Using Automation to Schedule SaaS Based Applications

September 2018



Agenda

OVERVIEW

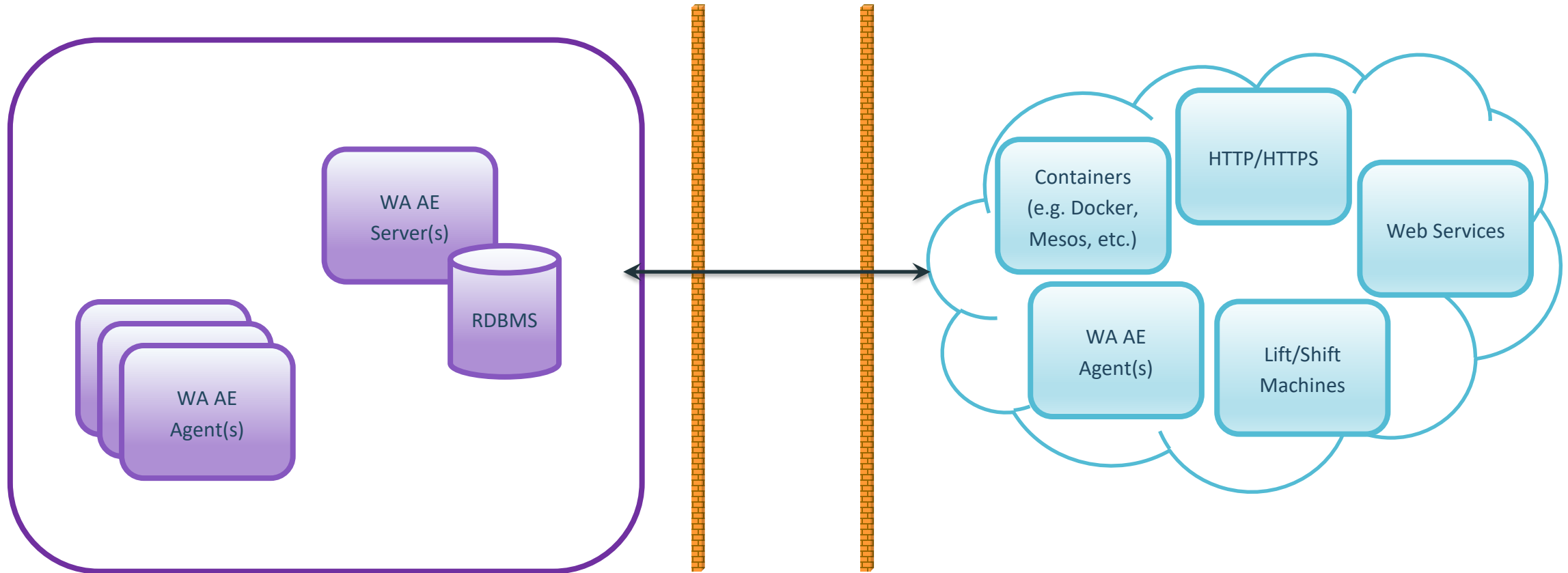
JOB TYPES

CHALLENGES

LOOKING AHEAD

Q&A

PaaS/SaaS – Applications



Job Types

- PaaS/SaaS
 - HTTP
 - WBSVC (SOAP RPC – *deprecated standard*)
 - WSDOC (SOAP Document/Literal)
 - POJO (Plain Old Java Object)
 - CMD (Execute cURL and container CLIs)

HTTP

View HTTP_Job_1 on wademo-ae-11366

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| ▼ [Dependent Jobs](#)

| ▼ [Starting Conditions](#)

| ▼ [Job Runs](#)

▲ Search Results





Select and:

Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Code
 HTTP_Job_1		Aug 14, 2018 5:06:13 PM	Aug 14, 2018 5:06:13 PM		41725		0

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▲ Job Details

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Attribute Name	Attribute Value
 Primary	
Name	HTTP_Job_1
Send to machine	localhost
Condition	e(HTTP_ERROR) = 500
Owner	ejmcommander
 HTTP	
Invocation type	GET
Provider URL	http://wabld-agent-ws:8080/SampleSoapWS/services/listServices
J2EE no global proxy defaults	true
J2EE proxy port	80
 Notification	
 Alarms	
Maximum run time (minutes)	0
Send alarm on failure	true

technologies

WSDOC

View getQuoteToken on wademo-ae-11366

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Search Results

Select and:

Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Co
getQuoteToken		Aug 15, 2018 4:39:38 PM	Aug 15, 2018 4:39:38 PM		46311		1



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Job Details

Quick Edit

Show

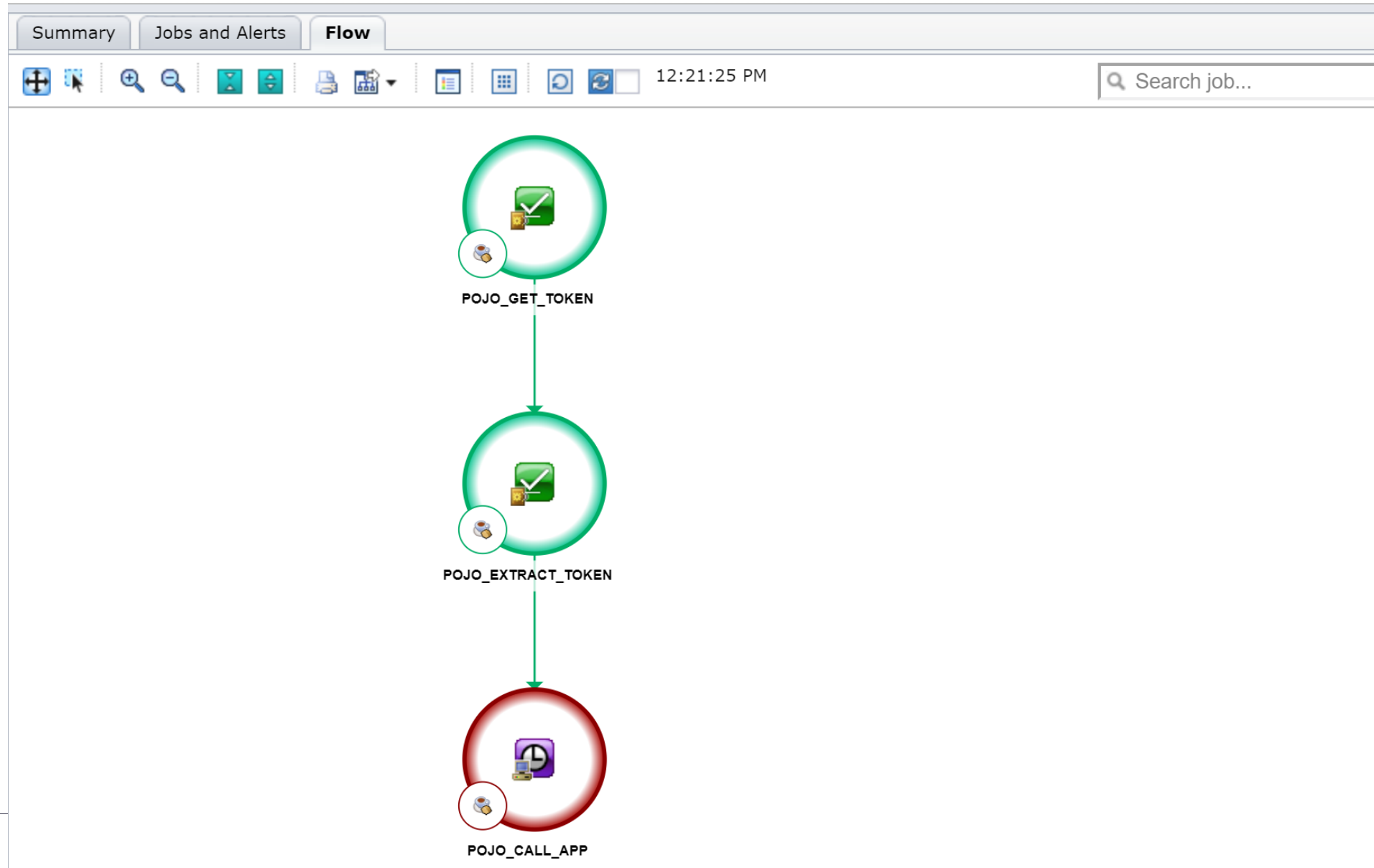
[Expand All](#) | [Collapse All](#)

Attribute Name	Attribute Value														
 Primary															
Name	getQuoteToken														
Send to machine	localhost														
Condition	s(login)														
Owner	ejmcommander														
 Document/Literal Style Web Service															
WSDL location	http://wabld-agent-ws:8080/SampleSoapWS/services/StockQuote?wsdl														
Service name	StockQuote														
Operation	getQuoteToken														
Target end-point URL	http://wabld-agent-ws:8080/SampleSoapWS/services/StockQuote.StockQuoteHttpSoap11Endpoint/														
Port name	StockQuoteHttpSoap11Endpoint														
Web service parameters	<table><tr><th>Parameter Name</th><th>Parameter Value</th><th>Payload Job</th></tr><tr><td>/getQuoteToken</td><td></td><td></td></tr><tr><td>/getQuoteToken/token</td><td>login</td><td></td></tr><tr><td>/getQuoteToken/symbol</td><td>CA</td><td></td></tr></table>	Parameter Name	Parameter Value	Payload Job	/getQuoteToken			/getQuoteToken/token	login		/getQuoteToken/symbol	CA			
Parameter Name	Parameter Value	Payload Job													
/getQuoteToken															
/getQuoteToken/token	login														
/getQuoteToken/symbol	CA														
Use global proxy defaults	true														

POJO – Requirements

- Default constructor (no arguments)
- Instance methods
- Return basic types (e.g. int, String, etc.)

POJO (Pivotal Cloud Foundry)



POJO (Pivotal Cloud Foundry)

View POJO_GET_TOKEN on wademo-ae-11366

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Search Results | Job Details | Job Flow | Dependent Jobs | Starting Conditions | Job Runs




Search Results

Select and: StartGo

Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Code
 POJO_GET_TOKEN		Jul 24, 2018 1:04:41 PM	Jul 24, 2018 1:04:42 PM		2757		0

Job DetailsQuick EditShow JILBack to Top

Expand AllCollapse All

Attribute Name	Attribute Value
 Primary	
Name	POJO_GET_TOKEN
Send to machine	localhost
Owner	ejmcommander
Group	
Application	PCF
 POJO	
Class name	com.ca.http.HttpClient
Method name	postSecure
J2EE parameters	String=test, String=Cansm300, String="", String=https://wabld-agent-ws.ca.com:8443/SampleSecureREST/rs/oauth/token, String=grant_type=client_credentials, String=Content-Type:application/x-www-form-urlencoded
 Notification	

POJO (Pivotal Cloud Foundry)

View POJO_EXTRACT_TOKEN on wademo-ae-11366

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Search Results

Select and: Start ▼ Go

Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Code
 POJO_EXTRACT_TOKEN		Jul 24, 2018 1:04:42 PM	Jul 24, 2018 1:04:42 PM		2758		0




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Job Details

Quick Edit

Show JIL

Expand All | Collapse All

Attribute Name	Attribute Value
 Primary	
Name	POJO_EXTRACT_TOKEN
Send to machine	localhost
Condition	s(POJO_GET_TOKEN)
Owner	ejmcommander
Group	
Application	PCF
 POJO	
Class name	com.ca.json.JsonParser
Method name	getJSONPath
J2EE parameters	payload_job=POJO_GET_TOKEN, String=\$.access_token
 Notification	

POJO (Pivotal Cloud Foundry)

View POJO_CALL_APP on wademo-ae-11366

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Select and:

Start

Go

Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Code
 POJO_CALL_APP		Jun 13, 2018 9:54:18 AM	Jun 13, 2018 9:54:19 AM		2176		0

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▲ Job Details

Quick Edit


Show JIL

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Attribute Name	Attribute Value
<div>Primary</div>	
Name	POJO_CALL_APP
Send to machine	agent_lb
Condition	s(POJO_EXTRACT_TOKEN)
Owner	ejmcommander
Group	
Application	PCF
<div>POJO</div>	
Class name	com.ca.http.HttpClient
Method name	application
J2EE parameters	String="", String="", String="", String=https://wabld-agent-ws:8443/SampleSecureREST/rs/application/start?countryC=BRA, payload_job=POJO_EXTRACT_TOKEN
<div>Notification</div>	

CMD (cURL)

 CA Workload Automation AE



DashboardMonitoringQuick ViewEnterprise Command LineReportingForecastQuick EditApplication EditorResourcesCredentialsConfigura

Create Command Job on wademo-ae-11366

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▼ Search | ▼ Properties

Expand All | Collapse All

Name	Value
 Primary	
• Name	curl_get_gvar
Description	use curl to retrieve global variable
• Send to machine	localhost
Condition	
Resources	
Owner	autosys
Box	
Group	
Application	
Initial status	▼
 Command	
• Command	C:\curl\bin\curl --basic --insecure --user <u>autosys:autosys</u> <u>https://localhost:9443/AEWS/gvar/wsvar</u>
Shell	

REST Client Prototype (wlaRESTclient)

- Available upon request through Support
- Engine agnostic
- HTTP/S
- GET, POST, PUT, DELETE
- XML & JSON

Persistent Settings

Global settings

BASEURL: https://localhost:9443/AEWS # base url

AUTH_SCHEMA: BASIC

USER: autosys

PASSWORD: ENC(0C6C30073DF47232)

AEWS_SCHEMA:

URL: /schema

ACCEPT : application/xml

Application settings

AEWS_JOB:

URL: /job

ACCEPT : application/json

Persistent Settings - continued

AEWS_STARTJOB:

TYPE: POST

CONTENTTYPE: application/xml

URL: /event/start-job

INPUT: "<command><jobName>%jobname%</jobName><comment>started via REST API</comment></command>"

AEWS_POST_GVAR:

TYPE: POST

BASEURL: https://localhost:9443/AEWS/event/set-gvar

ACCEPT : application/xml

CONTENTTYPE: application/xml

INPUT: "<command><gvarValue>%value%</gvarValue></command>"

AEWS_POST_GVAR_JSON:

TYPE: POST

BASEURL: https://localhost:9443/AEWS/event/set-gvar

ACCEPT : application/json

CONTENTTYPE: application/json

INPUT: "{ \"gvarValue\": \"%value%\" }"

CMD (wlaresclient)

ca

CA Workload Automation AE

ejmcommander Logout | My Profile |

DashboardMonitoringQuick ViewEnterprise Command LineReportingForecastQuick EditApplication EditorResourcesCredentialsConfiguration+

Create Command Job on wademo-ae-11366

Create...Customize...

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SearchProperties

Name	Value
<div>Primary</div>	
<div>Name</div>	post_gvar
Description	use prototype tool to set a global variable
<div>Send to machine</div>	localhost
Condition	
Resources	
Owner	autosys
Box	
Group	
Application	
Initial status	
<div>Command</div>	
<div>Command</div>	java -jar \wlaresclient\wlaresclient.jar AEWS_POST_GVAR PATH="C:\wlaresclient\waee.yml" URL=/ws_gvar XIvalue="created using wlaRESTclient"
Shell	
Interactive	<input type="checkbox"/>
Heartbeat interval	
Standard input file	
Blob input	
Standard output file	C:\temp\%AUTO_JOB_NAME%\%AUTORUN%_out.txt

CMD (Docker)

View start_docker0 on wademo-ae-11366

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Search Results | Job Details | Job Flow | Dependent Jobs | Starting Conditions | Job Runs

Search Results

Select and: Start Go

Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Code
 start_docker0		Jul 31, 2018 12:09:01 PM	Jul 31, 2018 12:09:02 PM		3283		0





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Job Details

Quick Edit

Show JIL

Expand All | Collapse All

Attribute Name	Attribute Value
 Primary	
Name	start_docker0
Send to machine	wademo-docker
Owner	root
Group	docker
Application	ondemand
 Command	
Command	/usr/bin/docker start docker0 ; /usr/bin/docker ps
 Notification	
 Alarms	



CMD (Docker)

View run_command_docker0 on wademo-ae-11366

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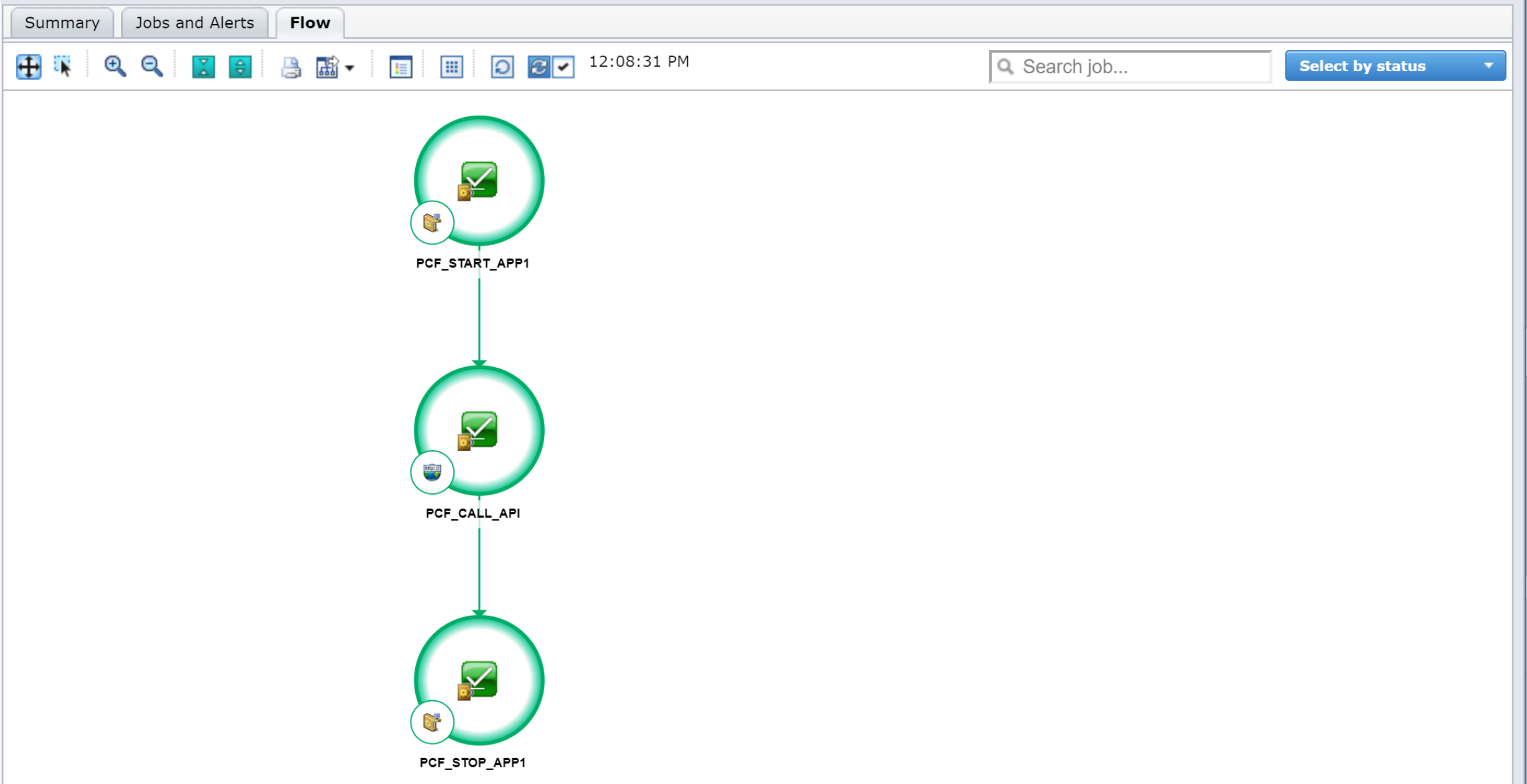
▲ Search Results							
Select and:		Start ▼	Go				
Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Code
 run_command_docker0		Jul 31, 2018 12:09:27 PM	Jul 31, 2018 12:09:27 PM		3284		0

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▲ Job Details		Quick Edit	Show JIL
Expand All Collapse All			
Attribute Name		Attribute Value	
[-] Primary			
Name		run_command_docker0	
Send to machine		docker0	
Condition		s(start_docker0)	
Owner		root	
Group		docker	
Application		ondemand	
[-] Command			
Command		hostname	
[-] Notification			



CMD (Pivotal Cloud Foundry)



CMD (Pivotal Cloud Foundry)

View PCF_START_APP1 on wademo-ae-11366

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▲ Search Results




Select and:	Start ▼	Go					
Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Code
 PCF_START_APP1		Dec 18, 2017 2:17:54 PM	Dec 18, 2017 2:18:07 PM		251		0

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Quick EditShow JIL

Expand All | Collapse All

Attribute Name	Attribute Value
 Primary	
Name	PCF_START_APP1
Send to machine	localhost
Owner	root
 Command	
Command	/media/sf_ae/cabd pcf pcf-cloud start
 Notification	



CMD (Pivotal Cloud Foundry)

View PCF_CALL_API on wademo-ae-11366

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Search Results | Job Details | Job Flow | Dependent Jobs | Starting Conditions | Job Runs

Search Results

Select and: Start

Go

Name	Box Name	Start Time	End Time	Status	Run	Priority	Exit Code
 PCF_CALL_API		Dec 18, 2017 2:18:23 PM	Dec 18, 2017 2:18:23 PM		252		0





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Job Details

Quick Edit

Show JIL

Expand All | Collapse All

Attribute Name	Attribute Value
 Primary	
Name	PCF_CALL_API
Send to machine	localhost
Condition	s(PCF_START_APP1)
Owner	root
 HTTP	
Invocation type	GET
Provider URL	http://kao.cfapps.io
Filter	hello world
J2EE no global proxy defaults	true
J2EE proxy port	80
 Notification	
 Alarms	

Challenges

- HTTP job type support weak for REST
- Web services sharing data must run on same agent
- Limited data sharing
- WSDOC XML representation proprietary
- No HTTP header support

WA AE 12.0

- Robust SOAP/REST support
- Orchestration of dependent web services
- Same agent dependency removed
- Support for XML standard

Questions





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