

Interconnect Session 1587:

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

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#ibminterconnect



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

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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

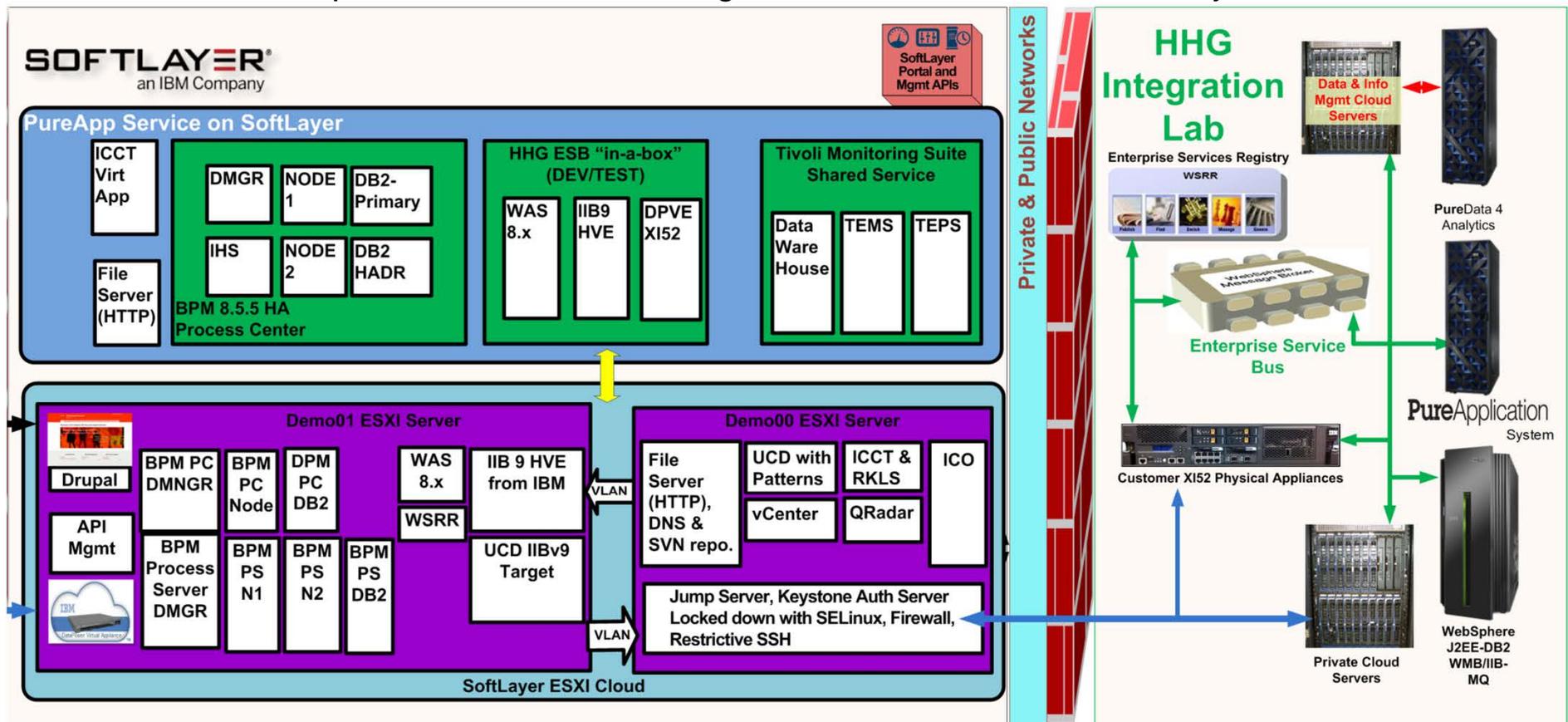
- a) QRadar monitors the components across multiple clouds
- b) DataPower DSM is monitored by QRadar
- c) QRadar monitoring example of custom rules
- d) QRadar Monitors MQ/IIB

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)

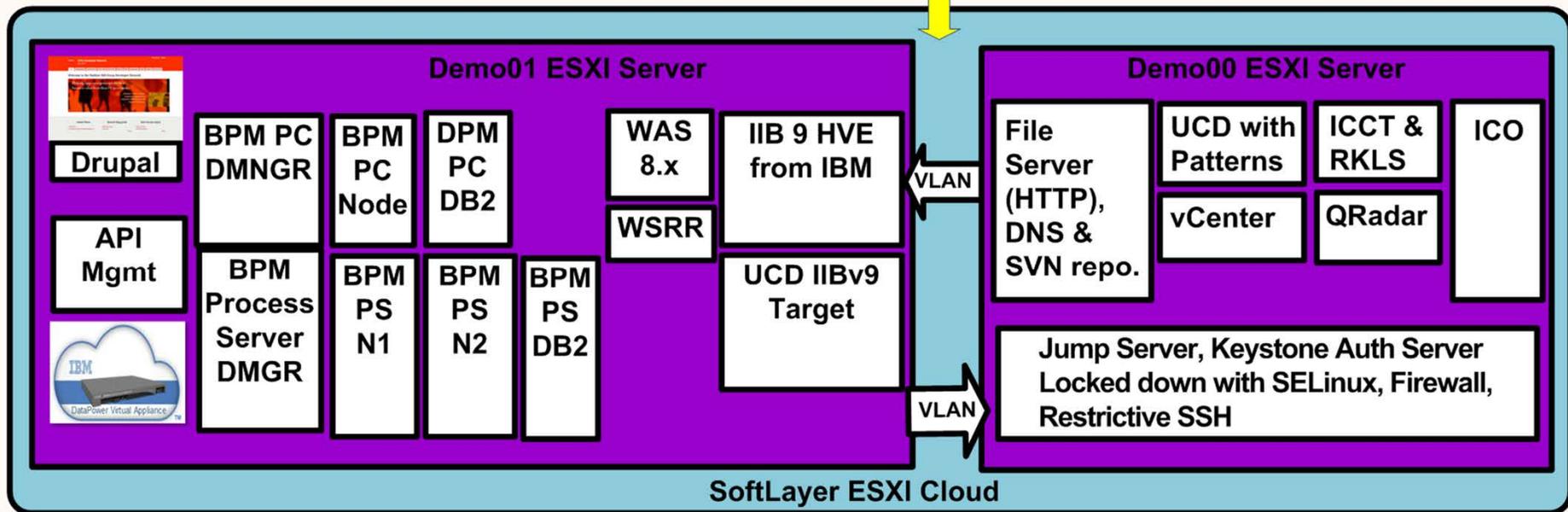
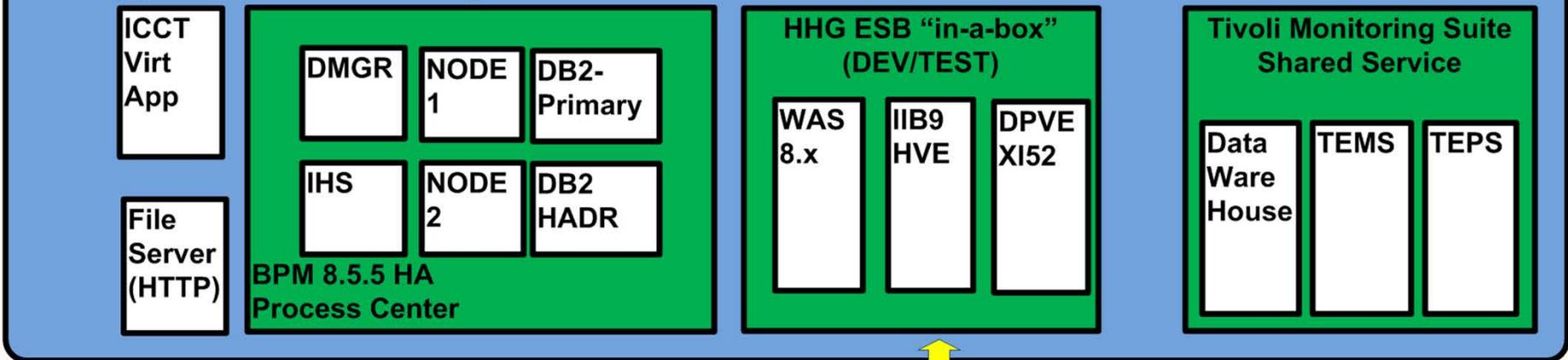
HHG Multi-cloud Integration Platform Deployment Topology

- 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



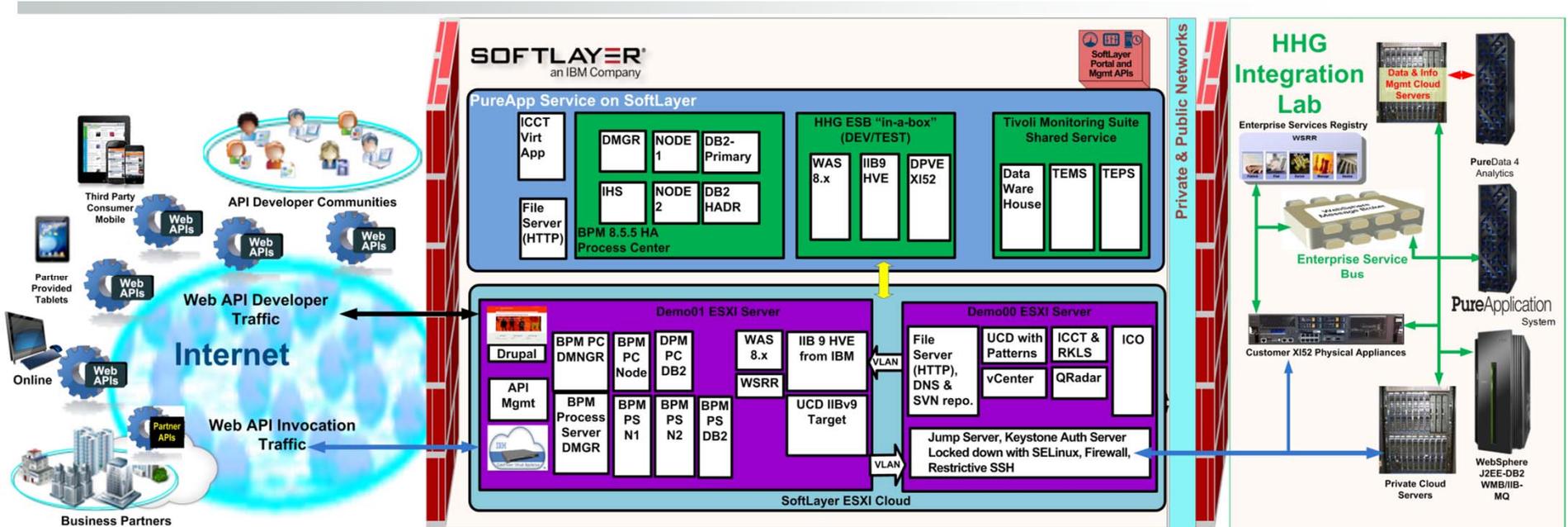
- HHG recreated these IBM product integrations with January 2015 available versions on:
 1. SoftLayer Bare Metal ESXi servers
 2. PureApp Service on SoftLayer

PureApp Service on SoftLayer



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

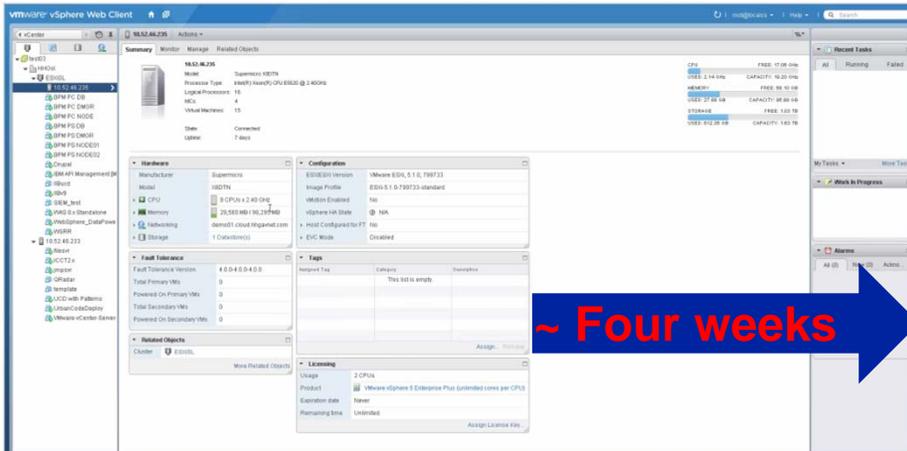
Functional Demo



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

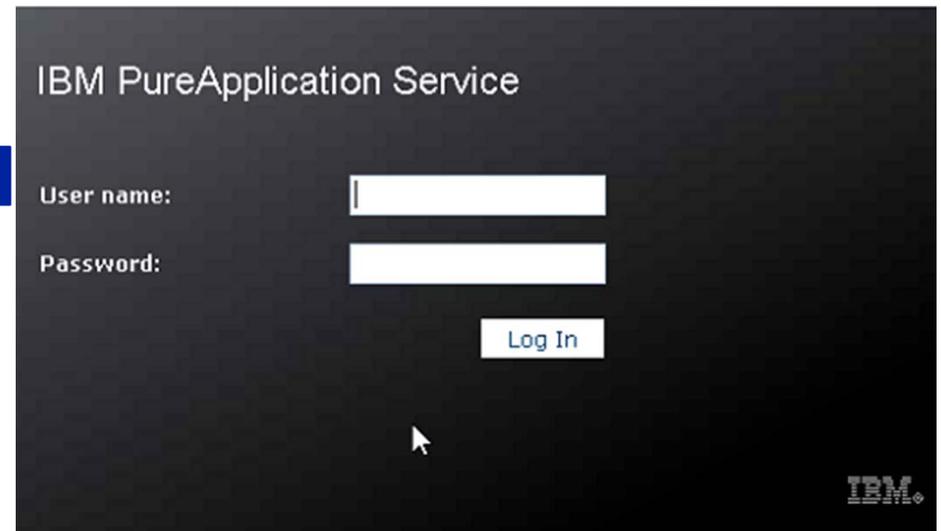


~ Four weeks

- 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



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  Account Service -
- **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  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 shows the IBM API Management console interface. The main heading is "/apimanagement". On the left, there is a navigation sidebar with icons for home, draft APIs, deployed APIs, and various filters. The main content area displays a table of APIs with columns for Name, Path, Last Modified, and Actions. The APIs listed are:

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. At the top, the breadcrumb is `/apimanagement`. The user is logged in as `jwitt@haddonhillgroup.com`. The main content area is titled "APIs" and shows a table of API details. The first entry is "HHG Cloud..." with a path of `/accounts...` and version `1`. It is deployed to both "Sandbox" and "Production" environments. The description, "Account Services service with HHG cloud back end", is circled in red. Below the API details, there are tabs for "Resources", "Security", "Properties", and "Documentation". The "Resources" tab is active, showing a table of API 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".

Name	Path	Version	Deployed to	Clone	Delete Version	Save API
HHG Cloud...	/accounts...	1	Sandbox, Production			

Description: Account Services service with HHG cloud back end

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

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

The screenshot displays the API Management console interface. At the top, there are tabs for 'Overview', 'Implementation', and 'Test'. The 'Test' tab is active, showing a '200 OK' status and a response body with headers like 'X-Global-Transaction-ID', 'Access-Control-Allow-Origin', 'Date', 'Transfer-Encoding', 'X-Backside-Transport', 'APIM-Debug-Trans-Id', 'APIM-Debug-Filename', 'Access-Control-Allow-Methods', 'Content-Type', 'Connection', and 'From'.

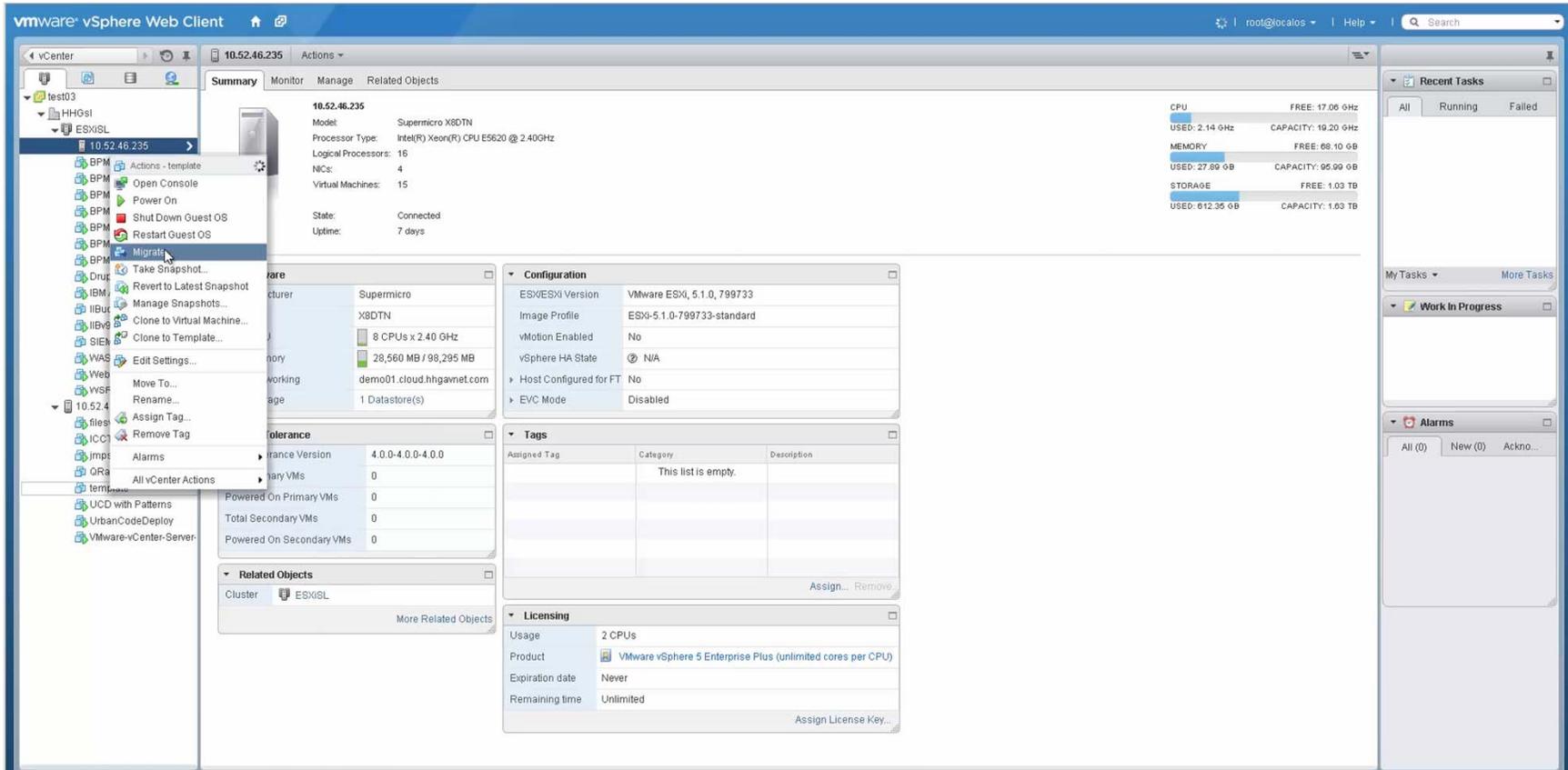
Two API instances are shown:

- Softlayer:** The 'Plan' dropdown is set to 'Gold (Version 1)'. The response body includes headers such as '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', and 'From: 10.52.46.195:9001'.
- HHG Integration Lab Cloud:** The 'Plan' dropdown is set to 'HHG (Version 1)'. The response body includes headers such as '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', and 'From: 192.168.0.162:9080'.

Red circles highlight the 'Plan' dropdown menus for both API instances. Blue arrows point from the labels 'Softlayer' and 'HHG Integration Lab Cloud' to their respective response bodies.

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

The screenshot displays the VMware vSphere interface with the 'template - Migrate' wizard open. The wizard is in the '2 Select Destination Resource' step, where the host '10.52.46.233' is selected. The 'Compatibility' section shows 'Compatibility checks succeeded'.

10.52.46.235
Model: Supermicro X8DTN
Processor Type: Intel(R) Xeon(R) CPU E5620 @ 2.40GHz
Logical Processors: 16
NICs: 4
Virtual Machines:

CPU: FREE: 17.06 GHz
USED: 2.14 GHz CAPACITY: 19.20 GHz
MEMORY: FREE: 88.10 GB
USED: 27.89 GB CAPACITY: 95.99 GB
DRAGE: FREE: 1.03 TB
ED: 612.35 GB CAPACITY: 1.03 TB

template - Migrate

- 1 Select Migration Type
 - Change host
Move the virtual machine to another host
 - Change datastore
Move the virtual machine's storage to another datastore
 - Change both host and datastore
Move the virtual machine to another host and move its storage to another datastore
- 2 Select Destination Resource
- 3 Select Datastore
- 4 Review Selections

template - Migrate

- 1 Select Migration Type
- 2 Select Destination Resource
- 3 Select Datastore
- 4 Review Selections

Search

- test03
 - HHGsl
 - ESXISL
 - 10.52.46.233

Select the cluster, host, resource pool, or vApp as the destination of this virtual machine's migration.

Compatibility:
✔ Compatibility checks succeeded.

Allow host selection within this cluster.

Back Next Finish Cancel

HHG ESX Application Host

The screenshot displays the VMware vSphere Web Client interface. The left-hand navigation pane shows a tree structure under 'vCenter' with a folder named 'test03'. Inside 'test03', there is a sub-folder 'HHGsl' which contains several VMs, including 'UrbanCodeDeploy', which is currently selected. Below 'UrbanCodeDeploy' are other VMs like 'vCenter' and 'VMware-vCenter-Server-'. Further down, another folder '10.52.46.235' contains various other VMs such as 'BPM PC DB', 'BPM PS DB', 'Drupal', and 'SIEM_test'.

The main content area shows the 'UrbanCodeDeploy' VM summary page. The status is 'Powered On'. Key configuration 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, 10.52.46.233
- Host: 10.52.46.233

 Below the summary, there are three panels:

- VM Hardware:** Shows 2 CPU(s) at 24 MHz, 8192 MB of memory (163 MB used), two hard disks (25.00 GB and 50.00 GB), a disconnected CD/DVD drive, a disconnected floppy drive, a 5.00 MB video card, and additional hardware. Compatibility is listed as ESXi 5.0 and later (VM version 8).
- VM Storage Policies:** Shows VM Storage Policies, VM Storage Policy Compliance, and Last Checked Date, all set to '--'. A 'Refresh' button is present.
- Tags:** A table with columns for Assigned Tag, Category, and Description. The table is currently empty, displaying '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

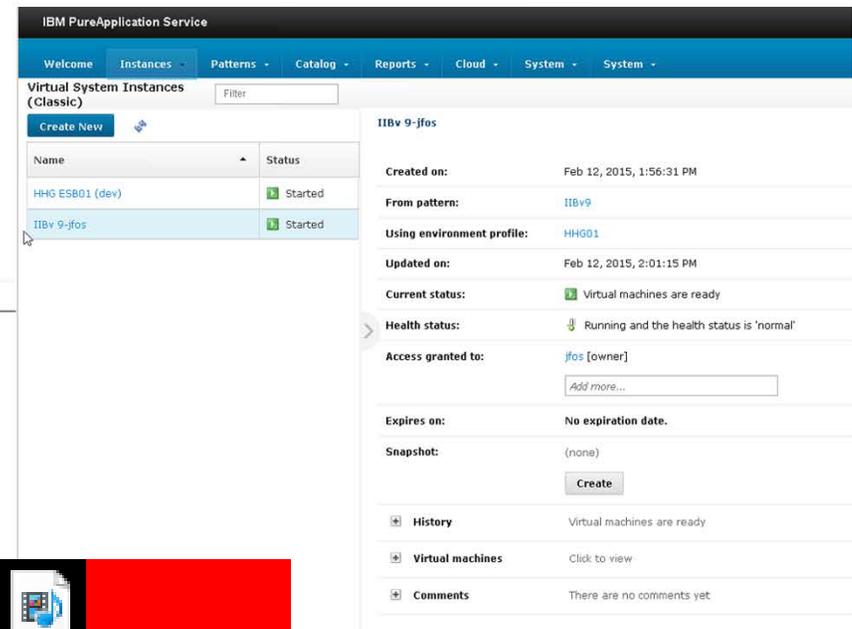
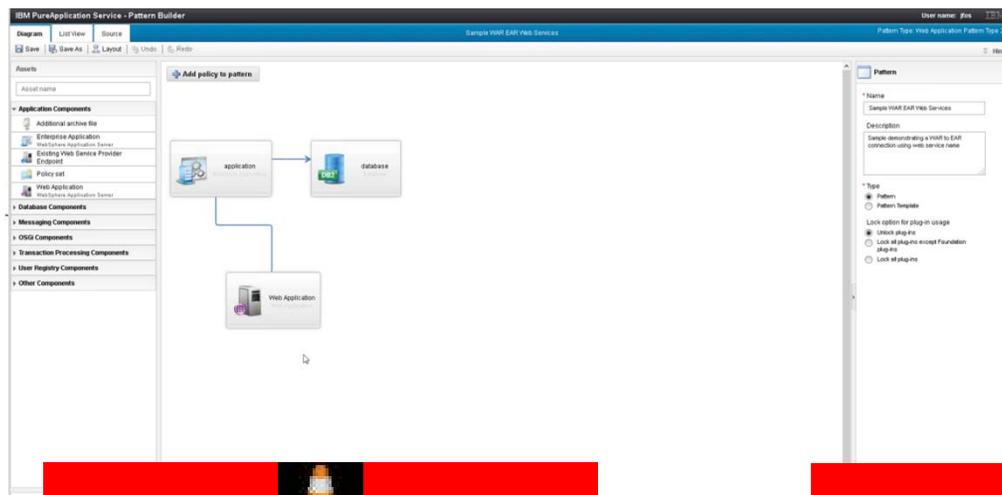
View the current status, metrics, and details of virtual application instances.

[View virtual application instances](#)

Working with virtual systems

Working with virtual appliances

Working with databases

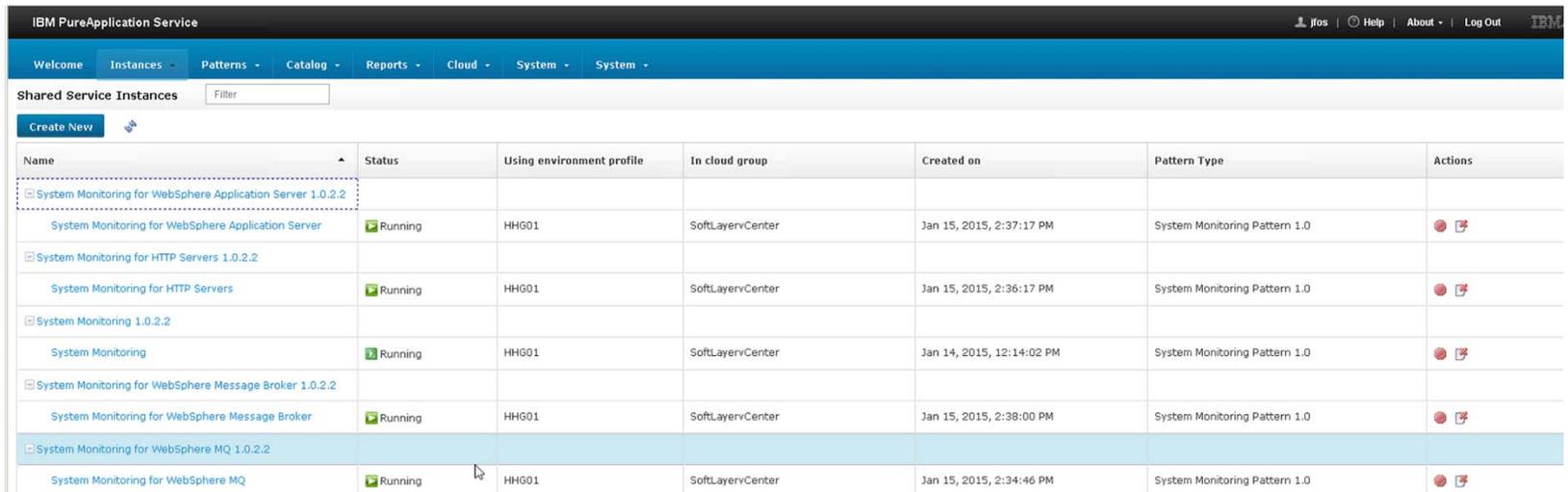
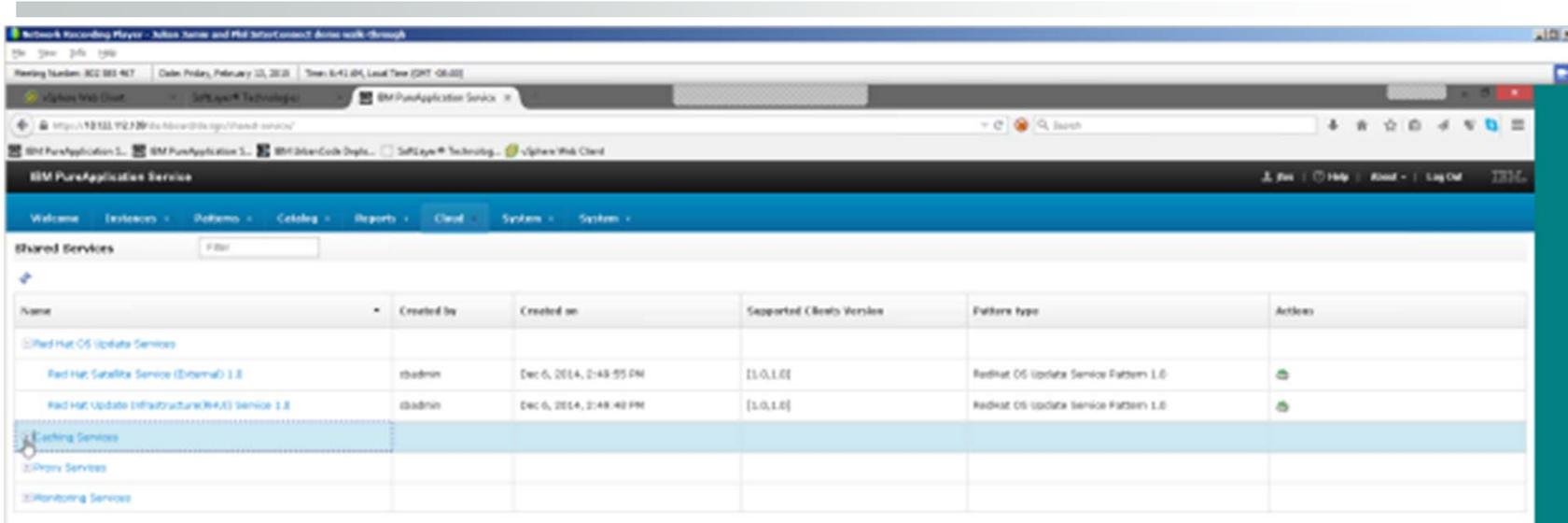


PureApp Service on SoftLayer.mp4



PureApp on SoftLayer-Full.mp4

PureApp Shared Services & Monitoring



Configure Shared Services Monitoring—ITCAM

The screenshot displays the IBM PureApplication Service console. The main view is titled "System Monitoring" and shows a "Shared Service Instance" that is "Running". Key configuration details include: "Expires on: No expiration date.", "Using environment profile: HHG01", "In cloud group: SoftLayerVCenter", and "Pattern type: System Monitoring Pattern 1.0". A "Check for updates" button is visible next to the pattern type. Below this, the "From pattern" section shows "System Monitoring".

The "Middleware perspective" is expanded to show two sections:

- Middleware perspective (23 in total)**
 - Data-Warehouse (ITM-Data-Warehouse)
 - Hub-TEMS (ITM-Hub-TEMS) with an "Endpoint" link
 - Remote-TEMS (ITM-Remote-TEMS)
- Virtual machine perspective (3 in total)**

The "Virtual machine perspective" section contains a table with the following data:

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

A note at the bottom states: "Note: virtual machine stop, start and configure action will be enabled in maintenance mode".

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

PureApp Systems Monitoring Views

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

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 'Welcome', 'Instances', 'Patterns', 'Catalog', 'Reports', 'Cloud', 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 modal window titled 'IBM® PureApplication System Monitoring Version 1.0.22' is overlaid on the details, displaying the following information:

- General info**
- Created on:
- From virtual in:
- Part name:
- Current statu:
- Updated on:
- On hypervisor:
- In cloud group:
- Registered as: wl169053142124-WMBHVEBasicPart-
- Stored on: datastore1
- Monitoring: [Click to open](#)
- Logging: [Click to open](#)
- IBM products (with license count for isolated usage)**
- IBM INTEGRATION BUS 140 PVU
- HYPERSOR EDITION FOR RED HAT ENTERPRISE LINUX SERVER FOR X86 PROCESSOR VALUE UNIT (PVI) LICENSE 1 SW

ITCAM Monitoring MQ

MQSERIES - wf169053142103.pureapplication.ibmcloud.com - jfos

IBM PureApplication System Monitoring

File Edit View Help

Navigator

View: IIBV 9-jfos (d-cdc73fac-844e-4eba-bbe8-b46f837428b)

- IIBV 9-jfos (d-cdc73fac-844e-4eba-bbe8-b46f837428b)
 - wf169053142124
 - Workload Agent
 - Linux OS
 - MQSERIES - HHGQM01
 - Channel Definitions
 - Channel Performance
 - Cluster Queue Manager
 - Dead-Letter Queue Messages
 - Error Log
 - MQSeries Events
 - Queue Definitions
 - Queue Manager Status
 - Queue Statistics
 - Application Accounting
 - MQI Statistics
 - Publish Subscribe
 - QI Agent - 2124
 - Components
 - Product Events
 - WebSphere Message Broker - HHGIIB01
 - Broker Status
 - Broker Status Events
 - Accounting Message Flow Statistics
 - Monitor Node Broker Statistics
 - Resource Statistics

Queue Summary

Channel Summary

Queue Manager Summary

QMgr Name	Host Name	QMgr Subsys	Host Jobname	Start Date & Time	QMgr Status	QMgr Type	DLQ Depth	DLO Maximum	Monitored Queues	Local Queues	Remote Queues	Alias Queues	Transmit Queues	Predefined Queues	Dynamic Perm Qs	Dynamic Temp Qs	Open Queues	# Qs With High Depth	% Qs With High Depth	# of Qs Put-Inhib	# of Qs Get-Inhib	Current Channels	Inactive Channels	In-Doubt Channels	Current Senders	Inactive Senders	Current Servers	Inactive Servers	Current Receivers	Inact Recel
HHGQM01	wf169053142124			02/12/15 18:57:00	Active	Linux	0	0	85	74	1	1	1	74	0	0	28	0	0.0	0	0	0	10	0	0	2	0	1	0	

Hub Time: Fri, 02/13/2015 08:55 PM

Server Available

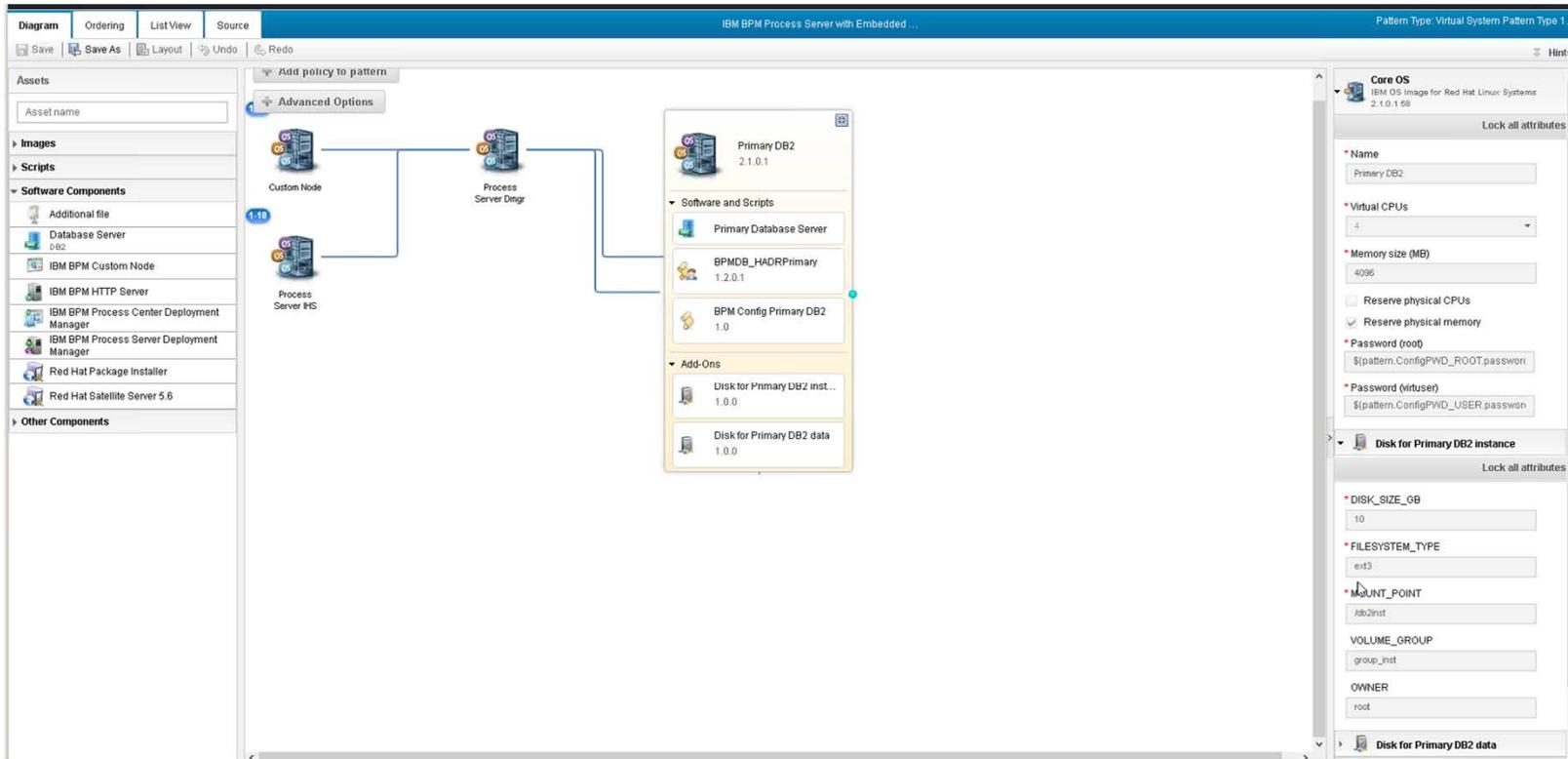
MQSERIES - wf169053142103.pureapplication.ibmcloud.com - jfos

Another look at the PureApp Patterns (BPM)

The screenshot displays the IBM PureApplication Service - Pattern Builder interface. The main workspace shows a diagram of a BPM process server with embedded components: Process Server Dmgr, Primary DB2, and Standby DB2. The left sidebar contains a list of assets and software components, including Custom Node (2.1.0.1), IBM BPM Custom Node (8.5.5.0), BPM Config Custom Node (1.0), BPM Config Transaction... (1.0), Add-Ons (Disk for Custom Node 1.0.0), and Policies (Base Scaling Policy). The right sidebar shows configuration options for scaling, including Instance number range of scaling in/out (Range: 1 - 10), Maximum vCPU count per virtual machine (Value: 16), Maximum memory size per virtual machine (GB) (Value: 32), CPU-based scaling (Scaling in and out when CPU usage is out of threshold range(%)), and Memory-based scaling (Scaling in and out when memory usage is out of threshold range(%)).



BPM DB Properties & Custom Patterns



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

WAS for ESB Dev Hosting

The screenshot displays the IBM PureApplication Service Pattern Editor interface. The main window shows the 'Pattern Editor' for 'DataPower Developer', which deploys to ESX hypervisors. A modal dialog titled 'Properties for part Standalone server (StandalonePart)' is open, showing configuration options for a virtual machine. The dialog includes fields for Name, Virtual CPUs (set to 1), Memory size (2048 MB), Reserve physical CPUs (False), Reserve physical memory (False), Cell name (CloudBurstCell), Node name (CloudBurstNode), and Features (checked for 'none', unchecked for 'xc10'). A 'WebSphere Repository Location' field is also present. The background interface shows a list of parts on the left, including Administrative agents, Core OS, Custom nodes, Deployment manager, and IBM HTTP servers. The bottom of the screen shows a Windows taskbar and a video player control bar with a timestamp of 00:20:40 / 01:11:06.

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)

IBM PureApplication Service

Pattern Editor: Editing DataPower Developer

Showing parts for ESX.

Parts (16/16)

- Administrative agents
- Core OS
- Core OS
- Core OS
- Custom nodes
- Deployment manager
- IBM HTTP servers
- IBM Integration Bus Advanced

Scripts (33/33)

Add-Ons (8/13)

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

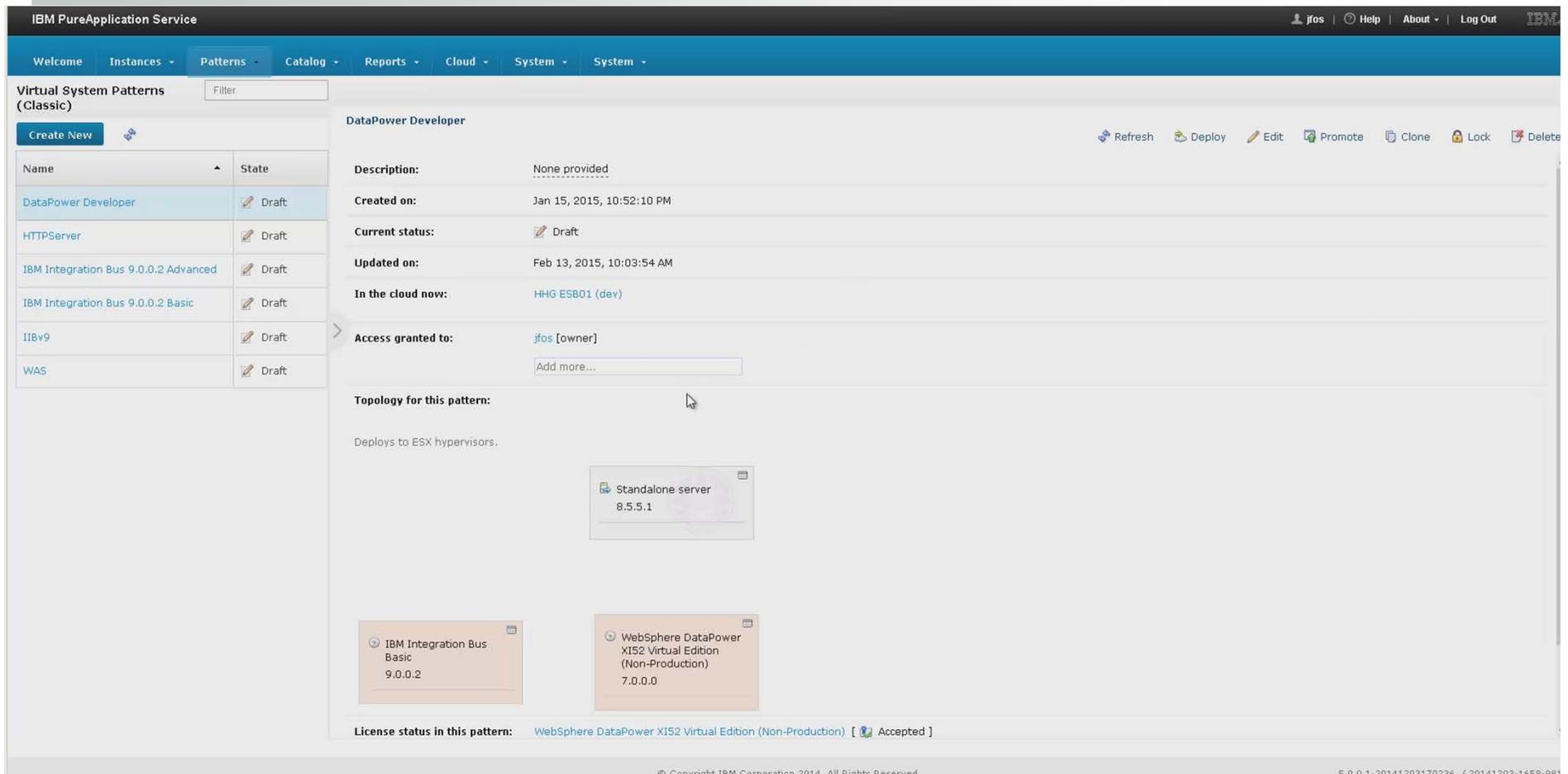
WAS Pattern.mp4

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5.0.0.1-20141203170236 / 20141203-1658-981

10:02 AM

An HHG Custom Pattern: "ESB In a Box"



The screenshot displays the IBM PureApplication Service interface. The main content area shows details for a custom pattern named "DataPower Developer".

- Name:** DataPower Developer
- State:** Draft
- 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 ES801 (dev)
- Access granted to:** jfos [owner]

Topology for this pattern: Deploys to ESX hypervisors. The topology diagram shows three components:

- 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]



IBM Integration Broker on PureApp

wl169053142124.pureapplication.ibmcloud.com:5801

IBM PureApplication S... IBM PureApplication S... IBM UrbanCode Deplo... SoftLayer® Technolog... vSphere Web Client

Disconnect Options Clipboard Send Ctrl-Alt-Del Refresh

Applications Places System Sat Feb 14, 5:38 PM

Integration Development - IBM Integration Toolkit

File Edit Navigate Search Project Run Window Help

Welcome

IBM Integration Bus

Welcome! Get started with IBM Integration Bus; create the Default Configuration, then verify your installation using the Pager samples.

Get Started

Create the Default Configuration
Use the Default Configuration wizard to create a simple broker and all the resources that it needs.

Verify your installation using the Pager samples
Verify that IBM Integration Bus is installed correctly on your computer using the Pager samples.

Read an introduction to IBM Integration Bus
A high-level overview of IBM Integration Bus and how you can use it in your business.

Additional information

Get a more in-depth technical overview
A more detailed introduction to the concepts, components, and tools, including the IBM Integration Toolkit.

Using Patterns
A pattern is a solution to a recurring problem in a given context. You can use the Patterns supplied in the IBM Integration Toolkit to generate resources that solve common business problems.

Access the Eclipse user guide
An introduction to the Eclipse workbench, for users who have not used the IBM Integration Toolkit before.

IBM Education Assistant
Get links to educational materials on administration and developing applications in IBM Integration Bus.

Get Started Samples Returning Users Web Resources



Deploying IIB with UCD

The screenshot displays the IBM PureApplication Service interface. The top navigation bar includes 'Welcome', 'Instances', 'Patterns', 'Catalog', 'Reports', 'Cloud', 'System', and 'System'. The main content area is titled 'Virtual System Patterns (Classic)' and features a 'Create New' button and a search filter. A table lists several patterns, with 'IIBv9' selected and highlighted. The details for 'IIBv9' are shown on the right, including its description, creation and update dates, current status (Draft), and the user 'jfos' as the owner. The topology section indicates that the pattern deploys to ESX hypervisors and includes a component for 'install_ucd_agent'. The license status is shown as '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.

IBM Integration Bus Basic 9.0.0.2
 install_ucd_agent

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

Setting IBM Information Broker Properties

The screenshot shows the IBM PureApplication Service Pattern Editor interface. The main window displays the configuration for the 'IBM Integration Bus Basic (BasicPart)'. The configuration includes the following fields:

- Password (root): [Redacted]
- Verify password: [Redacted]
- Administrative password (virtuser): [Redacted]
- Verify password: [Redacted]
- Integration Node Name: HHGIIB01
- 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 interface also shows a list of parts on the left side, including 'Administrative agents', 'Core OS', 'Custom nodes', 'Deployment manager', 'IBM HTTP servers', and 'IBM Integration Bus Advanced'. The bottom of the screen displays the copyright information: '© Copyright IBM Corporation 2014. All Rights Reserved.' and the version number '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

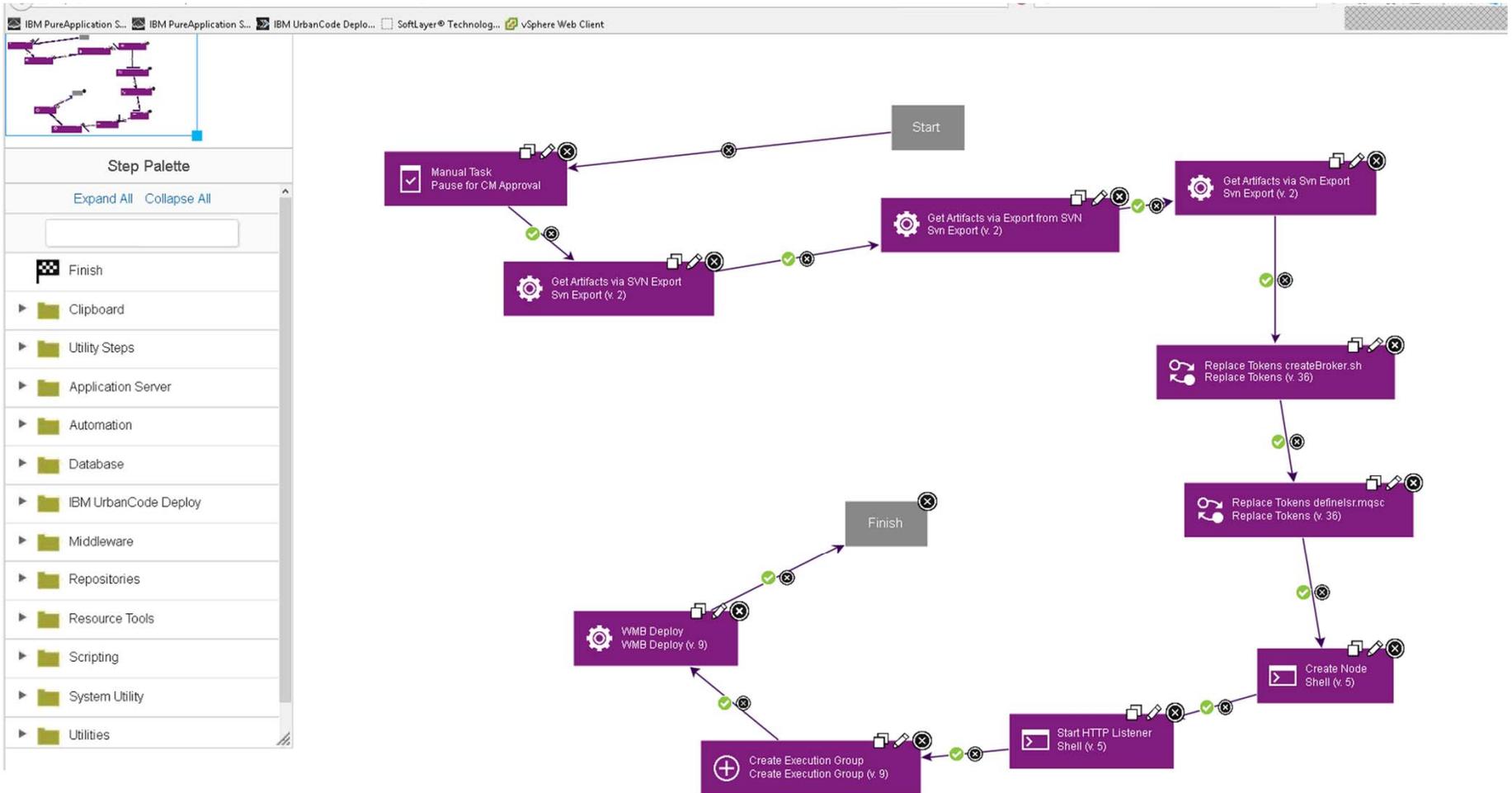
Deploying IIB and a specific BAR file from the UCD “Big Bang” Project

The screenshot displays the IBM UrbanCode Deploy web interface. The breadcrumb navigation shows 'Home > Applications > IIB Install and BAR Deploy (SOAPAgr)'. The main heading is 'Application: IIB Install and BAR Deploy (SOAPAgr)'. Below this, there are fields for 'Created By' (admin) and 'Created On' (1/7/15, 8:18 AM), along with a 'Description' field containing 'Full MO and IIB install and config with a BAR file deployment for a "One push Message Application deployment"'. A secondary navigation bar includes 'Environments', 'History', 'Configuration', 'Components', 'Blueprints', 'Snapshots', 'Processes', 'Calendar', and 'Changes'. A 'Create New Process' button is visible above a table of processes. The table has three columns: 'Process', 'Description', and 'Actions'. The first row, 'BigBang', is highlighted with a red circle. The second row is 'Pause'. At the bottom of the table, it indicates '2 records - Refresh Print' and a pagination control showing '1 / 1'.

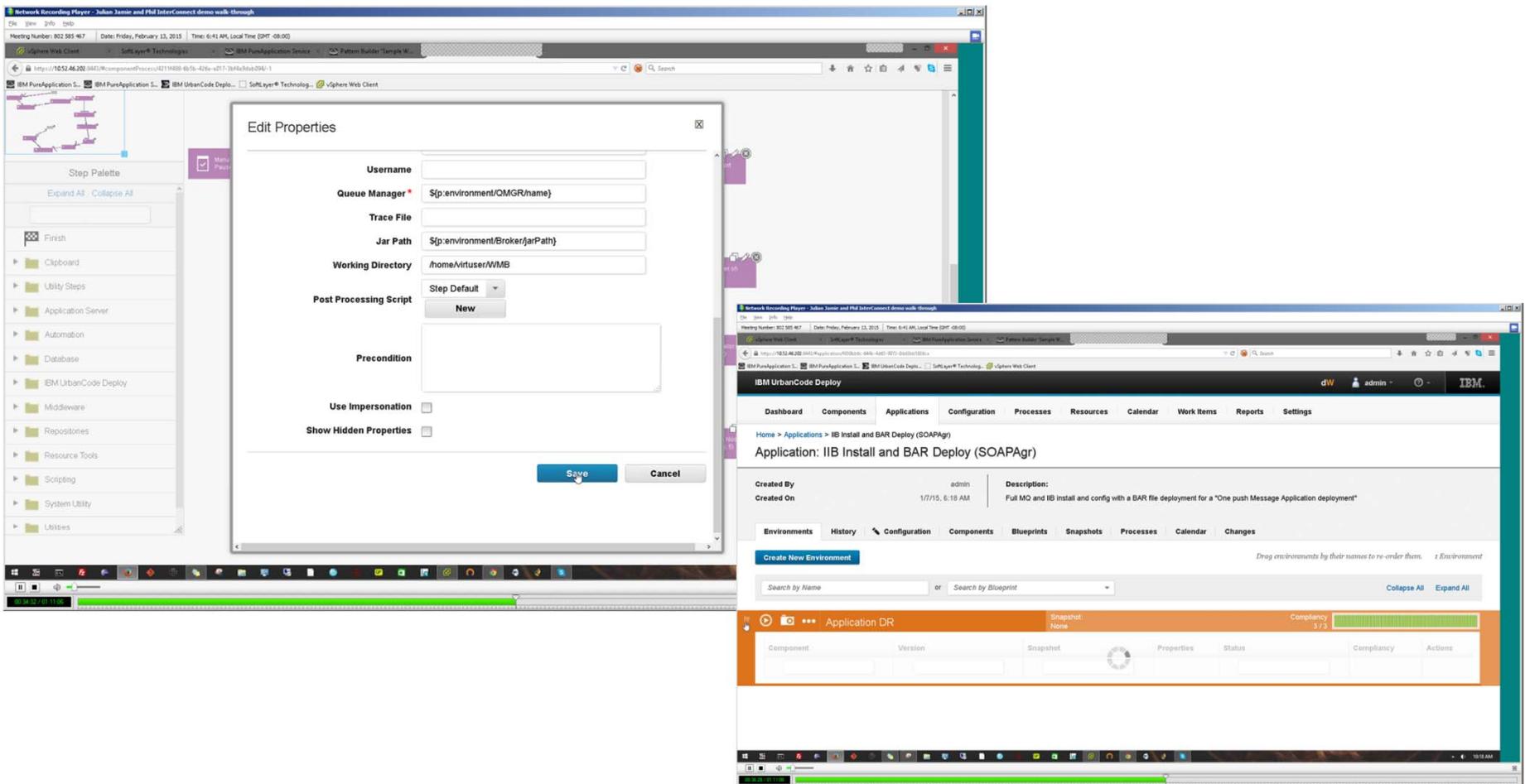
Process	Description	Actions
BigBang		Edit Duplicate Delete
Pause		Edit Duplicate Delete

UrbanCode Deploy process steps

- Process steps



Big Bang IIB Full Deploy or Redeploy in Seven Minutes



UCD Deployment Dashboard

- Now get your standard operating environment for IIB
- Everything gets installed

▼ 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. <input checked="" type="checkbox"/> 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 interface includes a navigation bar with 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 system events with columns for Created and Description.

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 offense names and magnitudes.

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 report names, generation dates, and formats.

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



QRadar DSM Parses the DataPower Logs

WebSphere. DataPower XI52 admin @ dpve Domain: d

Control Panel
Blueprint Console

Search

Configure Log Target

Main Event Filters Object Filters IP Address Filters Event Triggers Event Subscriptions

Log Target: QRadar [up]

Apply Cancel Delete Undo

Export View Log View Status Help

General Configuration

Administrative state enabled disabled

Comments

Target Type *

Logging Priority

Fixed Format on off

syslog Facility *

Rate Limit events/second

Feedback Detection on off

Identical Event Detection on off

Source Configuration

Local IP Address Select Alias *

Local Identifier

Destination Configuration

Remote Host Ping Remote

Remote Port

Connection Management

Connect Timeout seconds

Idle Timeout seconds

Active Timeout seconds

Security

SSL Proxy Profile + ...

Firmware: XI52.7.0.0.0
Build: 247062
IBM WebSphere DataPower
Copyright IBM Corporation 1999-2014
View License Agreement

- 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

WebSphere. DataPower XI52 admin @ dpve

Control Panel
Blueprint Console

Search

Domain Status

Refresh Status

Domain	Needs Save	File Capture	Debug Log	Probe Enabled	Diagnostics	Command	Quiesce State	Interface State
APIMgmt_A1B0D89A27	off	off	off	off	off			Appliance OK
HHG_Demo	off	off	on	off	off			Appliance OK
default	off	off	off	off	off			Appliance OK

View Logs
Main
Configuration
Configuration Checkpoints
Domain Status
System
IP-Network
Other Network

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

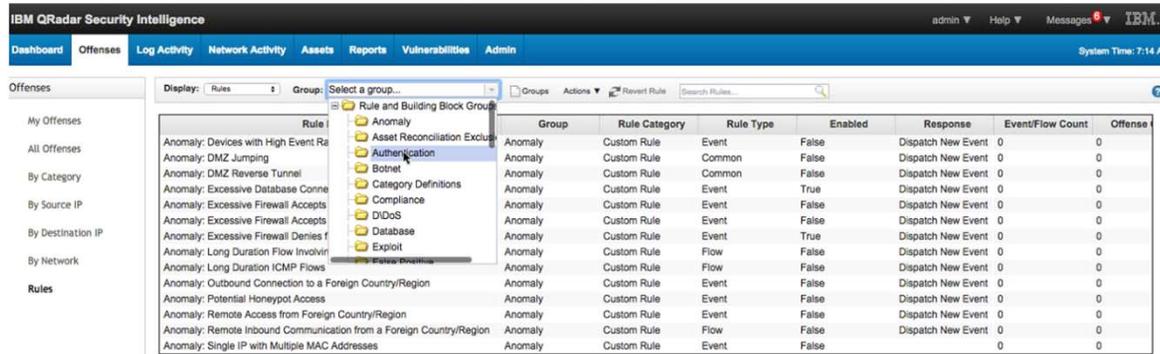
Quick Filter Search

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

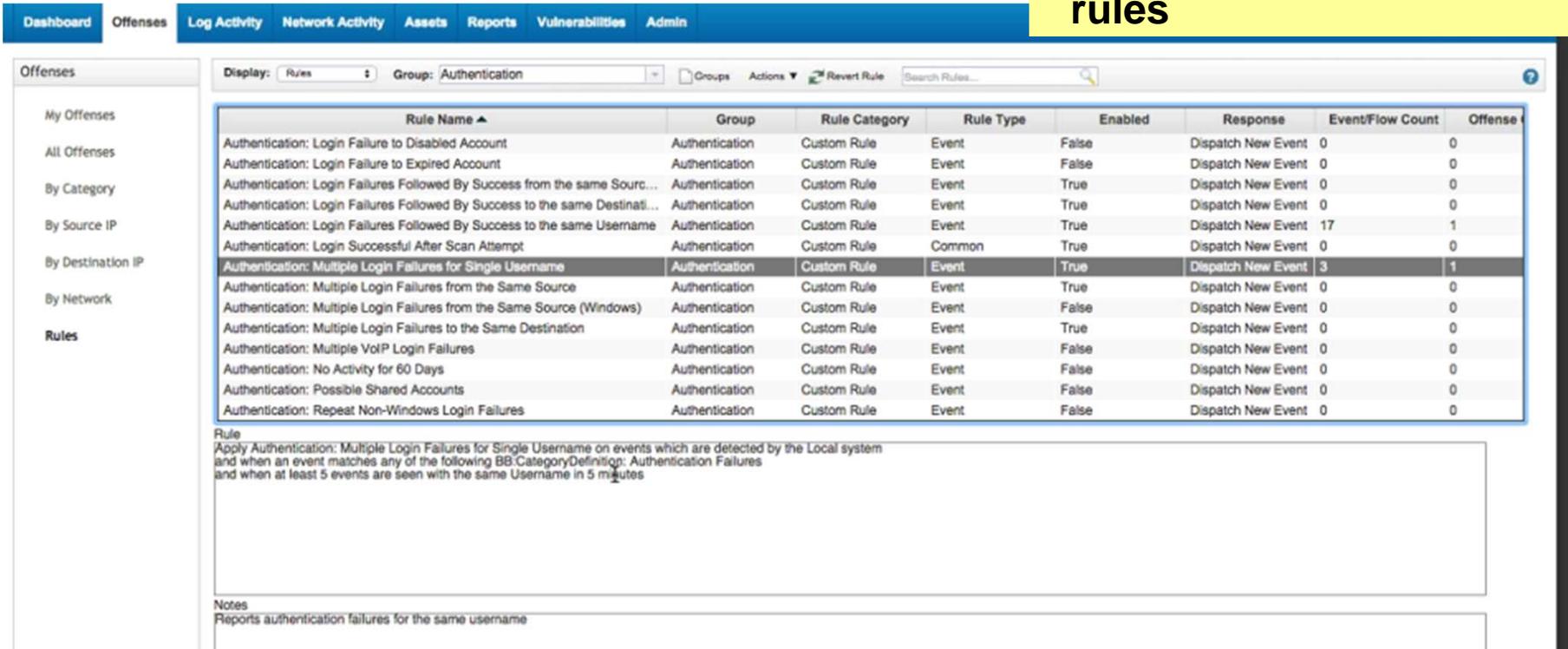
Current Filters:
Source IP is not any of [127.0.0.1 or 10.52.46.204] [\(Clear Filter\)](#)

Event Name	Log Source	Event Count	Time	Low Level Category	Source IP	Source Port	Destination IP	Destinati 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	
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_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



- 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



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 features a red header with the HHG logo and the text 'HHG Developer Network' and 'APIs Are Us'. A navigation menu includes links for Home, Getting Started, API Academy, About HHG, Community, Support, APIs, Applications, Plans, Analytics, API Testing, and My Organization. The main content area is titled 'Welcome to the Haddon Hill Group Developer Network' and contains 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 a link to 'First Echo service now available 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 displaying the HHG Developer Network API Testing page. The browser tabs include 'API Manager', 'API Testing | HHG Devel...', 'Swagger UI', 'IBM Cloud Orchestrator', and 'Hypervisors - IBA'. The address bar shows '10.52.46.201/test'. The page has a red header with the HHG logo and 'HHG Developer Network' text. Below the header is a navigation menu with items like 'Home', 'Getting Started', 'API Academy', 'About HHG', 'Community', 'Support', 'APIs', 'Applications', 'Plans', 'Analytics', 'API Testing', and 'My Organization'. The main content area is titled 'API Testing' and features two dropdown menus: 'Select an application' (set to 'Internal App') and 'Select a method'. The 'Select a method' dropdown is open, showing a list of API 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'. Below the API testing section, there are 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'. Each column has a 'More' link at the bottom.

IBM Cloud Orchestrator Can Manage HHG's Three Clouds

The screenshot displays the IBM Cloud Orchestrator interface. The top navigation bar includes 'Dashboard', 'Self-Service Catalog', 'Request History', 'Assigned Resources', 'Configuration', 'Action Log', 'Patterns', and 'Work'. The main content area is titled 'Virtual System Instances' and shows a table of instances for 'IBM BPM Process Center with Embedded DB2'. The table lists various VMs such as 'Custom_3000', 'Custom_Node', 'Primary_DB2', and 'Process_Center_Omni', all in a 'Running' state with 0% CPU and Memory usage.

On the right side, there is a 'Deploy a cloud service using advanced patterns' section. Below this is a table listing various patterns available for deployment:

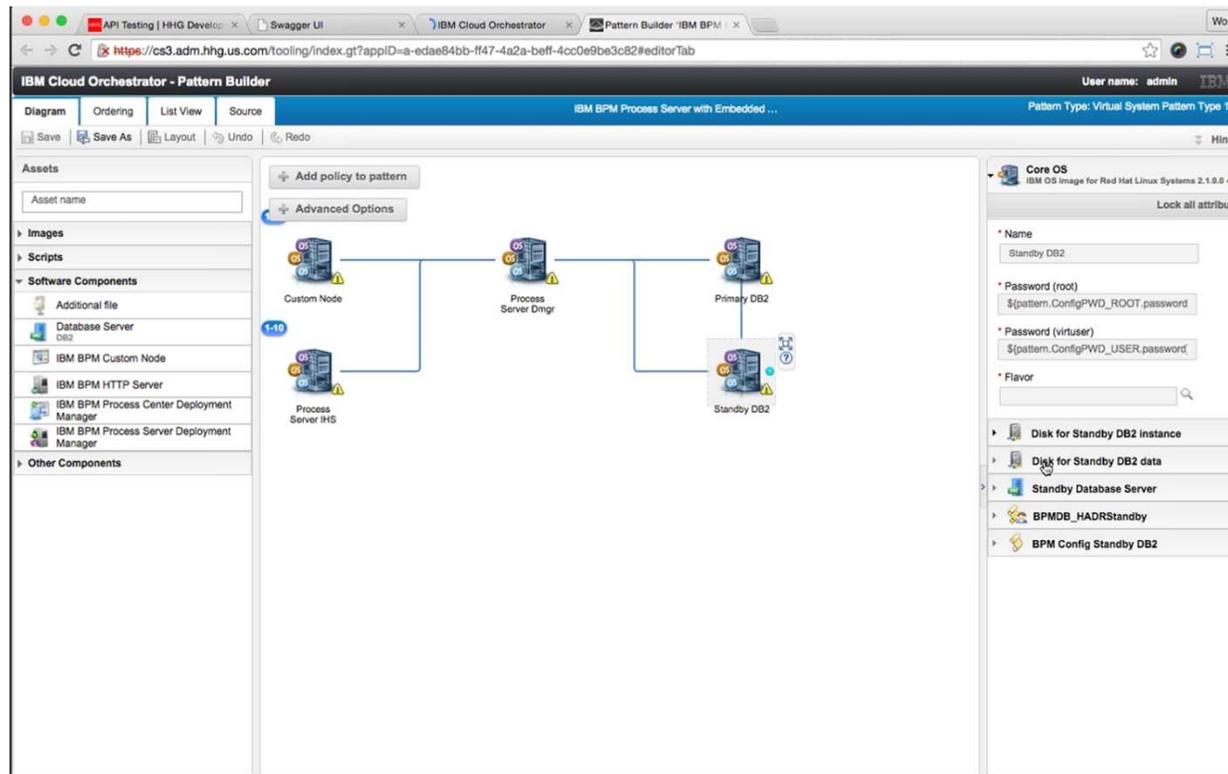
Pattern Name	Description
IBM BPM Process Server for Stray Node Disaster Recovery	Pattern to deploy a Process Server in golden topology with DB2 HADR, HA Deployment Manager and IHS, which provides disaster recovery function by utilizing GPFS and, stray node and database replication.
IBM BPM Process Center 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.

Below the pattern list, there is a 'Request History' section showing 5 new requests today. The bottom part of the interface shows 'Quota Usage of Current Project' with three gauges for VCPU Usage (0%), Volume (GB) Usage (0%), and RAM (MB) Usage (0%). A 'VM Status' section shows 15 total VMs, with 13 Active, 2 Stopped, and 0 Error.

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

The image displays two screenshots of the IBM Cloud Orchestrator Self-Service Catalog interface. The left screenshot shows the main dashboard with an 'Inbox' section indicating '0 new today' and a 'Latest Items' section that is currently empty. A dropdown menu is open at the bottom, showing options: 'RegionVmware_ESXiSL', 'RegionVmware', 'RegionVmware_ESXiSL', 'SL-SanJose', and 'All Regions'. The right screenshot shows a specific service offering page titled 'Deploy a cloud service using advanced patterns'. Below the title is a description: 'This offering allows you to provision a cloud service that uses the advanced version of patterns.' Underneath is a 'Deployment Configuration' section with four fields: 'Instance Name' (Base OS - Red Hat 6.5 x64), 'Environment Profile' (Lab), 'Cloud Group' (RegionVmware_nova), and 'IP Group' (RegionVmware_VM Network). At the bottom of this section are three buttons: 'Back', 'Next', and 'Cancel'. The browser address bar shows the URL: 'https://cs2.adm.hhg.us.com:8443/catalog/submit/39'.

The ICO BPM pattern looks just like PureApp **HHG** Haddon Hill Group



ICO BPM Pattern

The screenshot displays the IBM Cloud Orchestrator - Pattern Builder interface. The main workspace shows a diagram of an IBM BPM Process Center with Embedded IHS topology. The diagram consists of five nodes: Custom Node, Process Center Dmgr, Primary DB2, Standby DB2, and Process Center IHS. The Custom Node and Process Center IHS are connected to the Process Center Dmgr, which is in turn connected to the Primary DB2 and Standby DB2 nodes.

The interface includes a top navigation bar with tabs for Diagram, Ordering, List View, and Source. The current pattern is titled "IBM BPM Process Center with Embedded IHS" and is of type "Virtual System Pattern Type 1.0". The user is logged in as "admin".

On the left, the "Assets" panel lists various components under "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

On the right, the "Pattern" configuration panel shows the following details:

- 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:**
 - 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) interface. At the top, there are tabs for 'Designer', 'Inspector', and 'Optimizer', along with a 'Save' button and a version selector set to 'All versions'. Below this is a 'Process Instances' section with a 'Services in Debug' sub-tab. A table lists process instances, with one instance selected: 'Deploy pattern:318' with status 'Active' and due date 'Feb 28, 2015 12...'. Below the table is a 'Toolkit Settings (Read-Only)' section. The 'Common' tab is active, showing the toolkit name 'SCOrchestrator_Support_vSys_Next_Toolkit' and acronym 'SCOVSYN'. The 'Exposed Items' section lists various actions like 'Change Environment Profile Limits', 'Change Instance End Time', 'Delete Single vSys Pattern Instance', 'Deploy Selected Patterns', 'Deploy Single Pattern', 'Deploy Single vSysNext Pattern', and 'Deploy Virtual System Approval'. The 'Description' field contains text about the toolkit's capabilities for deploying virtual system patterns via IBM Cloud Orchestrator 2.4. On the right side, there are panels for 'Execution State' (showing 'No Process Instance Selected'), 'Breakpoints', 'Variables', and 'Execution Evaluator'.

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

Common

Name: SCOrchestrator_Support_vSys_Next_Toolkit
Acronym: SCOVSYN

Exposed Items

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

Description: 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.

Questions?

