

Interconnect Session 1587:

Bring Your Own Flow: Live Demo and Deep Dive into Enterprise Class Hybrid Clouds

Haddon Hill Group Inc.

Philip Schaad CTO

Julian Foster Principal PureApp and
Cloud Consultant



InterConnect2015

The Premier Cloud & Mobile Conference

February 22 – 26

MGM Grand & Mandalay Bay | Las Vegas, Nevada

#ibminterconnect



© 2014 IBM Corporation

**Interconnect Session #: AIN-1587:
Bring Your Own Flow: Live Demo and Deep Dive
into Enterprise Class Hybrid Clouds**

Julian Foster and Philip Schaadt

February 25, 2015

Preconference draft version of Feb 18th 2015



HHG's Hybrid Cloud Integration Platform

AIN-1587: Bring Your Own Flow: Live Demo and Deep Dive into Enterprise Class Hybrid Clouds

Attendees will see a live demonstration of the recommended practices for architecture, deployment, maintenance and management of a secure WebSphere integration infrastructure running across three hybrid clouds. The demonstration will show the connectivity scenario of "bring your own flow" with **IBM Integration Bus** running both on- and off-premise, and **DataPower** acting as the secure cloud connector. The connection to external endpoints will be through the **IBM API Management** product on SoftLayer with the HHG **custom API Portal running also on SoftLayer**. Cloud management on SoftLayer will be via **IBM PureApplication Service on SoftLayer**, with various options demonstrated multi-cloud management including **QRadar**, **UrbanCode Deploy** as well as **IBM Cloud Orchestrator**.

Stream: Application Infrastructure and Integration

Track: Innovating with APIs, Gateways, SOA

Cloud Components

- **IBM API Management** for Internet API access
- **API Management Dev Portal** for Internet developer access
- **IBM API Management** and **DataPower** for access control and dynamic routing (policies from **WSRR**)
- **IIB, BPM** and/or **ODM** for middleware processing and or routing (duplicated to each cloud)
- **WAS/DB2** for backend application
- **UrbanCode Deploy** with patterns for lifecycle management
- **QRadar** for security incident and event management
- **IBM PureApplication Service on SoftLayer**
- **IBM Cloud Orchestrator** for multi-cloud management

Introduction & Thanks

A typical selection of...

Analyst Cloud Prognostications...

- IT service architectures will become even more complex so IT must get better at complex IT service infrastructure design, automation, roll out and operations
- Over the next two years, a majority current service providers will manage their customer workloads on top of a leading cloud provider
- Over the next two years less than one quarter of large enterprise IT shops will have completed a significant platform or workload driven PaaS/Infrastructure deployment
- Over the next two years more than 50% of the new Business Intelligence/Analytics implementations will be on the cloud
- Multi-cloud integration technologies will preferentially drive incremental migration to the cloud of the enterprise's proven on premise integration IT infrastructures

A LIVE 50 Minute Technical Infrastructure Walk-through...

HHG's Hybrid Cloud Integration Platform (1)

1. HHG Multi-cloud Topology

2. Functional use case demo: Multi Cloud, Multi Broker routing from external APIs

- a) APIs managed from custom Drupal portal
- b) APIs route through the API domain on DataPower to the correct version of IIB on any cloud
- c) DataPower custom policies from WSRR

3. SoftLayer Bare Metal ESX server

- a) From On-Prem to SoftLayer Bare Metal
- b) Production Topology
- c) Cloud Management

4. IBM PureApplication Service on SoftLayer

- a) IBM PureApp Service on SoftLayer overview
- b) Basic Web App & WAS pattern and properties
- c) Dev/Test Topology
- d) PureApp Shared Services
- e) PureApp Monitoring
- f) ITCAM Monitoring the Integration Bus flows
- g) Patterns: BPM Pattern on PureApp
- h) PureApp Pattern Editor
- i) HHG ESB in a box in a Box Pattern
- j) DataPower Virtual Edition on PureApp

A LIVE 50 Minute Technical Infrastructure Walk-through...

HHG's Hybrid Cloud Integration Platform (2)

6. Integration Broker on IBM PureApp

- a) IIB Pattern Deployment
- b) IIB Properties

7. IIB Lifecycle Management with UCD

- a) UCD IBM Integration Broker lifecycle management project
- b) UCD project to completely deploy Integration Broker including selected BAR file

8. IBM API Management from the HHG custom Drupal portal

- a) APIs route through the API domain on DataPower to the correct version of the Integration Bus on any cloud
- b) DataPower custom policies are available from WSRR

9. Security Information and Event Management QRadar

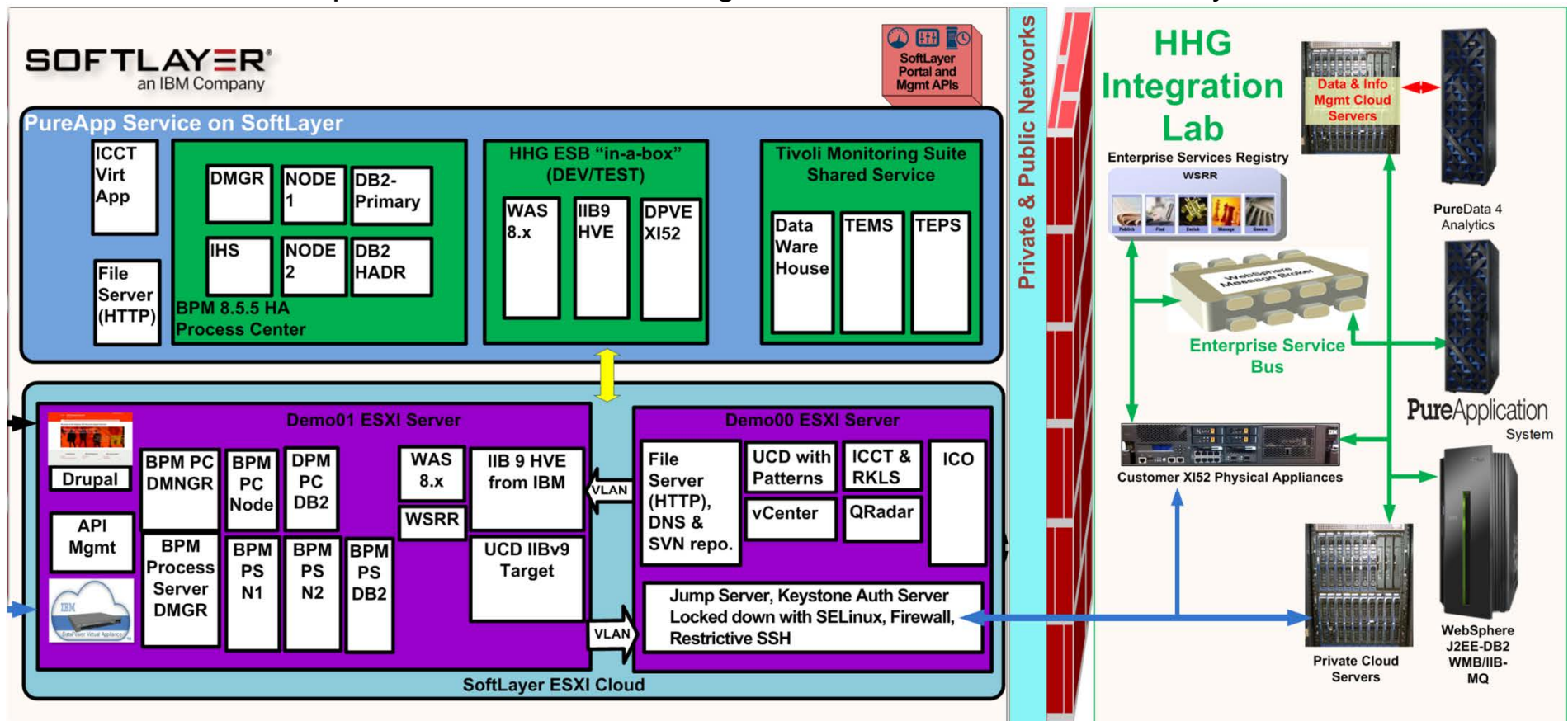
- a) QRadar monitors the components across multiple clouds
- b) DataPower DSM is monitored by QRadar
- c) QRadar monitoring example of custom rules
- d) QRadar Monitors MQ/IIB

10. IBM Cloud Orchestrator Manages Multi-Clouds

- a) Manage multiple clouds from one location
- b) ICO Patterns similar to IBM PureApp Service or PureApp System
- c) Deployments include parameter setting
- d) 1,000's of APIs, workflows and catalogs (Customer designs it, builds it and maintains it)

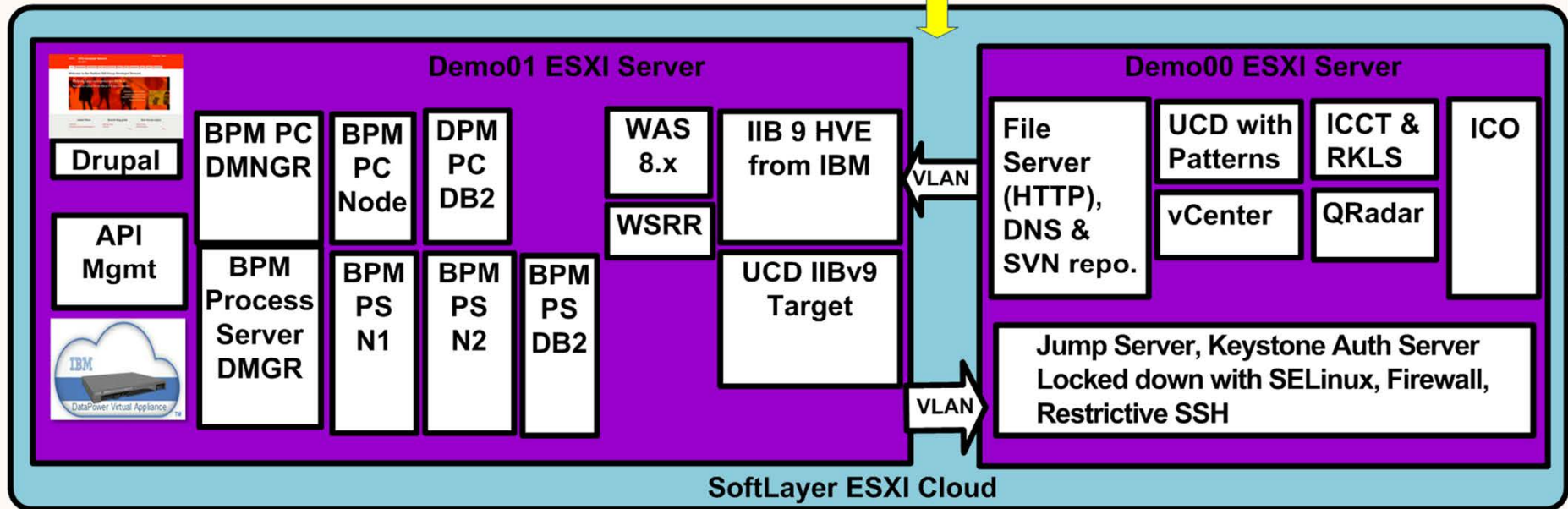
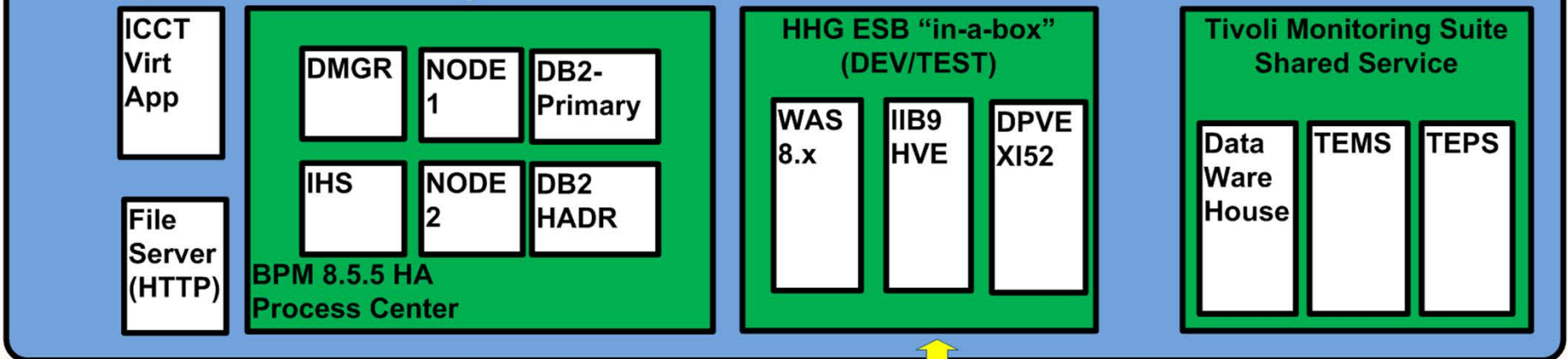
HHG Multi-cloud Integration Platform Deployment Topology

- HHG already runs a multi-cloud infrastructure within the HHG on premise Integration Labs.
- HHG invest in fully integrated and cross brand demo, POC, PoT and training from all legacy brands of WebSphere, Information Management, Tivoli, Rational, Security & POWER/AIX



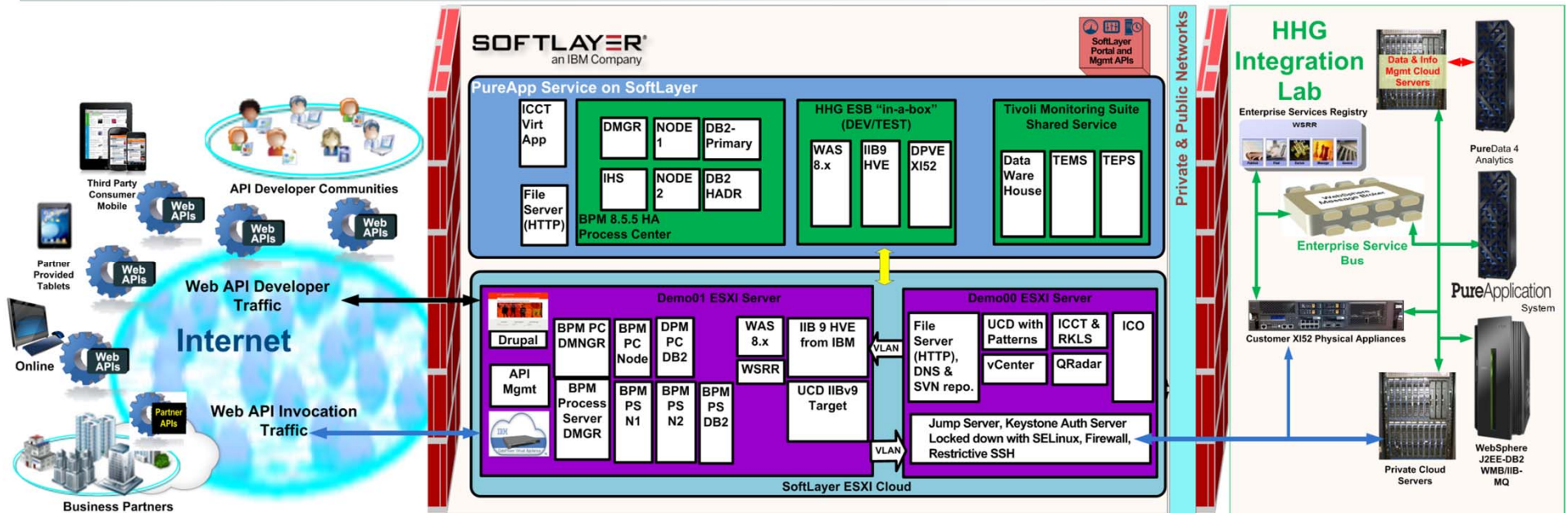
- HHG recreated these IBM product integrations with January 2015 available versions on:
 1. SoftLayer Bare Metal ESXi servers
 2. PureApp Service on SoftLayer

PureApp Service on SoftLayer



Manage Functional or Cloud Management Access with
API Plans, cloud connectors or BlueMix...

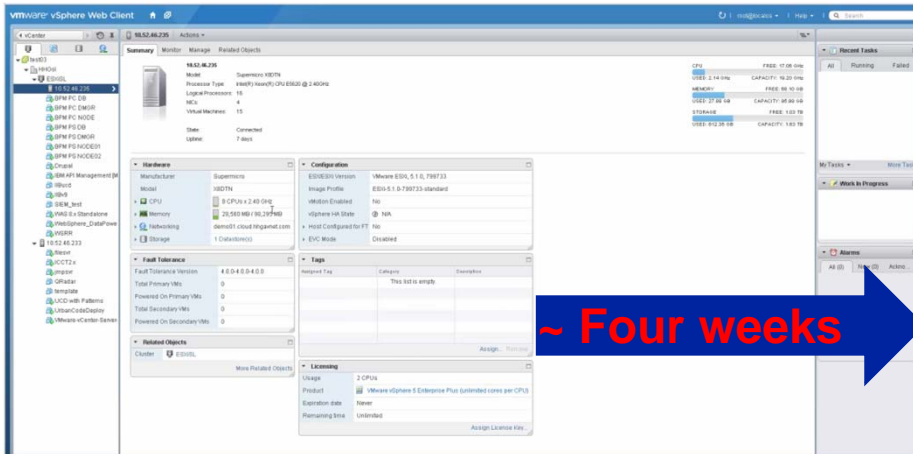
Functional Demo



Access HHG API Developer Portal on SoftLayer from the Internet

- **Invoke API #1:** All On SoftLayer Production API Gateway to DataPower Policy/Route to MQ/IIB ESB flow to backend WAS application.
- **Invoke API #2:** SoftLayer and HHG Integration API Gateway through to HHG Integration Lab DataPower to IIB ESB flow to back end WAS application
- **Invoke API #3:** Original HHG Integration Lab API Gateway through to HHG Integration Lab DataPower to IIB ESB flow to back end WAS application

Red is out of scope for today's presentation and **Bold is the focus...** Implementation

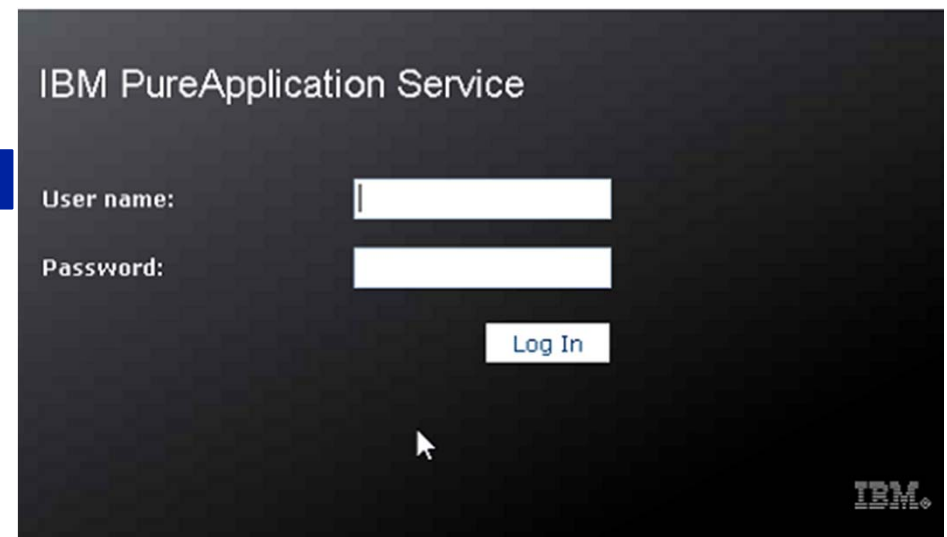


- **Create deployment architecture/ quantified technical use cases**
- Plan your environment, desired capacity & required SLAs
- Order your ESXi Servers from SoftLayer
- Plan your networking, security and access environment then coordinate orders with SoftLayer and your network provider & set access
- **Install Infrastructure and Management for Cloud & VMs**
- **Install VMs**
- **Install and integrate products including DevOps/Lifecycle Management**
- Test & Turnover to users
- Implement your standard ITSM support processes

- **Create deployment architecture/ quantified technical use cases**
- Plan your environment, desired capacity & required SLAs
- Order your PureApp Service from IBM or Business Partner
- Plan your networking, security and access environment. Coordinate orders with IBM/Business Partner plus network provider & set access

- **Upload licensed patterns, images, etc.**
- **Deploy desired configuration of shared services with integration to enterprise services as necessary**
- **Deploy desired applications and/or VM assets**
- **Install and integrate products including DevOps/Lifecycle Management**
- Test & Turnover
- Implement standard ITSM support processes

~1 week



This integration could also be BlueMix...

Functional Demo Using HHG's API Management Portal



HHG HHG Developer Network
APIs Are Us

My account Log out
Organization *
Internal Customer A

Home Getting Started API Academy About HHG Community Support APIs Applications Plans Analytics API Testing My Organization

Home

API Testing

Select an application
Internal App

Select a method

- ✓ Select a method
- HHG Cloud Account Service/Check account balance
- HHG Cloud Echo Service/Mirror a string
- HHG Cloud Echo Service/Uppercase a string
- Account balance/Check balance
- Echo/Uppercase
- MQ Service/Get balance

API Test Sequence.mp4

API Test Account Service - Softlayer.mp4

Latest News
API Status
Custom developer portal development

Recent blog posts
Welcome
HHG Blog Posts
More

Active forum topics
First
Echo service now available
Developer site active
More

Access HHG API Developer Portal on SoftLayer from the Internet

- **Invoke API #1: All On SoftLayer Production** API Gateway to DataPower Policy/Route to MQ/IIB ESB flow to backend WAS app.
- **Invoke API #2: SoftLayer and HHG Integration** API Gateway to HHG Integration Lab DataPower to IIB ESB flow to WAS app.
- **Invoke API #3: Original HHG Integration Lab** API Gateway to HHG Integration Lab DataPower to IIB ESB flow to WAS app.
- **Invoke API #4: All On SoftLayer Production** API Gateway to ESXi to DataPower Policy/Route to PureApp Service to MQ/IIB ESB flow to backend WAS application.

API Test Account Service.mp4

Multi-cloud HHHG APIs available through the HHG API Portal

The screenshot displays the HHG API Portal interface. The top navigation bar includes the 'apimanagement' logo and user information. A left sidebar contains navigation icons and filters for 'Draft APIs', 'Deployed to' (Sandbox, Production), and 'Show' (All APIs: 4, Favorite: 0, REST: 4, SOAP: 0). The main content area lists several APIs with columns for Name, Path, Last Modified, and Actions.

Name	Path	Last Modified	Actions
Account Service (1 version) A simple service to return an account balance	/softlayer/account	a day ago	★ 🗑️
Account Service - SoftLayer_HHG (1 version) Account Services service with HHG cloud back end	/softlayer/hhg/account	a day ago	★ 🗑️
Account Service - Direct to HHG (1 version) Account Services service with HHG cloud back end	/hhg/account	a day ago	★ 🗑️
Account Service - MQ (1 version) Calling an MQ flow	/softlayer/mq/account	a day ago	★ 🗑️
Echo Service (1 version) A simple web service that echos a string	/softlayer/echo	a day ago	★ 🗑️
Echo Service - SoftLayer_HHG (1 version) Echo service in the HHG Cloud	/softlayer/hhg/echo	a day ago	★ 🗑️

- IBM API Management deploys and manages it's own domain on the DataPower Gateway
- APIs can be grouped into Plans which control the location and the cloud routing and application execution
- The API portal controls access to registered users of the plan
- There is also a second HHG Demo domain on the DataPower for routing and this routing can be dynamic based on policies retrieved from WSRR



This integration could also be BlueMix...

Functional Demo Using IBM API Management

The screenshot shows the IBM API Management console interface. The top navigation bar includes the "/apimanagement" logo, "InterConnect" status, a user profile for "jwitt@haddonhillgroup.com", and the IBM logo. A red notification badge with the number "98" is in the top right corner.

The main content area is titled "APIs" and displays a table of API details for "HHG Cloud...". The table has columns for Name, Path, Version, and Deployed to. The "Description" field is circled in red and contains the text "Account Services service with HHG cloud back end".

Below the API details, there are tabs for "Resources", "Security", "Properties", and "Documentation". The "Resources" tab is active, showing a list of resources. The first resource is a GET method for the path "/balance/{number}" with the display name "Check account balance" and description "Get the account balance".

Method	Path	Display name (optional)	Description (optional)	Identification	Authentication	Actions
GET	/balance/{number}	Check account balance	Get the account balance	Yes	No	 

At the bottom of the console, there is a footer with the text "Contact Support | @ibmapimgt".

This integration could also be BlueMix... Routing by API Plan

GET /balance/{number} Get balance Check account balance

Overview Implementation **Test**

Environment Plan **Gold (Version 1)** Invoke

Parameters

Response

```
200 OK
X-Global-Transaction-ID: 2314035
Access-Control-Allow-Origin: *
Date: Tue, 17 Feb 2015 20:55:01 GMT
Transfer-Encoding: chunked
X-Backside-Transport: OK OK
APIM-Debug-Trans-Id: 54aff21ae4b03dac10d7f05e-1079a638
APIM-Debug-Filename: temporary:///apimdebug83876.json
Access-Control-Allow-Methods: GET
Content-Type: application/json
Connection: Keep-Alive
From: 10.52.46.195:9001
```

Softlayer →

/apimanagement

APIs

Name Path Version Deployed to

Account ... /hhg/acco... 1 Sandbox Production

Description

Account Services service with HHG cloud back end

Resources Security Properties Documentation

+ Resource

Method Path Display name (optional) Description (optional) Identification Authentication Actions

GET /balance/{number} Check account bal Get the account balance

Overview Implementation **Test**

Environment Plan **HHG (Version 1)** Invoke

Parameters

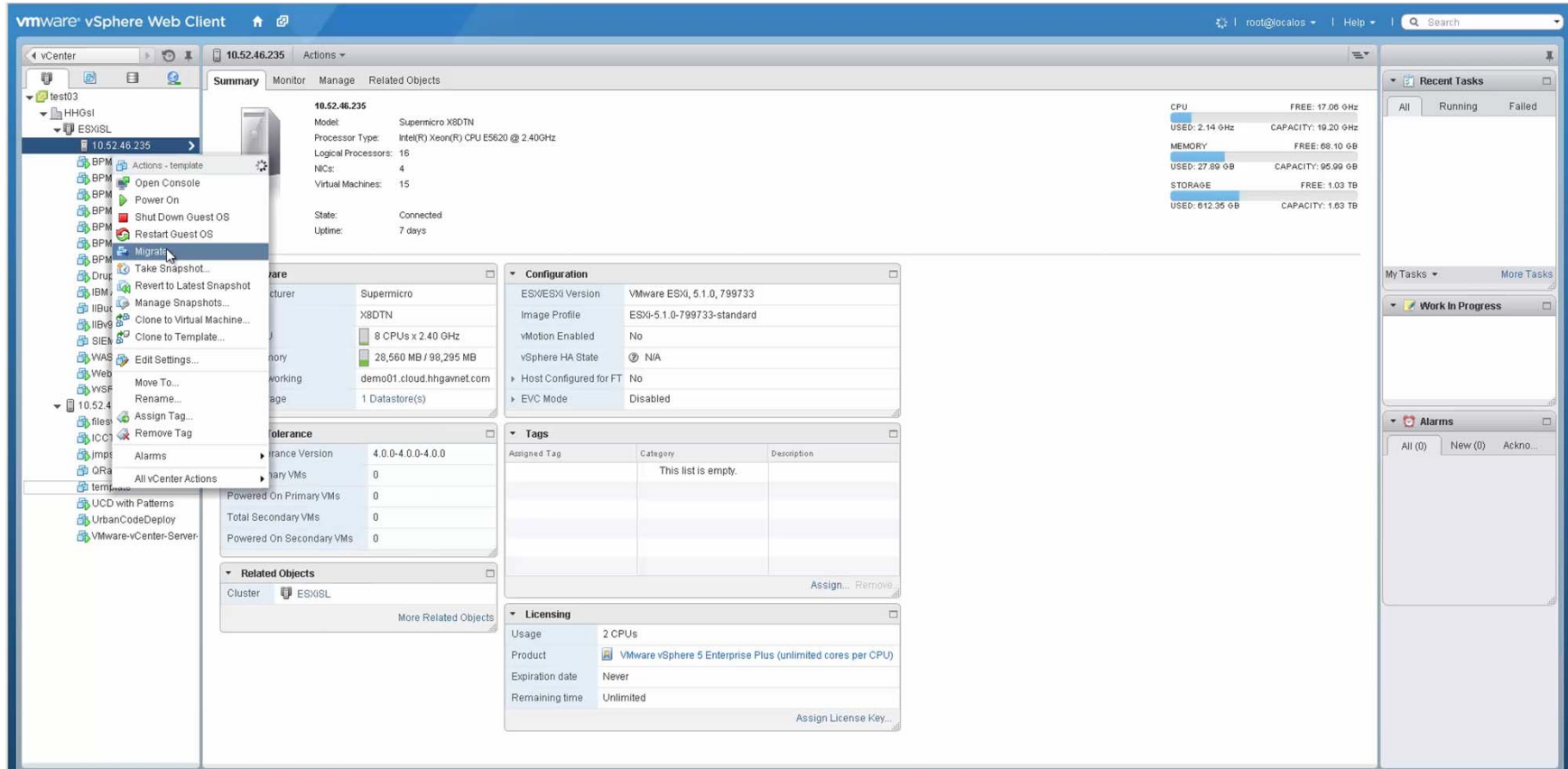
Response

```
200 OK
X-Global-Transaction-ID: 2315139
Access-Control-Allow-Origin: *
Date: Tue, 17 Feb 2015 20:56:19 GMT
Transfer-Encoding: chunked
X-Backside-Transport: OK OK
APIM-Debug-Trans-Id: 54aff21ae4b03dac10d7f05e-99334872-7762-4d86-9c75-0671b476dd43
APIM-Debug-Filename: temporary:///apimdebug83876.json
Access-Control-Allow-Methods: GET
Content-Type: application/json
Connection: Keep-Alive
From: 192.168.0.162:9080
```

HHG Integration Lab Cloud →

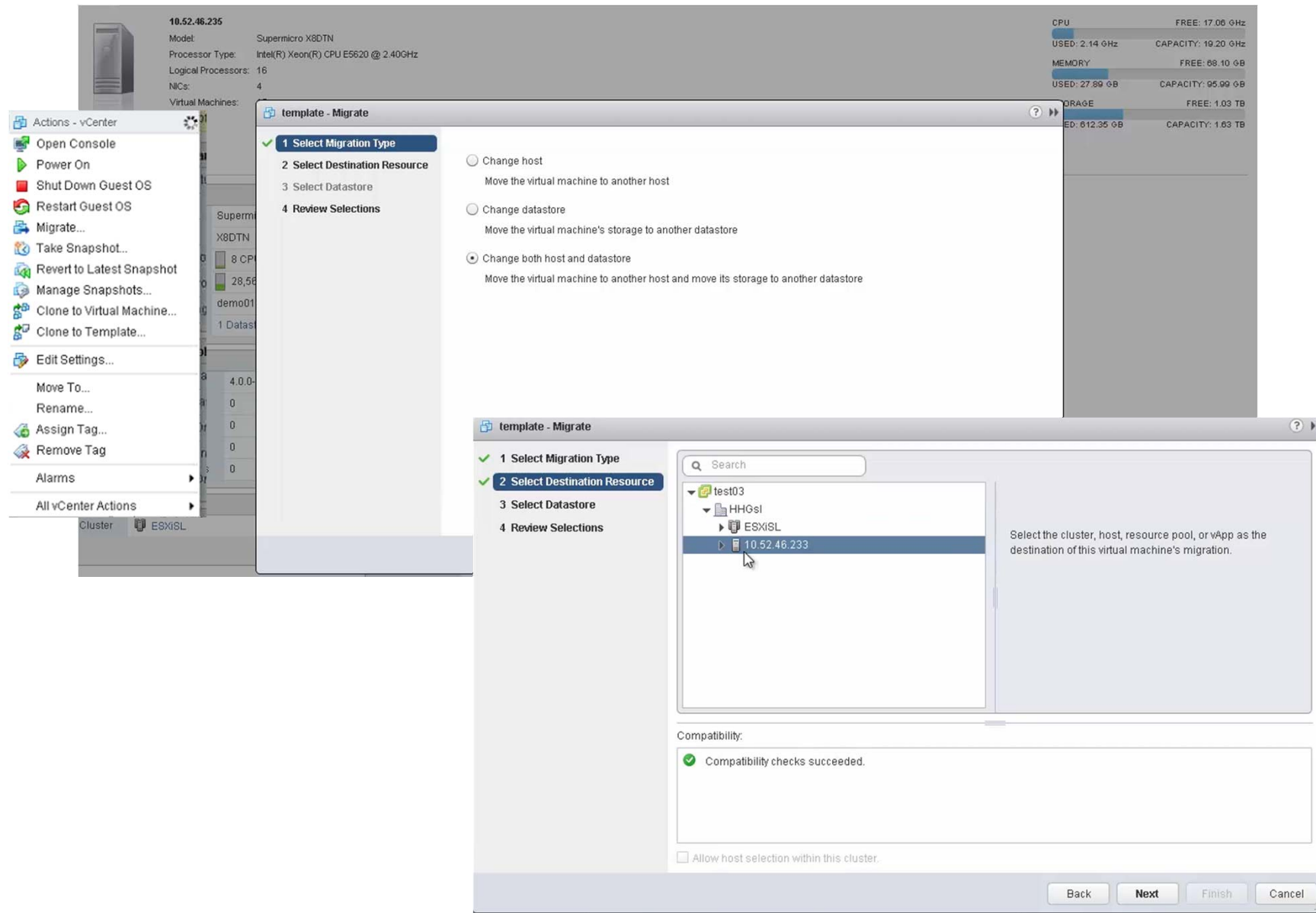
One approach is to use VMware to move your on premise config to SoftLayer using vCenter...

Building your SoftLayer Bare Metal ESX Server



A VMware clone approach...

Purchase and Migrate



HHG ESX Application Host

The screenshot displays the VMware vSphere Web Client interface. On the left, a tree view shows the hierarchy: vCenter > test03 > HHGsl > 10.52.46.233 > UrbanCodeDeploy. The main panel shows the 'Summary' tab for the 'UrbanCodeDeploy' VM. The VM is powered on, as indicated by a green play button icon. Key details include: Guest OS: Other 2.6.x Linux (64-bit); Compatibility: ESXi 5.0 and later (VM version 8); VMware Tools: Running, version: 2147483647 (Guest Managed); DNS Name: ucd.cloud.hhgavnet.com; IP Addresses: 10.52.46.202 and 10.52.46.233; Host: 10.52.46.233. Below the summary, there are sections for 'VM Hardware' and 'VM Storage Policies'. The 'VM Hardware' section lists CPU (2 CPU(s), 24 MHz used), Memory (8192 MB, 163 MB used), Hard disk 1 (25.00 GB), Hard disk 2 (50.00 GB), Network adapter 1 (Private Network - vmnic0 vmnic2 (connected)), CD/DVD drive 1 (Disconnected), Floppy drive 1 (Disconnected), Video card (5.00 MB), and Other (Additional Hardware). The 'VM Storage Policies' section shows VM Storage Policies, VM Storage Policy Compliance, and Last Checked Date, with a 'Refresh' button. The 'Tags' section is empty, displaying 'This list is empty.'

vmware® vSphere Web Client

vCenter

UrbanCodeDeploy

Getting Started Summary Monitor Manage Related Objects

test03

HHGsl

10.52.46.233

filesvr

ICCT2.x

jmpsvr

QRadar

template

UCD with Patterns

UrbanCodeDeploy

vCenter

VMware-vCenter-Server-

10.52.46.235

BPM PC DB

BPM PC DMGR

BPM PC NODE

BPM PS DB

BPM PS DMGR

BPM PS NODE01

BPM PS NODE02

Drupal

IBM API Management [M

IIBucd

IIBv9

SIEM_test

WAS 8.x Standalone

WebSphere_DataPowe

WSRR

Powered On

Launch Console

Open with VMRC

Download VMRC

UrbanCodeDeploy

Guest OS: Other 2.6.x Linux (64-bit)

Compatibility: ESXi 5.0 and later (VM version 8)

VMware Tools: Running, version: 2147483647 (Guest Managed)

DNS Name: ucd.cloud.hhgavnet.com

IP Addresses: 10.52.46.202 View all 2 IP addresses

Host: 10.52.46.233

VM Hardware

CPU 2 CPU(s), 24 MHz used

Memory 8192 MB, 163 MB used

Hard disk 1 25.00 GB

Hard disk 2 50.00 GB

Network adapter 1 Private Network - vmnic0 vmnic2 (connected)

CD/DVD drive 1 Disconnected

Floppy drive 1 Disconnected

Video card 5.00 MB

Other Additional Hardware

Compatibility ESXi 5.0 and later (VM version 8)

Edit Settings...

VM Storage Policies

VM Storage Policies --

VM Storage Policy Compliance --

Last Checked Date --

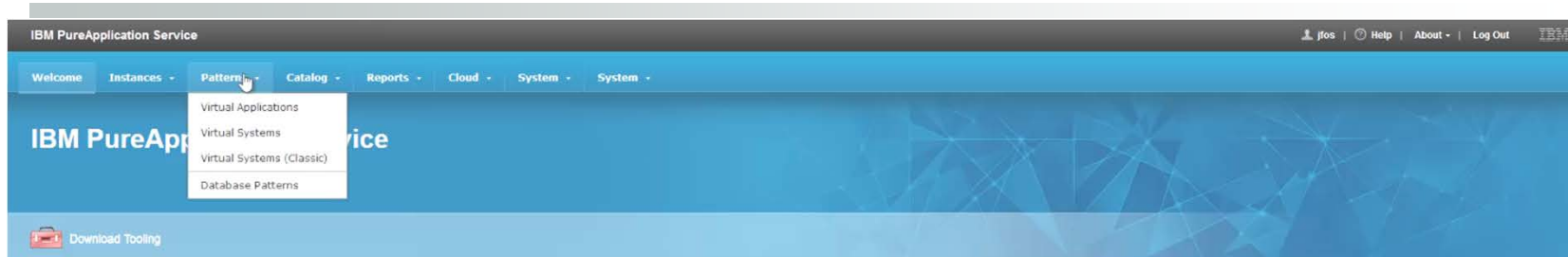
Refresh

Tags

Assigned Tag Category Description

This list is empty.

Intro to IBM PureApplication Service on SoftLayer Overview



Working with virtual applications



Step 1: Create a virtual application pattern

Create a virtual application pattern using the Virtual Application Builder

[Create virtual application pattern](#)



Step 2: Create a virtual application instance

Create a virtual application instance by deploying a virtual application pattern.

[Deploy virtual application instance](#)



Step 3: View virtual application instances

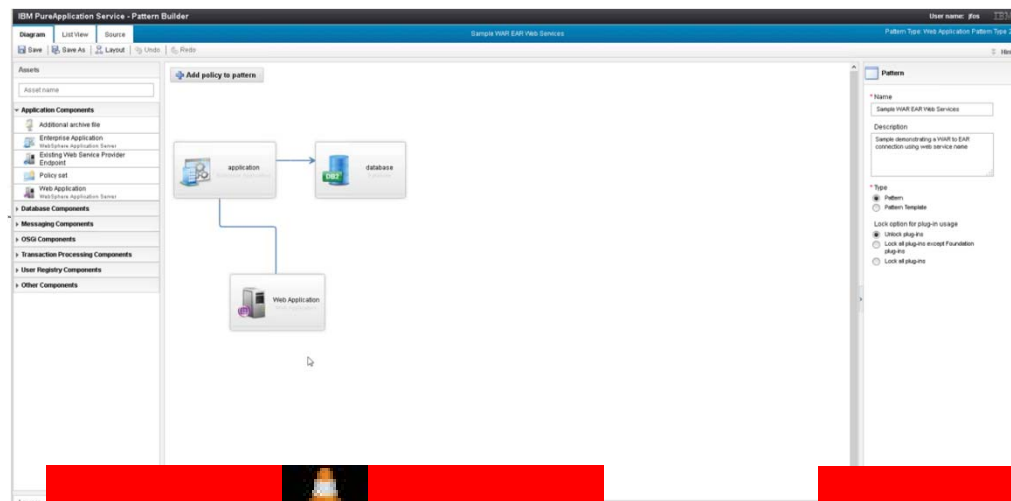
View the current status, metrics, and details of virtual application instances.

[View virtual application instances](#)

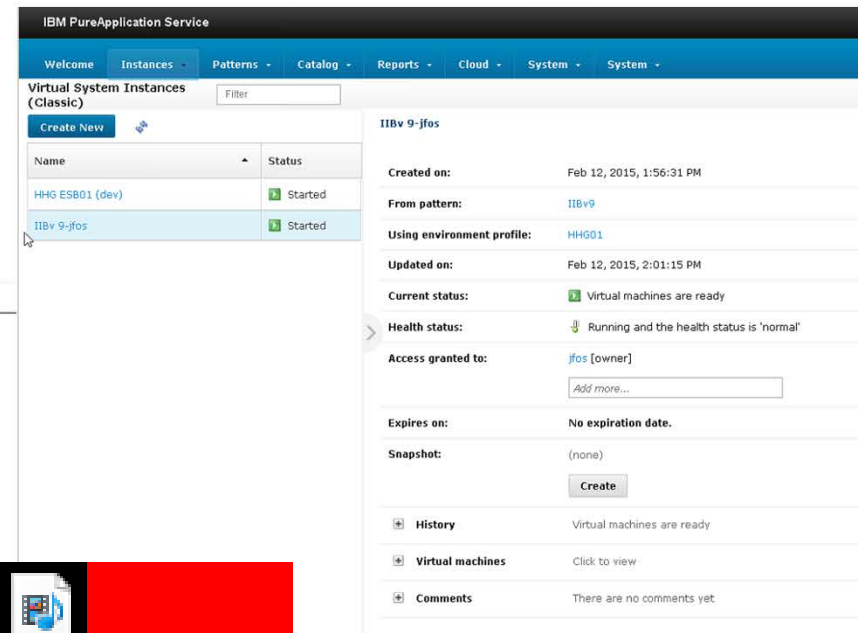
Working with virtual systems

Working with virtual appliances

Working with databases



PureApp Service on SoftLayer.mp4



PureApp on SoftLayer-Full.mp4

HHG
Haddon Hill Group

IBM PureApplication Service

jfos

Help

About

Log Out

IBM

Welcome

Instances

Patterns

Catalog

Reports

Cloud

System

System

Shared Service Instances

Filter

Create New

Name	Status	Using environment profile	In cloud group	Created on	Pattern Type	Actions
<div><div></div><div>System Monitoring for WebSphere Application Server 1.0.2.2</div></div>						
<div><div></div><div>System Monitoring for WebSphere Application Server</div></div>	<div><div></div>Running</div>	HHG01	SoftLayervCenter	Jan 15, 2015, 2:37:17 PM	System Monitoring Pattern 1.0	<div><div></div><div></div></div>
<div><div></div><div>System Monitoring for HTTP Servers 1.0.2.2</div></div>						
<div><div></div><div>System Monitoring for HTTP Servers</div></div>	<div><div></div>Running</div>	HHG01	SoftLayervCenter	Jan 15, 2015, 2:36:17 PM	System Monitoring Pattern 1.0	<div><div></div><div></div></div>
<div><div></div><div>System Monitoring 1.0.2.2</div></div>						
<div><div></div><div>System Monitoring</div></div>	<div><div></div>Running</div>	HHG01	SoftLayervCenter	Jan 14, 2015, 12:14:02 PM	System Monitoring Pattern 1.0	<div><div></div><div></div></div>
<div><div></div><div>System Monitoring for WebSphere Message Broker 1.0.2.2</div></div>						
<div><div></div><div>System Monitoring for WebSphere Message Broker</div></div>	<div><div></div>Running</div>	HHG01	SoftLayervCenter	Jan 15, 2015, 2:38:00 PM	System Monitoring Pattern 1.0	<div><div></div><div></div></div>
<div><div></div><div>System Monitoring for WebSphere MQ 1.0.2.2</div></div>						
<div><div></div><div>System Monitoring for WebSphere MQ</div></div>	<div><div></div>Running</div>	HHG01	SoftLayervCenter	Jan 15, 2015, 2:34:46 PM	System Monitoring Pattern 1.0	<div><div></div><div></div></div>



Configure Shared Services Monitoring— ITCAM

The screenshot shows the IBM PureApplication Service console. The 'Shared Service Instances' table on the left lists several monitoring services, all with a 'Running' status. The main panel shows the configuration for the 'System Monitoring' instance, which is also 'Running'. It details the environment profile (HHG01), cloud group (SoftLayerCenter), and pattern type (System Monitoring Pattern 1.0). Below this, it shows two perspectives: 'Middleware perspective (23 in total)' listing Data-Warehouse, Hub-TEMS, and Remote-TEMS; and 'Virtual machine perspective (3 in total)' listing ITM-Data-Warehouse, ITM-Hub-TEMS, and ITM-Remote-TEMS with their respective public IPs, VM statuses, CPU, and memory usage.

Name	Status
System Monitoring for WebSphere Application Server 1.0.2.2	Running
System Monitoring for HTTP Servers 1.0.2.2	Running
System Monitoring 1.0.2.2	Running
System Monitoring for WebSphere Message Broker 1.0.2.2	Running
System Monitoring for WebSphere MQ 1.0.2.2	Running

Name	Public IP	VM Status	CPU	Memory	Action
ITM-Data-Warehouse, 11421255642605	169.53.142.102	Running	0%	2%	Manage
ITM-Hub-TEMS, 11421255642604	169.53.142.103	Running	4%	3%	Manage
ITM-Remote-TEMS, 11421255642606	169.53.142.101	Running	4%	3%	Manage

- System monitoring includes the familiar ITCAM, TEMS, ITM DW
- Agents are registered automatically

PureApp Systems Monitoring Views

Role Type Perspective Deployment Overview

System Monitoring

DW ITM-Data-Warehouse.11421255642605

HTEMS ITM-Hub-TEMS.11421255642604

RTEMS ITM-Remote-TEMS.11421255642606

Total: 7 Selected: 0 Last refreshed: 02/13/2015 04:10 PM

Virtual Machine Name	Role Name	Role ID	Role State	Role Availability	Hostname	Public IP Address	Node ID	Cloud Group Name	Rack Name
ITM-Remote-TEMS.11421255642606	RTEMS	ITM-Remote-TEMS.11421255642606.Remote-TEMS	RUNNING	NORMAL	w169053142101.pureapplication.ibmcloud.com	169.53.142.101	ITM-Remote-TEMS.11421255642606	SoftLayerCenter	10122112109
ITM-Data-Warehouse.11421255642605	DW	ITM-Data-Warehouse.11421255642605.Data-Warehouse	RUNNING	NORMAL	w169053142102.pureapplication.ibmcloud.com	169.53.142.102	ITM-Data-Warehouse.11421255642605	SoftLayerCenter	10122112109
ITM-Hub-TEMS.11421255642604	HTEMS	ITM-Hub-TEMS.11421255642604.Hub-TEMS	RUNNING	NORMAL	w169053142103.pureapplication.ibmcloud.com	169.53.142.103	ITM-Hub-TEMS.11421255642604	SoftLayerCenter	10122112109

Role Type Perspective Deployment Overview

IIBv 9-jfs

UNKNOWN

BasicPart.11423767391515

Total: 3 Selected: 0 Last refreshed: 02/14/2015 12:30 PM

Virtual Machine Name	Role Name	Role ID	Role State	Role Availability	Hostname	Public IP Address	Node ID	Cloud Group Name	Rack Name
BasicPart.11423767391515	UNKNOWN	UNKNOWN	Normal	UNKNOWN	w169053142124.pureapplication.ibmcloud.com	169.53.142.124	BasicPart.11423767391515		

 Monitoring as Administrator.mp4

Auto Installing the agent for IIB and MQ

The screenshot displays the IBM PureApplication System Monitoring interface. The top navigation bar includes links for Welcome, Instances, Patterns, Catalog, Reports, Cloud, System, and System. The main content area is titled "Virtual System Instances (Classic)" and features a "Create New" button and a table of instances.

Name	Status
HHG ESB01 (dev)	Started
IIBv 9-jfos	Started

The "IIBv 9-jfos" instance is selected, and its details are shown on the right. A "Create" button is visible above the details. The details include a "History" section, a "Virtual machines" section, and a "General info" section. The "General info" section contains the following information:

- Created on:
- From virtual in:
- Part name:
- Current status:
- Updated on:
- On hypervisor:
- In cloud group:
- Registered as: wl169053142124-WMBHVEBasicPart-
- Stored on: datastore1
- Monitoring: [Click to open](#)
- Logging: [Click to open](#)

The "IBM products (with license count for isolated usage)" section lists the following products and their license counts:

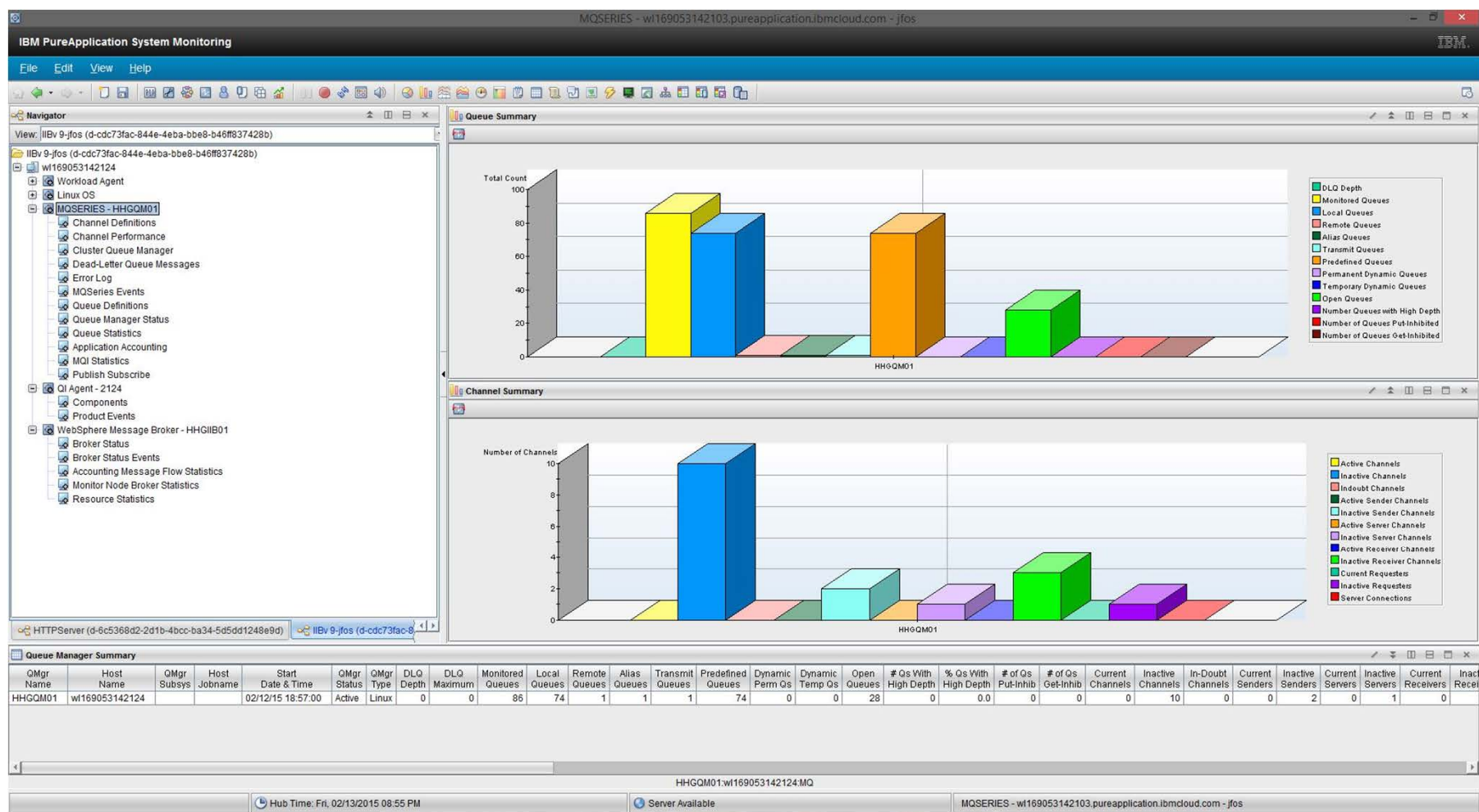
- IBM INTEGRATION BUS: 140 PVU
- HYPERSOR EDITION FOR RED
- HAT ENTERPRISE LINUX SERVER
- FOR X86 PROCESSOR VALUE
- UNIT (PMA) LICENSE 1 SW

A modal window titled "IBM® PureApplication System Monitoring Version 1.0.22" is overlaid on the details. It contains the following text:

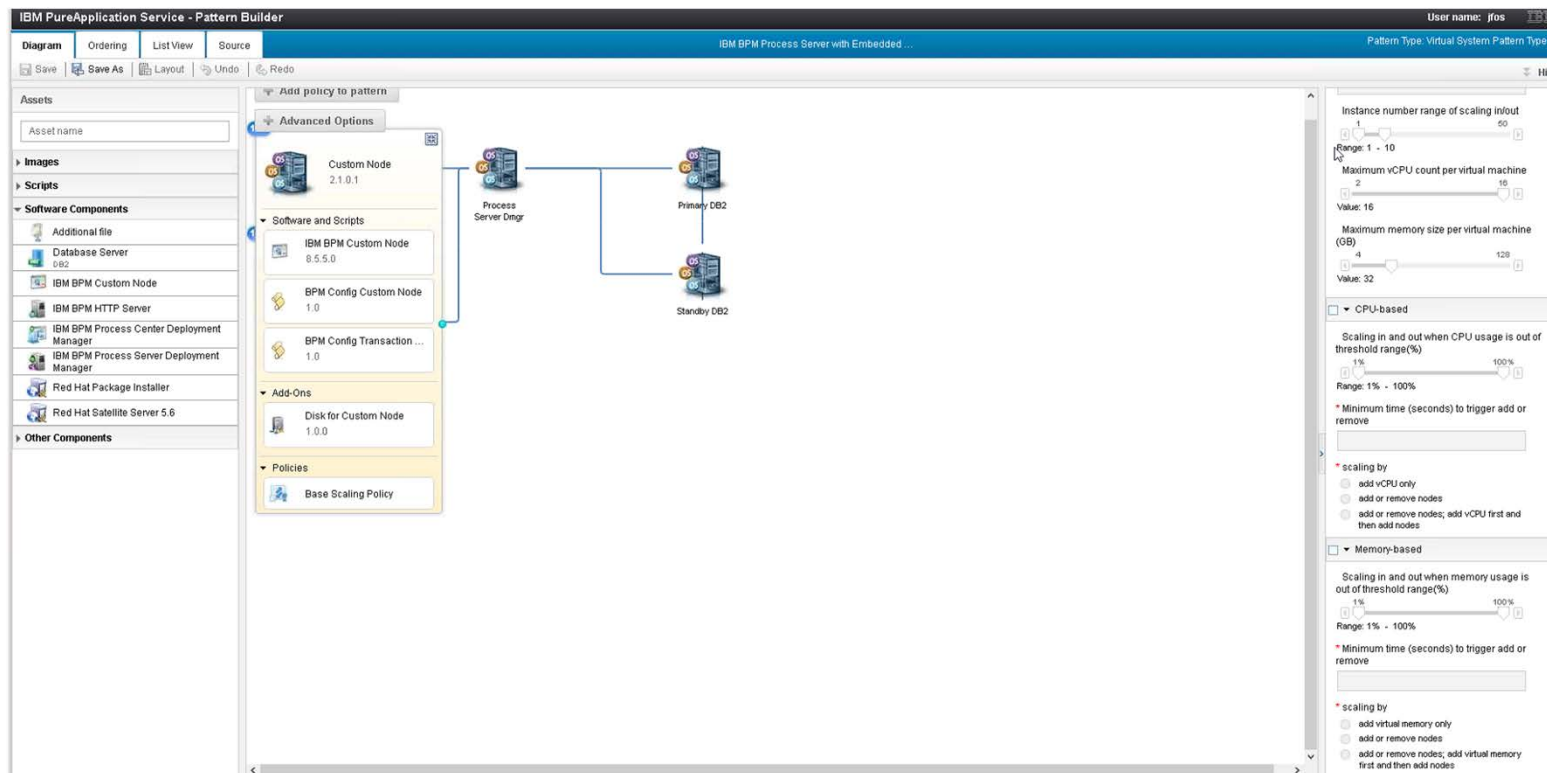
Licensed Materials - Property of IBM Corp. © Copyright IBM Corporation™ and its licensors 1998, 2012. IBM, the IBM logo are trademarks of IBM Corporation in the United States, other countries, or both. Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates. Other company, product or service names may be trademarks or service marks of others. See product license for details.

The modal window also displays a progress bar and the IBM logo.

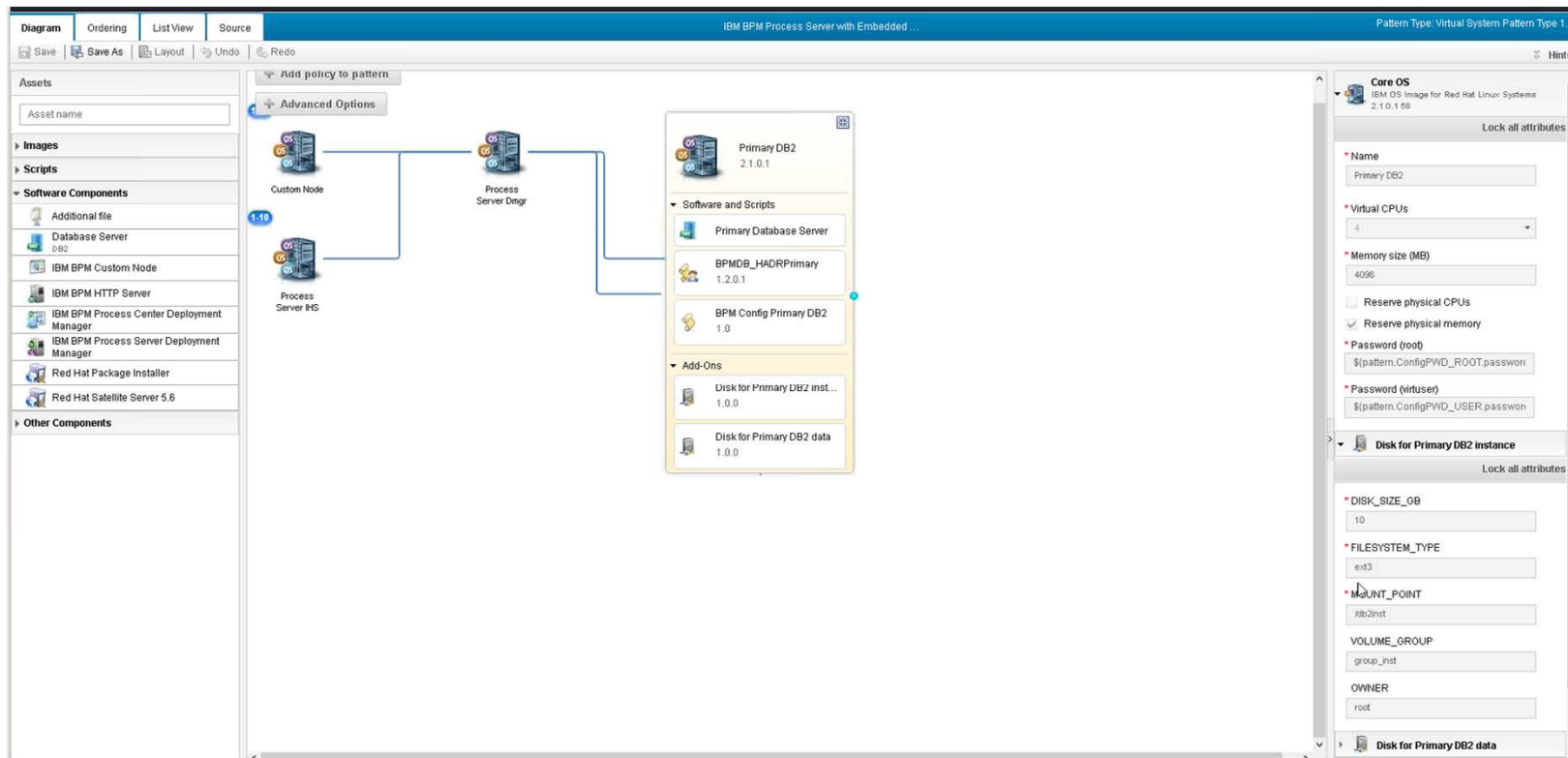
ITCAM Monitoring MQ



Another look at the PureApp Patterns (BPM)



BPM DB Properties & Custom Patterns



- The BPM pattern is suitable for development/test and would require extension for production

WAS for ESB Dev Hosting

Network Recording Player - Julian Jamie and Phil InterConnect demo walk-through

Meeting Number: 802 585 467 | Date: Friday, February 13, 2015 | Time: 6:41 AM, Local Time (GMT -08:00)

vSphere Web Client | SoftLayer® Technologies | IBM PureApplication Service | Pattern Builder Sample W...

https://10.122.112.109/dashboards/design/patterns/editor?id=9

IBM PureApplication Service

Welcome | Instances | **Patterns** | Catalog | Reports | Cloud | System | System

Pattern Editor

Filter...

Showing parts for ESX.

Parts (16/16)

- Administrative agents
 - WebSphere Application Server 8.5.5.1 64-bit RHEL 6 x86-64 (VMWare)
 - 8.5.5.1 (R3_o8551_1341.07), ESX, RedHat Enterprise Linux 64-bit 6 (RedHat Enterprise Linux Server 6.4)
- Core OS
 - IBM OS Image for Red Hat Linux Systems
 - 2.1.0.1 (59), ESX, RedHat Enterprise Linux 64-bit 6.6 (RHEL 6.6 X64)
- Core OS
 - IBM OS Image for Red Hat Linux Systems
 - 2.1.0.0 (17), ESX, RedHat Enterprise Linux 64-bit 6.5 (RHEL 6.5 X64)
- Core OS
 - IBM OS Image for Red Hat Linux Systems
 - 2.0.0.4 (148), ESX, RedHat Enterprise Linux 64-bit 6.4 (RHEL 6.4 X64)
- Custom nodes
 - WebSphere Application Server 8.5.5.1 64-bit RHEL 6 x86-64 (VMWare)
 - 8.5.5.1 (R3_o8551_1341.07), ESX, RedHat Enterprise Linux 64-bit 6 (RedHat Enterprise Linux Server 6.4)
- Deployment manager
 - WebSphere Application Server 8.5.5.1 64-bit RHEL 6 x86-64 (VMWare)
 - 8.5.5.1 (R3_o8551_1341.07), ESX, RedHat Enterprise Linux 64-bit 6 (RedHat Enterprise Linux Server 6.4)
- IBM HTTP servers
 - WebSphere Application Server 8.5.5.1 64-bit RHEL 6 x86-64 (VMWare)
 - 8.5.5.1 (R3_o8551_1341.07), ESX, RedHat Enterprise Linux 64-bit 6 (RedHat Enterprise Linux Server 6.4)
- IBM Integration Bus Advanced
 - IBM Integration Bus 9.0.0.2
 - 9.0.0.2 (S900-FD02 P), ESX, RedHat Enterprise Linux

Scripts (33/33)

Add-Ons (8/13)

Editing DataPower Developer

Deploys to ESX hypervisors.

Updated on Feb 13, 2015, 10:03:39 AM | Ordering | Advanced Options

Refresh | Undo | Undo All | Done editing

Properties for part Standalone server (StandalonePart)

Name: StandalonePart

* Virtual CPUs: 1

* Memory size (MB): 2048

* Reserve physical CPUs: False

* Reserve physical memory: False

* Cell name: CloudBurstCell

* Node name: CloudBurstNode

* Features:
☒ none
☐ xc10

WebSphere Repository Location:

OK Cancel

IBM Basic 9.0.0

Copyright IBM Corporation 2014. All Rights Reserved.

5.0.0.1-20141203170236 / 20141203-1658-981

00:20:40 / 01:11:06

10:02 AM



An HHG Custom Pattern: “ESB In a Box”

The screenshot displays the IBM PureApplication Service interface. The top navigation bar includes 'Welcome', 'Instances', 'Patterns', 'Catalog', 'Reports', 'Cloud', 'System', and 'System'. The left sidebar shows 'Virtual System Patterns (Classic)' with a 'Create New' button and a list of patterns: 'DataPower Developer' (Draft), 'HTTPServer' (Draft), 'IBM Integration Bus 9.0.0.2 Advanced' (Draft), 'IBM Integration Bus 9.0.0.2 Basic' (Draft), 'IIBv9' (Draft), and 'WAS' (Draft). The main content area shows the details for the 'DataPower Developer' pattern. It includes a 'Description' field (None provided), 'Created on' (Jan 15, 2015, 10:52:10 PM), 'Current status' (Draft), 'Updated on' (Feb 13, 2015, 10:03:54 AM), and 'In the cloud now' (HHG ESB01 (dev)). The 'Access granted to' section shows 'jfos [owner]' and an 'Add more...' button. The 'Topology for this pattern' section shows a diagram with three components: 'Standalone server 8.5.5.1', 'IBM Integration Bus Basic 9.0.0.2', and 'WebSphere DataPower XI52 Virtual Edition (Non-Production) 7.0.0.0'. The 'License status in this pattern' section shows 'WebSphere DataPower XI52 Virtual Edition (Non-Production)' with an 'Accepted' status.

IBM PureApplication Service

Welcome Instances Patterns Catalog Reports Cloud System System

Virtual System Patterns (Classic) Filter

Create New

Name	State
DataPower Developer	Draft
HTTPServer	Draft
IBM Integration Bus 9.0.0.2 Advanced	Draft
IBM Integration Bus 9.0.0.2 Basic	Draft
IIBv9	Draft
WAS	Draft

DataPower Developer

Refresh Deploy Edit Promote Clone Lock Delete

Description: None provided

Created on: Jan 15, 2015, 10:52:10 PM

Current status: Draft

Updated on: Feb 13, 2015, 10:03:54 AM

In the cloud now: HHG ESB01 (dev)

Access granted to: jfos [owner]

Add more...

Topology for this pattern:

Deploys to ESX hypervisors.

Standalone server 8.5.5.1

IBM Integration Bus Basic 9.0.0.2

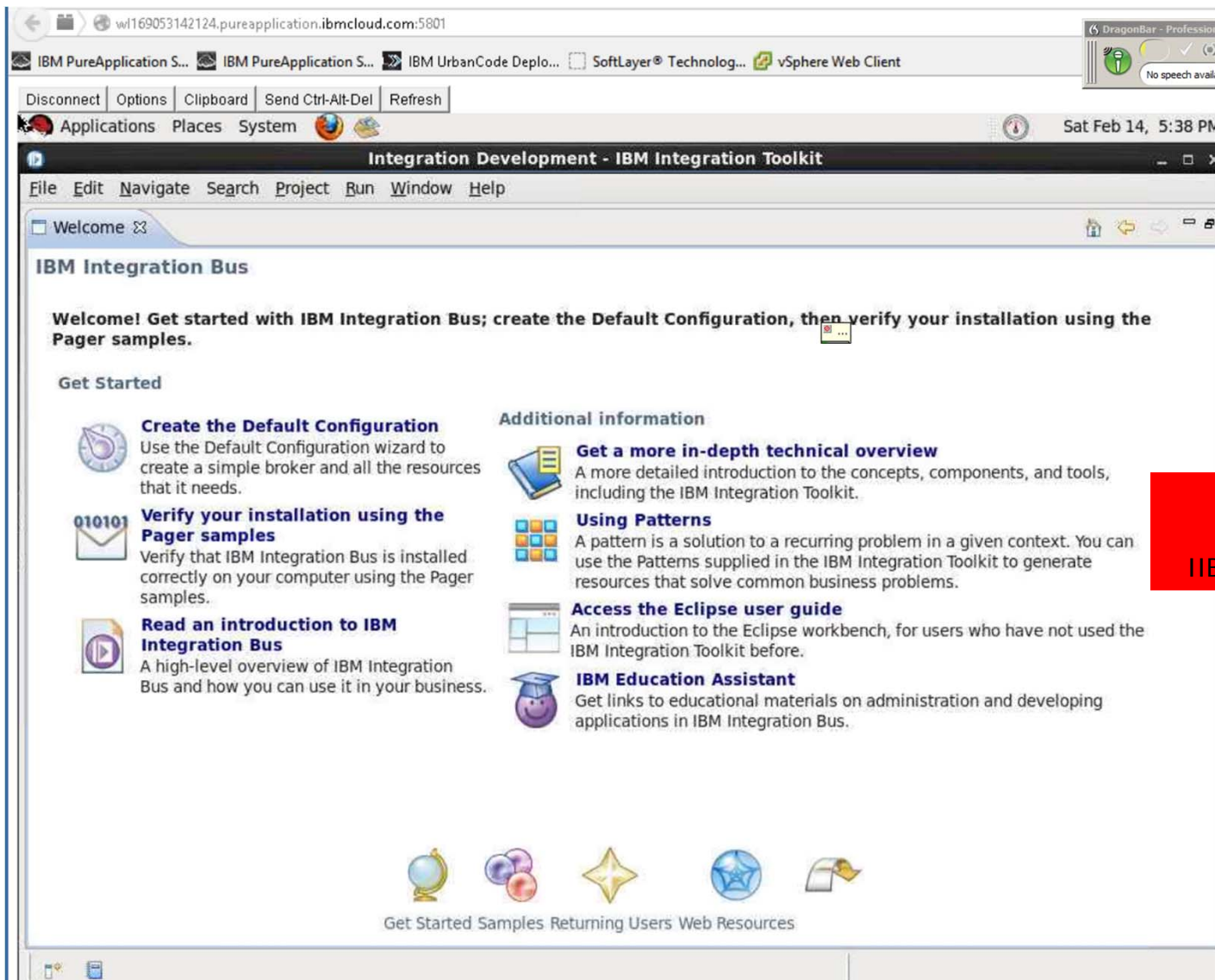
WebSphere DataPower XI52 Virtual Edition (Non-Production) 7.0.0.0

License status in this pattern: WebSphere DataPower XI52 Virtual Edition (Non-Production) [Accepted]

© Copyright IBM Corporation 2014. All Rights Reserved. 5.0.0.1-20141203170236 / 20141203-1658-981



IBM Integration Broker on PureApp




Deploying IIB with UCD

The screenshot displays the IBM PureApplication Service interface. The top navigation bar includes links for Welcome, Instances, Patterns, Catalog, Reports, Cloud, System, and another System. The 'Patterns' tab is active, showing a list of 'Virtual System Patterns (Classic)'. The list includes DataPower Developer, HTTPServer, IBM Integration Bus 9.0.0.2 Advanced, IBM Integration Bus 9.0.0.2 Basic, and IIBv9, all in a 'Draft' state. The 'IIBv9' pattern is selected, and its details are shown on the right. The details include a description of 'None provided', creation and update timestamps, a current status of 'Draft', and information about cloud deployment and access granted to 'jfos [owner]'. A topology diagram shows the 'IBM Integration Bus Basic 9.0.0.2' component with an 'install_ucd_agent' action. The license status at the bottom indicates 'IBM Integration Bus 9.0.0.2' is 'Accepted'.

IBM PureApplication Service

Welcome Instances Patterns Catalog Reports Cloud System System

Virtual System Patterns (Classic)

Create New 

Name	State
DataPower Developer	Draft
HTTPServer	Draft
IBM Integration Bus 9.0.0.2 Advanced	Draft
IBM Integration Bus 9.0.0.2 Basic	Draft
IIBv9	Draft

IIBv9

Description: None provided

Created on: Feb 4, 2015, 11:55:17 AM

Current status: Draft


Updated on: Feb 12, 2015, 1:53:38 PM

In the cloud now: IIBv 9-jfos

Access granted to: jfos [owner]

Topology for this pattern:

Deploys to ESX hypervisors.



License status in this pattern: IBM Integration Bus 9.0.0.2 [Accepted]

Setting IBM Information Broker Properties

The screenshot displays the IBM PureApplication Service web interface. The main area is titled "Editing DataPower Developer" and shows a pattern for ESX hypervisors. A modal dialog box is open, titled "Properties for part IBM Integration Bus Basic (BasicPart)". The dialog contains the following fields:

- Password (root): [Redacted]
- Verify password: [Redacted]
- Administrative password (virtuser): [Redacted]
- Verify password: [Redacted]
- Integration Node Name: HHGIB01
- Queue Manager: HHGQM01
- Queue Manager Description: Broker Queue Manager
- Queue Manager TCP/IP listener port: 2414
- Authorized users: virtuser
- Queue Manager Dead Letter Queue: SYSTEM.DEAD.LETTER.QUEUE

The background interface shows a list of parts on the left, including "Administrative agents", "Core OS", "Custom nodes", "Deployment manager", "IBM HTTP servers", and "IBM Integration Bus Advanced". The top navigation bar includes links for Welcome, Instances, Patterns, Catalog, Reports, Cloud, System, and System. The bottom of the screen shows copyright information: "© Copyright IBM Corporation 2014, All Rights Reserved." and version information: "5.0.0.1-20141203170236 / 20141203-1658-981".

IIB Lifecycle Management with UCD

IBM UrbanCode Deploy

Dashboard Components Applications Configuration Processes Resources Calendar Work Items Reports Settings

Home > Components

Components Templates

Create New Component Import Components Actions... Flat list

<input type="checkbox"/>	Name	Template	Description	Created	By
	<input type="text" value="Component Name"/> <input type="text" value="Tags"/>		<input type="text"/>		
<input type="checkbox"/>	BPM Process Center Component			1/30/15, 1:29 PM	admin
<input type="checkbox"/>	BPM Process Server Component			2/4/15, 10:56 AM	admin
<input type="checkbox"/>	Broker Archive Deploy			12/5/14, 7:55 AM	admin
<input type="checkbox"/>	Install BPM no profiles BPM x		Installs a BPM node with no profiles	12/1/14, 8:49 AM	admin
<input type="checkbox"/>	Install BPM PC DB		Installs DB2 on Linux and then creates databases and schema	12/9/14, 10:58 AM	admin
<input type="checkbox"/>	Install DB2		Installs DB2 on Linux	12/1/14, 8:40 AM	admin
<input type="checkbox"/>	Install IIB9		Installs IIB v9 on Linux	11/26/14, 9:04 AM	admin
<input type="checkbox"/>	Install IM 1.8 IM x		Installs the IBM Installation Manager 1.8 for x86_64	12/1/14, 8:52 AM	admin
<input type="checkbox"/>	Install MQ		Installs MQ 7.5.0.1 on Linux	11/26/14, 9:02 AM	admin
<input type="checkbox"/>	PureApp IIBv9 clone	Actions...	A clone of the message flows in the ESXi IIBv9	2/12/15, 9:02 AM	admin

12 records - Refresh Print

1 / 2

Rows 10

Deploying IIB and a specific BAR file from the UCD “Big Bang” Project

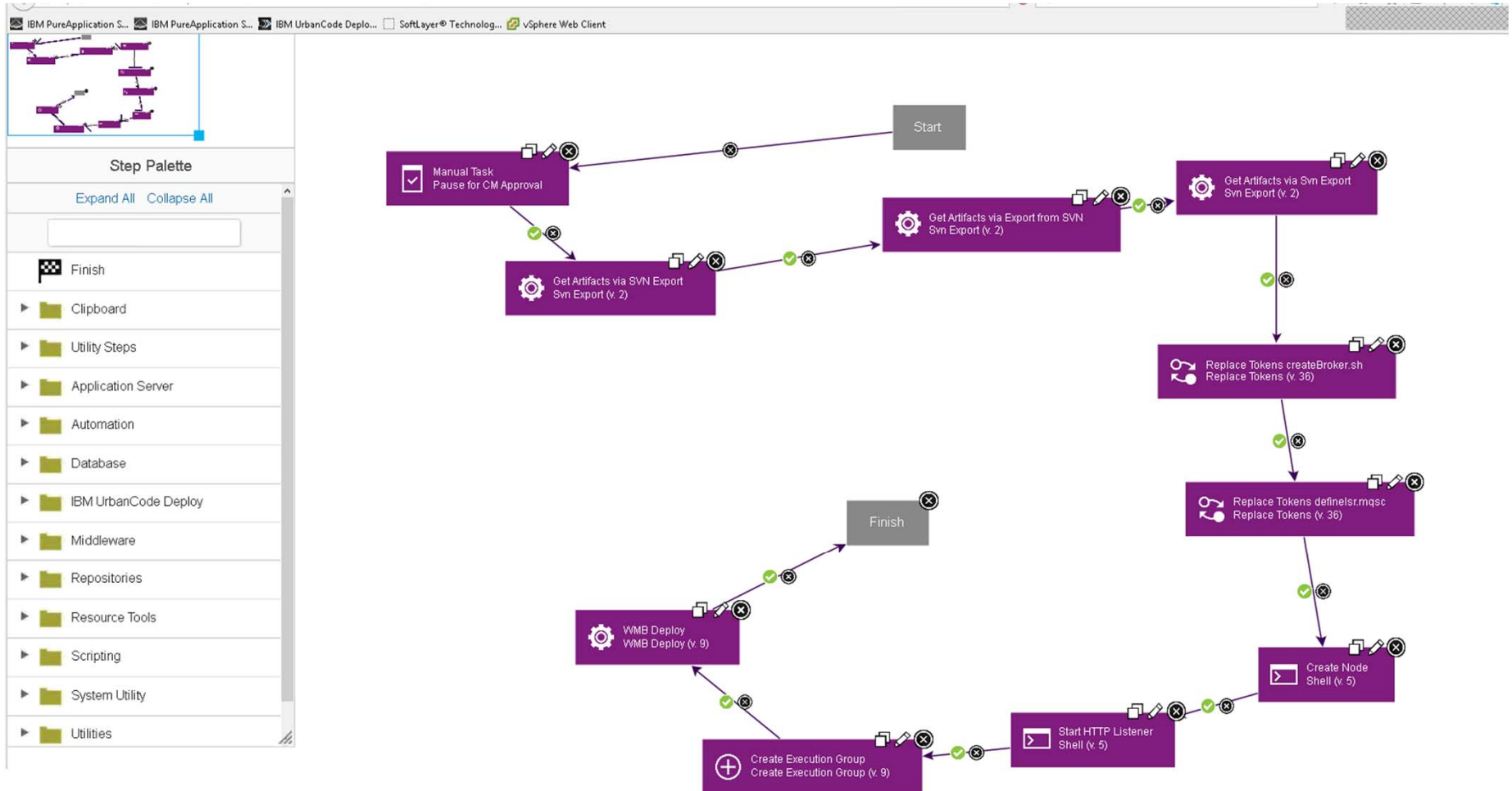
The screenshot displays the IBM UrbanCode Deploy (UCD) web console interface. The top navigation bar includes tabs for Dashboard, Components, Applications, Configuration, Processes, Resources, Calendar, Work Items, Reports, and Settings. The main content area shows the 'Application: IIB Install and BAR Deploy (SOAPAg)' page. Below the application details, there is a 'Processes' tab selected, which displays a table of processes. The 'Big Bang' process is highlighted with a red circle. The table has columns for Process, Description, and Actions.

Process	Description	Actions
Big Bang		Edit Duplicate Delete
Pause		Edit Duplicate Delete

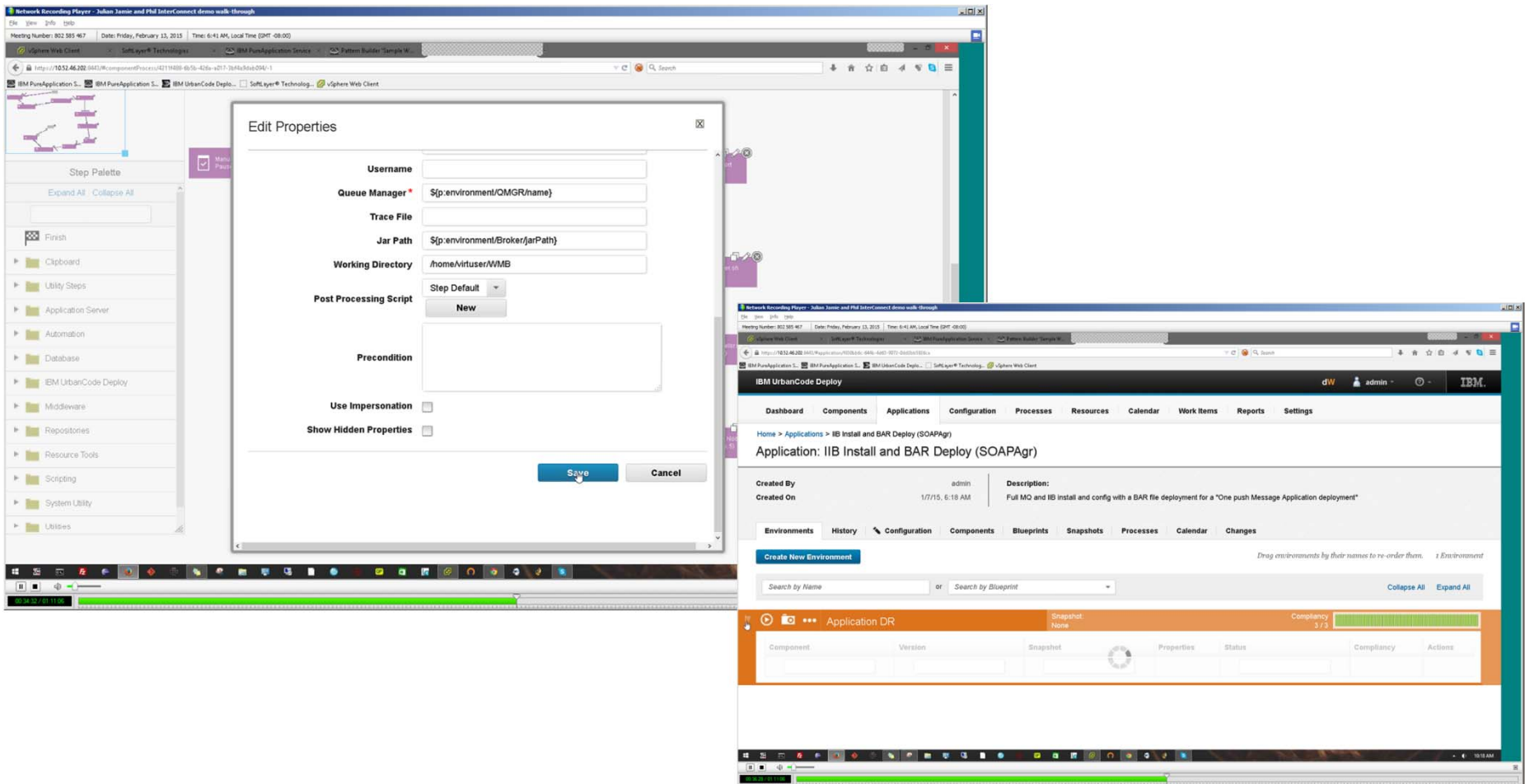
2 records - Refresh Print































UrbanCode Deploy process steps

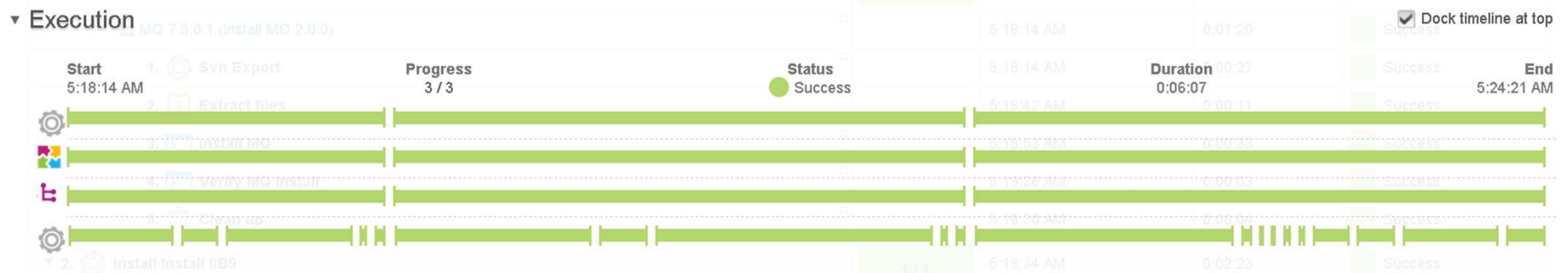
- Process steps



Big Bang IIB Full Deploy or Redeploy in Seven Minutes



- | | | | | | |
|--|----|-------|------------|---------|---|
| ▼ 3.  Install Broker Archive Deploy | | 1 / 1 | 5:21:58 AM | 0:02:23 |  Success |
| ▼  Broker Archive Deploy | | 1 / 1 | 5:21:58 AM | 0:02:23 |  Success |
| ▼  Deploy BAR File (Broker Archive Deploy 1.0.1) | :: | | 5:21:58 AM | 0:02:23 |  Success |
| 1.  Manual Task: Pause for CM Approval | :: | | 5:21:58 AM | 0:01:05 |  Complete |
| 2.  Get Artifacts via Svn Export | :: | | 5:23:11 AM | 0:00:03 |  Success |
| 3.  Get Artifacts via Export from SVN | :: | | 5:23:08 AM | 0:00:02 |  Success |
| 4.  Get Artifacts via SVN Export | :: | | 5:23:04 AM | 0:00:04 |  Success |
| 5.  Replace Tokens createBroker.sh | :: | | 5:23:14 AM | 0:00:03 |  Success |
| 6.  Replace Tokens definelsr.mqsc | :: | | 5:23:18 AM | 0:00:03 |  Success |
| 8.  WMB Deploy | :: | | 5:24:09 AM | 0:00:11 |  Success |
| 9.  Create Node    | | | 5:23:21 AM | 0:00:11 |  Success |
| 10.  Start HTTP Listener | :: | | 5:23:32 AM | 0:00:11 |  Success |
| 11.  Create Execution Group | :: | | 5:23:44 AM | 0:00:25 |  Success |
| Total Execution | | 3 / 3 | 5:18:14 AM | 0:06:07 |  Success |



QRadar monitoring security incidents from all clouds

The screenshot displays the IBM QRadar Security Intelligence dashboard. The top navigation bar includes tabs for Dashboard, Offenses, Log Activity, Network Activity, Assets, Reports, Vulnerabilities, and Admin. The main content area is divided into several sections:

- Top VMware Virtual Infrastructure Authentication Events by EventName (Count):** No results were returned for this item. [View in Log Activity](#)
- Top VMware Virtual Infrastructure Authentication Failures by Username (Count):** No results were returned for this item. [View in Log Activity](#)
- System Notifications:** A table listing recent system events.

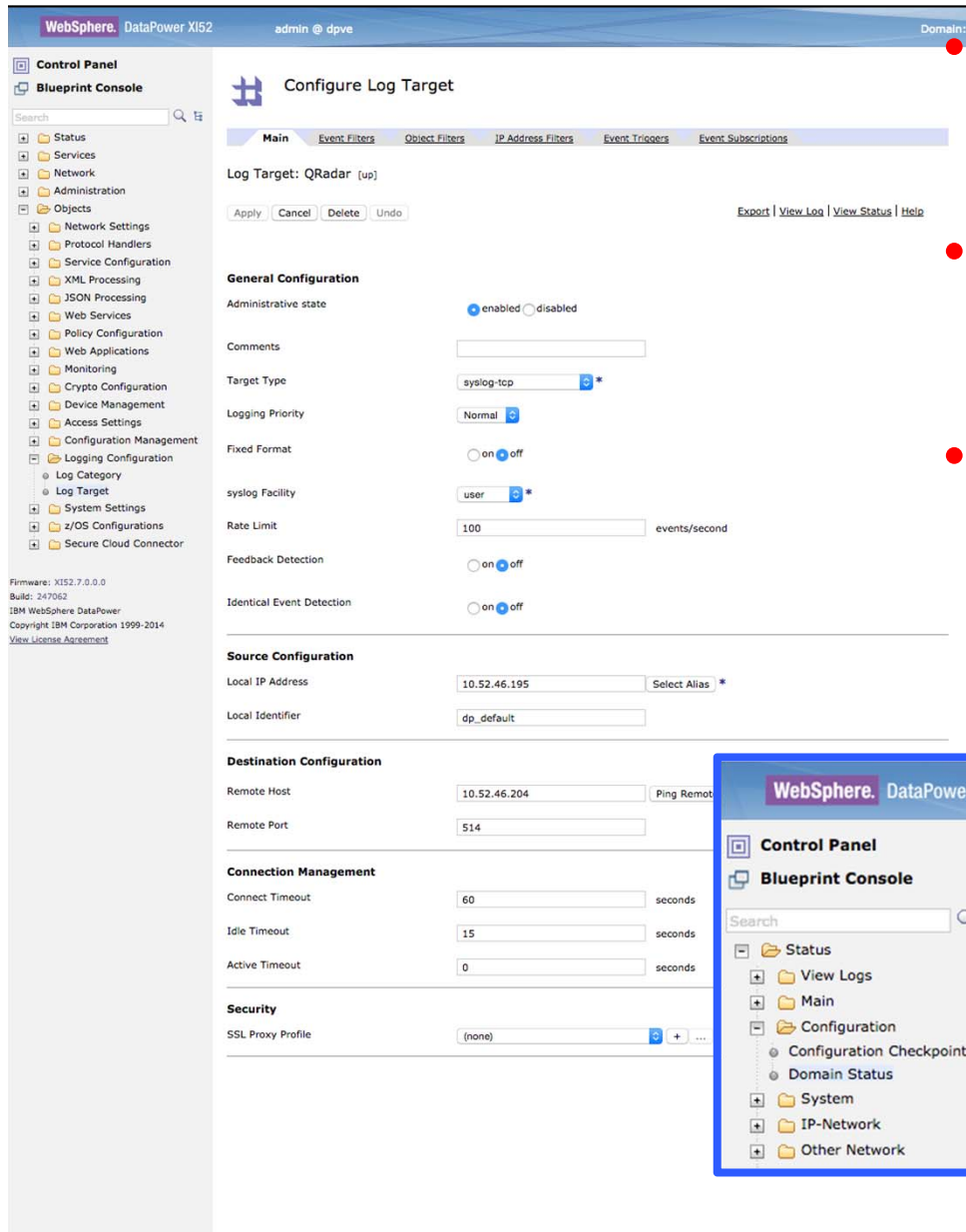
Created	Description
3m 10s	SAR Sentinel: Normal operation restored.
28m 19s	Process monitor: Unable to start process because license expired or invalid.
2h 21m 59s	SAR Sentinel: Threshold crossed.
2h 22m 1s	A license is nearing expiration. It will need to be replaced soon.
3d 7h 17m 33s	Automatic updates could not complete installation. See the Auto Update Log for details.
3d 16h 30m 8s	Unable to determine associated log source for IP address. Unable to automatically detect the associated log source for IP address.
5d 5h 22m 11s	Magistrate: The server was not shutdown cleanly. Offenses are being closed in order to resynchronize and ensure system stability.
- vCenter Activities by Event Name (Count):** No results were returned for this item. [View in Log Activity](#)
- vCloud Director Activities by Event Name (Count):** No results were returned for this item. [View in Log Activity](#)
- Most Severe Offenses:** A table showing the most severe offenses.

Offense Name	Magnitude
Multiple Login Failures for the Same User preceded by Login Failures Followed By Success from the same Username	High
- Most Recent Reports:** A table listing recent reports.

Report Name	Generated	Formats
PCI 8.1 VI User Account, Role, Permission Additions and Changes - Daily	Feb 14, 2015, 1:05 AM	Download
PCI 10 VI Ensure Audit of Data - Daily	Feb 14, 2015, 1:04 AM	Download
vCloud Director User Authentication Activity - Daily	Feb 14, 2015, 1:03 AM	Download
vCenter User Authentication Activity - Daily	Feb 14, 2015, 1:03 AM	Download
Top IDS/IPS Alerts (Daily)	Feb 14, 2015, 1:02 AM	Download



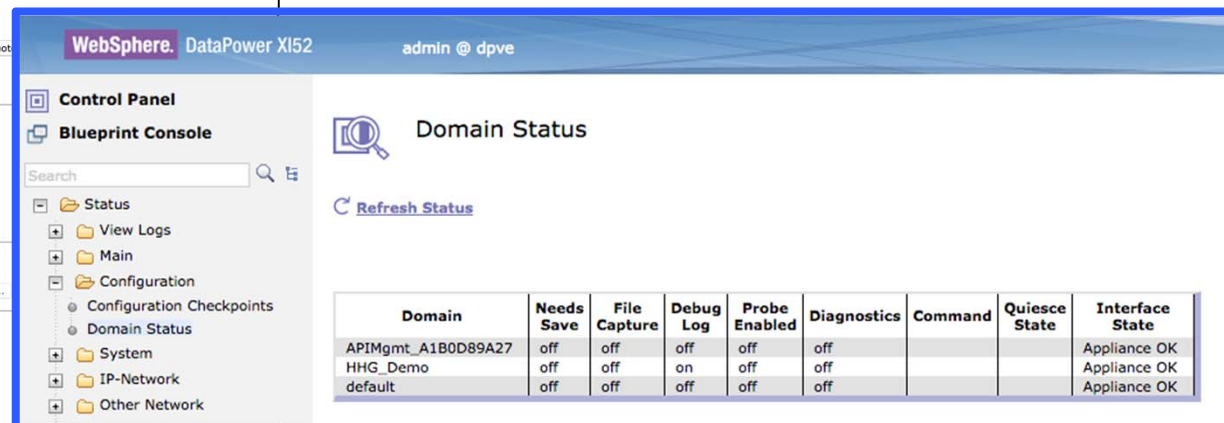
QRadar DSM Parses the DataPower Logs



• IBM API Management deploys and manages it's own domain on the DataPower Gateway

• There is also a second HHG Demo domain on the DataPower for routing

• The DataPower DSM module for QRadar it's just a parser to manage the monitoring by looking at the logs from both DataPower domains



QRadar View

Dashboard Offenses Log Activity Network Activity Assets Reports Vulnerabilities Admin										
System Time: 7:12 AM										
Search... Quick Searches Add Filter Save Criteria Save Results Cancel False Positive Rules Actions										
Quick Filter Search										
Viewing real time events View: Select An Option: Display: Default (Normalized) Using Search: NonQRadar										
Current Filters: Source IP is not any of [127.0.0.1 or 10.52.46.204] (Clear Filter)										
Event Name	Log Source	Event Count	Time	Low Level Category	Source IP	Source Port	Destination IP	Destination Port	Username	Magnitude
User Logged	DP_APIM	1	Feb 14, 2015, 7:12:04 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_APIM	1	Feb 14, 2015, 7:12:04 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:12:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:12:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:12:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:12:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:12:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:12:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:12:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
Ignore The Invalid HTTP Respon...	DP_Default	1	Feb 14, 2015, 7:11:32 AM	Error	10.52.46.195	0	10.52.46.195	0	N/A	
Ignore The Invalid HTTP Respon...	DP_APIM	1	Feb 14, 2015, 7:11:33 AM	Error	10.52.46.195	0	10.52.46.195	0	N/A	
User Logged	DP_APIM	1	Feb 14, 2015, 7:11:01 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_APIM	1	Feb 14, 2015, 7:11:01 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:11:03 AM	User Login Success	10.52.46.195	0	10.52.46.218	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:08:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:08:02 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:08:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:08:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:08:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:08:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:08:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_APIM	1	Feb 14, 2015, 7:08:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_APIM	1	Feb 14, 2015, 7:08:03 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
TCP Connection Attempt Refuse...	DP_Default	1	Feb 14, 2015, 7:08:00 AM	Error	186.231.37.120	0	50.97.202.254	80	N/A	
Ignore The Invalid HTTP Respon...	DP_Default	1	Feb 14, 2015, 7:07:32 AM	Error	10.52.46.195	0	10.52.46.195	0	N/A	
Ignore The Invalid HTTP Respon...	DP_APIM	1	Feb 14, 2015, 7:07:32 AM	Error	10.52.46.195	0	10.52.46.195	0	N/A	
User Logged	DP_Default	1	Feb 14, 2015, 7:07:00 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:07:00 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:07:01 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:07:01 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_Default	1	Feb 14, 2015, 7:07:01 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_APIM	1	Feb 14, 2015, 7:07:01 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	
User Logged	DP_APIM	1	Feb 14, 2015, 7:07:01 AM	User Login Success	10.52.46.195	0	10.52.46.200	0	admin	

Multi-Cloud monitoring with IBM QRadar

IBM QRadar Security Intelligence

admin Help Messages IBM

Dashboard Offenses Log Activity Network Activity Assets Reports Vulnerabilities Admin

System Time: 7:14 AM

Offenses

Display: Rules Group: Select a group...

Rule Building Block Group

Rule	Group	Rule Category	Rule Type	Enabled	Response	Event/Flow Count	Offense
Anomaly: Devices with High Event Rate	Anomaly	Custom Rule	Event	False	Dispatch New Event	0	0
Anomaly: DMZ Jumping	Anomaly	Custom Rule	Common	False	Dispatch New Event	0	0
Anomaly: DMZ Reverse Tunnel	Anomaly	Custom Rule	Common	False	Dispatch New Event	0	0
Anomaly: Excessive Database Connections	Anomaly	Custom Rule	Event	True	Dispatch New Event	0	0
Anomaly: Excessive Firewall Accepts	Anomaly	Custom Rule	Event	False	Dispatch New Event	0	0
Anomaly: Excessive Firewall Denies	Anomaly	Custom Rule	Event	True	Dispatch New Event	0	0
Anomaly: Long Duration Flow Involvement	Anomaly	Custom Rule	Flow	False	Dispatch New Event	0	0
Anomaly: Long Duration ICMP Flows	Anomaly	Custom Rule	Flow	False	Dispatch New Event	0	0
Anomaly: Outbound Connection to a Foreign Country/Region	Anomaly	Custom Rule	Event	False	Dispatch New Event	0	0
Anomaly: Potential Honeypot Access	Anomaly	Custom Rule	Event	False	Dispatch New Event	0	0
Anomaly: Remote Access from Foreign Country/Region	Anomaly	Custom Rule	Event	False	Dispatch New Event	0	0
Anomaly: Remote Inbound Communication from a Foreign Country/Region	Anomaly	Custom Rule	Flow	False	Dispatch New Event	0	0
Anomaly: Single IP with Multiple MAC Addresses	Anomaly	Custom Rule	Event	False	Dispatch New Event	0	0

➤ QRadar also monitors the other logs within the HHG multiple clouds

➤ There are many built-in rules.

➤ It is also easy to edit, extend or create your own rules

Dashboard Offenses Log Activity Network Activity Assets Reports Vulnerabilities Admin

Offenses

Display: Rules Group: Authentication

Rule Name	Group	Rule Category	Rule Type	Enabled	Response	Event/Flow Count	Offense
Authentication: Login Failure to Disabled Account	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: Login Failure to Expired Account	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: Login Failures Followed By Success from the same Source	Authentication	Custom Rule	Event	True	Dispatch New Event	0	0
Authentication: Login Failures Followed By Success to the same Destination	Authentication	Custom Rule	Event	True	Dispatch New Event	0	0
Authentication: Login Failures Followed By Success to the same Username	Authentication	Custom Rule	Event	True	Dispatch New Event	17	1
Authentication: Login Successful After Scan Attempt	Authentication	Custom Rule	Common	True	Dispatch New Event	0	0
Authentication: Multiple Login Failures for Single Username	Authentication	Custom Rule	Event	True	Dispatch New Event	3	1
Authentication: Multiple Login Failures from the Same Source	Authentication	Custom Rule	Event	True	Dispatch New Event	0	0
Authentication: Multiple Login Failures from the Same Source (Windows)	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: Multiple Login Failures to the Same Destination	Authentication	Custom Rule	Event	True	Dispatch New Event	0	0
Authentication: Multiple VoIP Login Failures	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: No Activity for 60 Days	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: Possible Shared Accounts	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: Repeat Non-Windows Login Failures	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0

Rule

Apply Authentication: Multiple Login Failures for Single Username on events which are detected by the Local system and when an event matches any of the following BB:CategoryDefinition: Authentication Failures and when at least 5 events are seen with the same Username in 5 minutes

Notes

Reports authentication failures for the same username

IBM QRadar flags “Offenses” through rules...

Many rules are available out of the box

The screenshot displays the IBM QRadar Security Intelligence interface. The top navigation bar includes 'Dashboard', 'Offenses', 'Log Activity', 'Network Activity', 'Assets', 'Reports', 'Vulnerabilities', and 'Admin'. The 'Offenses' tab is active, showing a list of offenses with columns for Id, Description, Offense Type, Offense Source, Magnitude, Source IPs, Destination IPs, Users, and Log Sources. A table shows an offense with Id 6, Description 'Login Failures Followed By Success from the same Username pr...', Offense Type 'Username', Offense Source 'admin', Magnitude (red and yellow bars), Source IPs 'dpmgmt.cloud.hh...', Destination IPs 'Local (2)', Users 'admin', and Log Sources 'Multiple (3)'. Below the offenses list, the 'Rules' section is visible, showing a list of rules with columns for Rule Name, Rule Group, and Rule. A dropdown menu is open for 'Select a group...', showing a list of rule groups including 'Anomaly', 'Asset Reconciliation Exclusion', 'Authentication', 'Botnet', 'Category Definitions', 'Compliance', 'D'oS', 'Database', 'Exploit', and 'False Positive'. The 'Authentication' group is selected. The interface also shows a search bar, filters, and a sidebar with navigation options.

IBM QRadar Security Intelligence

admin Help Messages 6 IBM

System Time: 10:03 AM

Search... Quick Searches Add Filter Save Criteria Save Results Cancel False Positive Rules Actions

Quick Filter Search

Viewing real time events View: Select An Option: Display: Default (Normalized) Using Search: NonQRadar

Current Filters: Source IP is not any of [127.0.0.1 or 10.52.46.204] (Clear Filter)

Event Name	Log Source	Event Count
Login Failures Followed By Success from...	Custom Rule Engine-8 ...	
User Logged	DP_APIM	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_APIM	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_Default	
Ignore The Invalid HTTP Response Sta...	DP_APIM	
User Failed To Log In	DP_Default	
Ignore The Invalid HTTP Response Sta...	DP_Default	
User Failed To Log In	DP_Default	
Multiple Login Failures for the Same User	Custom Rule Engine-8 ...	
User Failed To Log In	DP_Default	
SSH Session From	DP_Default	
User Failed To Log In	DP_Default	
User Failed To Log In	DP_Default	
User Failed To Log In	DP_Default	
User Failed To Log In	DP_Default	
SSH Session From	DP_Default	
User Logged	DP_APIM	
User Logged	DP_APIM	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_Default	
User Logged	DP_APIM	

Receiving an average of less than one result per second.

Offenses

My Offenses

All Offenses

By Category

By Source IP

By Destination IP

By Network

Rules

Display: Rules Group: Select a group...

Rule and Building Block Groups

Rule	Group
Anomaly: Devices with High Event Ra	Anomaly
Anomaly: DMZ Jumping	Anomaly
Anomaly: DMZ Reverse Tunnel	Anomaly
Anomaly: Excessive Database Conne	Anomaly
Anomaly: Excessive Firewall Accepts	Anomaly
Anomaly: Excessive Firewall Accepts	Anomaly
Anomaly: Excessive Firewall Denies f	Anomaly
Anomaly: Long Duration Flow Involvin	Anomaly
Anomaly: Long Duration ICMP Flows	Anomaly
Anomaly: Outbound Connection to a Foreign Country/Region	Anomaly
Anomaly: Potential Honeypot Access	Anomaly
Anomaly: Remote Access from Foreign Country/Region	Anomaly
Anomaly: Remote Inbound Communication from a Foreign Country/Region	Anomaly
Anomaly: Single IP with Multiple MAC Addresses	Anomaly

➤ Alert on multiple login failures followed by success across log sources

HHG
Haddon Hill Group

	Id	Description	Offense Type	Offense Source	Magnitude	Source IPs	Destination IPs	Users	Log Sources
	7	Multiple Login Failures for the Same User preceded by Login Fail...	Username	admin	<div><div></div><div></div><div></div></div>	dpmgmt.cloud.hh...	Local (2)	admin	Multiple (3)

QRadar Rule Wizard allows for easy customizations based on out-of-the-box rules

Rule Name ▲	Group	Rule Category	Rule Type	Enabled	Response	Event/Flow Count	Offense
Authentication: Login Failure to Disabled Account	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: Login Failure to Expired Account	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: Login Failures Followed By Success from the same Sourc...	Authentication	Custom Rule	Event	True	Dispatch New Event	0	0
Authentication: Login Failures Followed By Success to the same Destinati...	Authentication	Custom Rule	Event	True	Dispatch New Event	0	0
Authentication: Login Failures Followed By Success to the same Username	Authentication	Custom Rule	Event	True	Dispatch New Event	17	1
Authentication: Login Successful After Scan Attempt	Authentication	Custom Rule	Common	True	Dispatch New Event	0	0
Authentication: Multiple Login Failures for Single Username	Authentication	Custom Rule	Event	True	Dispatch New Event	3	1
Authentication: Multiple Login Failures from the Same Source	Authentication	Custom Rule	Event	True	Dispatch New Event	0	0
Authentication: Multiple Login Failures from the Same Source (Windows)	Authentication	Custom Rule	Event	False	Dispatch New Event	0	0
Authentication: Multiple Login Failures to the Same Destination	Authentication	Custom Rule	Event	True	Dispatch New Event	0	0
Authentication: Multiple VoIP Login Failures	Authentication						
Authentication: No Activity for 60 Days	Authentication						
Authentication: Possible Shared Accounts	Authentication						
Authentication: Repeat Non-Windows Login Failures	Authentication						

Rule

Apply Authentication: Multiple Login Failures for Single Username on events which are detected by the and when an event matches any of the following BB:CategoryDefinition: Authentication Failures and when at least 5 events are seen with the same Username in 5 minutes

Notes

Reports authentication failures for the same username

Rule Wizard: Rule Test Stack Editor

Which tests do you wish to perform on incoming events?

Test Group All Export as Building Block

Type to filter

- when the local network is one of the following networks
- when the destination network is one of the following networks
- when the IP protocol is one of the following protocols
- when the Event Payload contains this string
- when the source port is one of the following ports
- when the destination port is one of the following ports
- when the local port is one of the following ports
- when the remote port is one of the following ports
- when the source IP is one of the following IP addresses
- when the destination IP is one of the following IP addresses
- when the local IP is one of the following IP addresses

Rule (Click on an underlined value to edit it)
Invalid tests are highlighted and must be fixed before rule can be saved.

Apply Authentication: Multiple Login Failures for Single User on events which are detected by the Local system

- and when an event matches any of the following BB:CategoryDefinition: Authentication Failures
- and when at least 5 events are seen with the same Username in 5 minutes

Please select any groups you would like this rule to be a member of:

- ☐ Anomaly
- ☐ Asset Reconciliation Exclusion
- ☒ Authentication
- ☐ Botnet
- ☐ Category Definitions

Notes (Enter your notes about this rule)

Reports authentication failures for the same username

A Second Look at API Driven Cloud Management

The screenshot shows a web browser window displaying the HHG Developer Network homepage. The browser's address bar shows the URL '10.52.46.201/welcome'. The page has a red header with the HHG logo and 'HHG Developer Network' text. Below the header is a navigation bar with links: Home, Getting Started, API Academy, About HHG, Community, Support, APIs, Applications, Plans, Analytics, API Testing, and My Organization. A 'My account' link and 'Log out' button are also present. The main content area features a large banner with the text 'Helping large enterprises get the best business value from their IT investments' and 'Advanced, complex IT design, architecture, infrastructure, integration, implementation and management services'. Below the banner, there are three columns: 'Latest News' with a link to 'API Status Custom developer portal development', 'Recent blog posts' with a link to 'Welcome HHG Blog Posts', and 'Active forum topics' with links to 'First Echo service now available' and 'Developer site active'. Each column has a 'More' link at the bottom.



Testing APIs Available to that Developer

The screenshot shows a web browser window with the URL 10.52.46.201/test. The page is titled "HHG Developer Network" with the tagline "APIs Are Us". The navigation bar includes links for Home, Getting Started, API Academy, About HHG, Community, Support, APIs, Applications, Plans, Analytics, API Testing, and My Organization. The "API Testing" section is active, showing a "Select an application" dropdown menu with "Internal App" selected. Below this is a "Select a method" dropdown menu with a list of methods: "HHG Cloud Account Service/Check account balance", "HHG Cloud Echo Service/Mirror a string", "HHG Cloud Echo Service/Uppercase a string", "Account balance/Check balance", "Echo/Uppercase", and "MQ Service/Get balance". The page also features three columns of content: "Latest News" with a link to "API Status" and "Custom developer portal development", "Recent blog posts" with links to "Welcome" and "HHG Blog Posts", and "Active forum topics" with links to "First", "Echo service now available", and "Developer site active".

HHG Developer Network
APIs Are Us

My account Log out
Organization *
Internal Customer A

Home Getting Started API Academy About HHG Community Support APIs Applications Plans Analytics API Testing My Organization

Home

API Testing

Select an application
Internal App

Select a method

- ✓ Select a method
- HHG Cloud Account Service/Check account balance
- HHG Cloud Echo Service/Mirror a string
- HHG Cloud Echo Service/Uppercase a string
- Account balance/Check balance
- Echo/Uppercase
- MQ Service/Get balance

Latest News

API Status
Custom developer portal development

Recent blog posts

Welcome
HHG Blog Posts

Active forum topics

First
Echo service now available
Developer site active

More More

IBM Cloud Orchestrator Can Manage HHG's Three Clouds

IBM Cloud Orchestrator

Virtual System Instances: 1/10

Name	Status
Base OS - Red Hat 6.6 x64 - Demo	Running
Demo Instance	Launching
IBM BPM Process Center with Embedded DB2	Running

IBM BPM Process Center with Embedded DB2

Location: Local | Created On: No snapshot found

Buttons: Create a snapshot, Disable Automatic Snapshots

Virtual machine perspective (6 in total)

Name	Public IP	VM Status	CPU	Memory
Customs_Node_11422463271795	192.168.2.82	Running	0%	0%
Customs_Node_11422463271796	192.168.2.82	Running	0%	0%
Primary_DB2_11422463271792	192.168.2.87	Running	0%	0%
Process_Center_Dmgr_11422463271793	192.168.2.83	Running	0%	0%
Process_Center_IHS_11422463271797	192.168.2.81	Running	0%	0%
Standby_DB2_11422463271794	192.168.2.84	Running	0%	0%

Note: virtual machine stop, start and configure action will be enabled in maintenance mode

History

Script package BPM Post Config on virtual machine Process_Center_Dmgr_11422463271793 completed successfully Jan 31 PM



Deploy a cloud service using advanced patterns

This offering allows you to provision a cloud service that uses the advanced version of patterns.

		replication.
	IBM BPM Process Server for Stray Node Disaster Recovery	Pattern to deploy a Process Server in golden topology with DB2 HADR, HA Deployment Manager and IHS, which provides disaster recovery function by utilizing GPFS and, stray node and database replication.
	IBM BPM Process Center for Classic Disaster Recovery	Pattern to deploy a Process Center in golden topology with DB2 HADR and IHS, which provides disaster recovery function by utilizing GPFS and block storage replication.
	IBM BPM Process Center with Embedded DB2	Pattern to deploy a Process Center in golden topology with DB2 HADR and IHS.
	Default DB2 OLTP Pattern for Linux	
	IBM BPM Process Server with Embedded DB2	Pattern to deploy a Process Server in golden topology with DB2 HADR and HA IHS, which provide the option to upload a process application to be installed during the deployment time.
	Base OS - Red Hat 6.6 x64	
	Base OS - Red Hat 6.5 x64	
	Hardened IBM BPM Process Center with Embedded DB2	Pattern to deploy a Process Center in golden topology with DB2 HADR and IHS.
1 - 22 of 22 items		5 10 50 All
Next		Cancel

IBM Cloud Orchestrator

DASHBOARD | SELF-SERVICE CATALOG | REQUEST HISTORY | ASSIGNED RESOURCES | CONFIGURATION | ACTION LOG | PATTERNS | INBOX

Index

0 new today | 0 to-do | 0 overdue

Latest Items

There are no items to be displayed.

Request History

5 new today

Latest Requests

Deploy a cloud service using patterns - WAS-SL-flo
Register a key to enable access to virtual servers softlayer_pcg
Deploy a cloud service using patterns - WAS Classic Softlayer ESX
Deploy a cloud service using advanced patterns
Deploy a cloud service using advanced patterns

Quota Usage of Current Project

Region/Aware_ED00L

VCPU Usage

0% (0 out of 10 vCPU is remaining)

Volume (GB) Usage

0% (0 GB out of 1,000 GB Storage remaining)

RAM (MB) Usage

0% (0 MB out of 41,700 MB remaining)

VM Status

15 Total

- 13 Active
- 0 Paused
- 2 Stopped
- 0 Error

IBM Cloud Orchestrator Self Service Catalog Across HHG's Three Clouds

The image displays two side-by-side screenshots of the IBM Cloud Orchestrator Self Service Catalog interface.

Left Screenshot: Shows the main dashboard with the following elements:

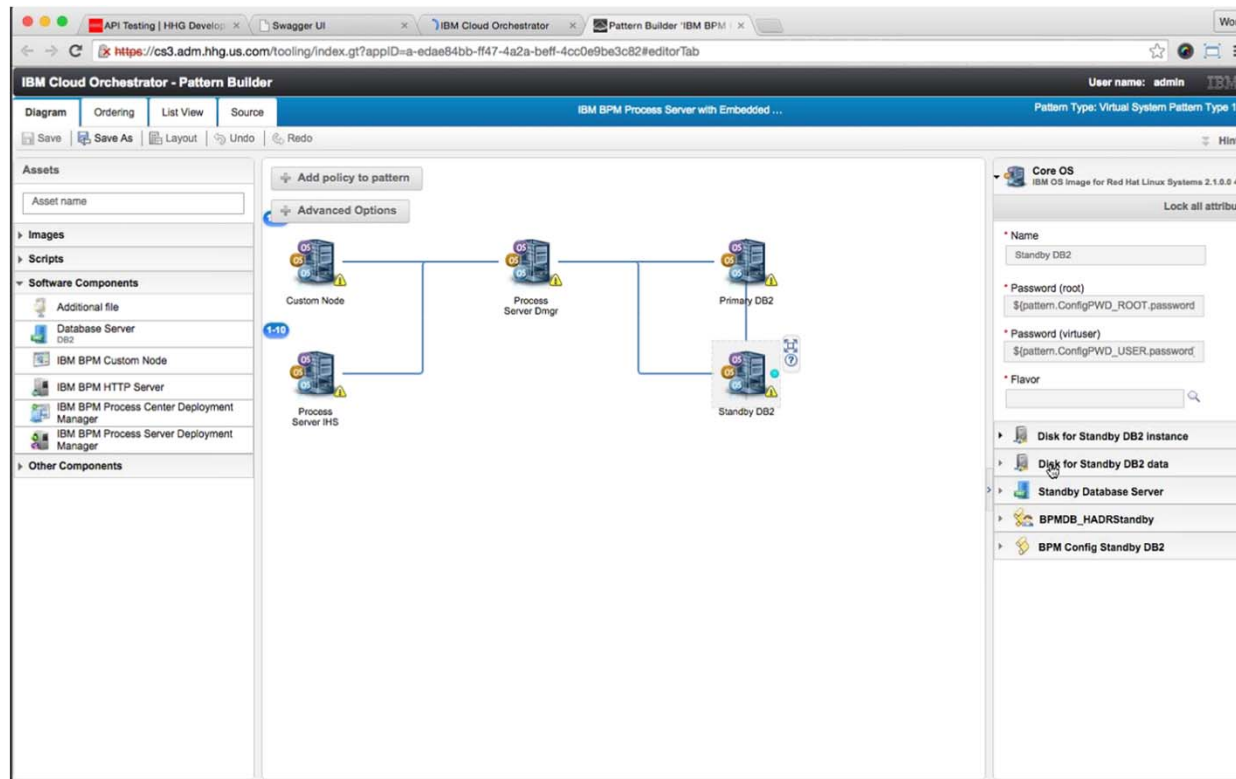
- Header:** "IBM Cloud Orchestrator" with navigation tabs for "DASHBOARD" and "SELF-SERVICE CATALOG".
- Inbox:** A section indicating "0 new today".
- Latest Items:** A section stating "There are no items to be displayed." with two empty placeholder boxes.
- Dropdown Menu:** A dropdown menu is open, showing options: "RegionVMware_ESXiSL" (selected), "RegionVMware", "RegionVMware_ESXiSL", "SL-SanJose", and "All Regions".

Right Screenshot: Shows the "Deploy a cloud service using advanced patterns" page. The browser address bar indicates the URL: <https://cs2.adm.hhg.us.com:8443/catalog/submit/39>. The page includes the following elements:

- Header:** "IBM Cloud Orchestrator" with navigation tabs for "DASHBOARD", "SELF-SERVICE CATALOG", "REQUEST HISTORY", "ASSIGNED RESOURCES", and "CONFIGURATION".
- Breadcrumbs:** "Self-Service > Deploy cloud services > Deploy a cloud service using advanced patterns".
- Cloud Icon:** A blue circular icon with a white cloud.
- Section Title:** "Deploy a cloud service using advanced patterns".
- Description:** "This offering allows you to provision a cloud service that uses the advanced version of patterns."
- Deployment Configuration:** A section with the following fields:
 - Instance Name:** "Base OS - Red Hat 8.5 x64"
 - Environment Profile:** "Lab" (dropdown menu)
 - Cloud Group:** "RegionVMware_nova" (dropdown menu)
 - IP Group:** "RegionVMware_VM Network" (dropdown menu)
- Buttons:** "Back", "Next", and "Cancel".

The ICO BPM pattern looks just like PureApp **HHG**

Haddon Hill Group



ICO BPM Pattern

IBM Cloud Orchestrator - Pattern Builder

User name: admin

Diagram | Ordering | List View | Source

IBM BPM Process Center with Embedded ...

Pattern Type: Virtual System Pattern Type 1.0

Save | Save As | Layout | Undo | Redo

Assets

Asset name

Images

Scripts

Software Components

- Additional file
- Database Server DB2
- IBM BPM Custom Node
- IBM BPM HTTP Server
- IBM BPM Process Center Deployment Manager
- IBM BPM Process Server Deployment Manager

Other Components

Advanced Options

Custom Node

Process Center Dmgr

Primary DB2

Standby DB2

Process Center IHS

Pattern

Name

IBM BPM Process Center with Embedded I

Version

1.0

Description

Pattern to deploy a Process Center in golden topology with DB2 HADR and IHS.

Type

☐ Pattern

☐ Pattern Template

Lock option for plug-in usage

☐ Unlock plug-ins

☐ Lock all plug-ins except Foundation plug-ins

☐ Lock all plug-ins

Pattern-level Parameters

Add new parameter

Password (root)

Password

Verify password

Password (virtuser)

Password

Verify password

Password (db2fenc1 - DB2 Fenced user)

Password

Verify password

ICO Deployment

The screenshot displays the IBM Cloud Orchestrator (ICO) Designer interface. The top navigation bar includes tabs for Designer, Inspector, and Optimizer, along with a Save button and an All versions dropdown. The main workspace is divided into two primary sections: Process Instances and Services in Debug.

Process Instances Table:

Instance Name	Snapshot	Process	Status	Due Date	Instance Id	Status	Owner	Subject	Priority	Due Date	Task Id
Deploy pattern:318	Tip	Deploy Single VSys...	Active	Feb 28, 2015 12...	318						

Toolkit Settings (Read-Only) Panel:

Common

Name: SCOrchestrator_Support_vSys_Next_Toolkit
Acronym: SCOVSYN

Description: [\(Edit\)](#)

////
// Licensed Materials - Property of IBM
// 5725-H28
// (C) Copyright IBM Corp. 2014 All Rights Reserved
// US Government Users Restricted Rights - Use, duplication
// or
// disclosure restricted by GSA ADP Schedule Contract with
// IBM Corp.
////

This toolkit provides capabilities to deploy the **new virtual system pattern** via IBM Cloud Orchestrator 2.4. Therefore the toolkit provides building blocks that can be used in other toolkits or process applications in order to build custom service and processes.

The toolkit builds function on top of the IBM Cloud Orchestrator API and uses the GenericREST integration service of the SmartCloud Orchestrator toolkit to perform

Exposed Items

These items have been exposed from this Process App. They are normally the starting points for the design and implementation.

Business Process Diagrams:

- [Change Environment Profile Limits](#)
- [Change Instance End Time](#)
- [Delete Single vSys Pattern Instance](#)
- [Delete vSys Pattern Instances](#)
- [Deploy Selected Patterns](#)
- [Deploy Single Pattern](#)
- [Deploy Single VSysNext Pattern](#)
- [Deploy Virtual System Approval](#)

Human Services:

- [Approval](#)
- [Change Environment Profile Limits](#)
- [Change Instance End Time](#)
- [Change Instance End Time \(Instance Op\)](#)
- [Delete Single Server Virtual System](#)
- [Delete Single vSys Instance](#)

Execution State Breakpoints

No Process Instance Selected

Variables Execution Evaluator

Questions?

