How to integrate Red Hat OpenShift, Ansible and IBM Cloud Paks in your AIX and IBM i Environment

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September 15, 2020

Consistent enterprise automation across Power, Z and x86

Red Hat
Ansible Automation Platform

Key Ansible use cases

| Provisioning | Configuration Management | Application Deployment | Continuous Delivery | Orchestration | Security Automation |

Consistency

- Consistent enterprise automation strategy across
  - z/OS, AIX, IBM i, Linux and Windows environments
 - Hybrid applications and infrastructure management

Transparency

- Complete visibility of z/OS, AIX, IBM i and Linux automation
- Drive best practices to manage automation and move towards infrastructure as code
- Contribute to breaking down cultural walls

Skills

- Leverage readily available Ansible and Python skills to automate z/OS, AIX, IBM i and Linux environments

Ansible Architecture
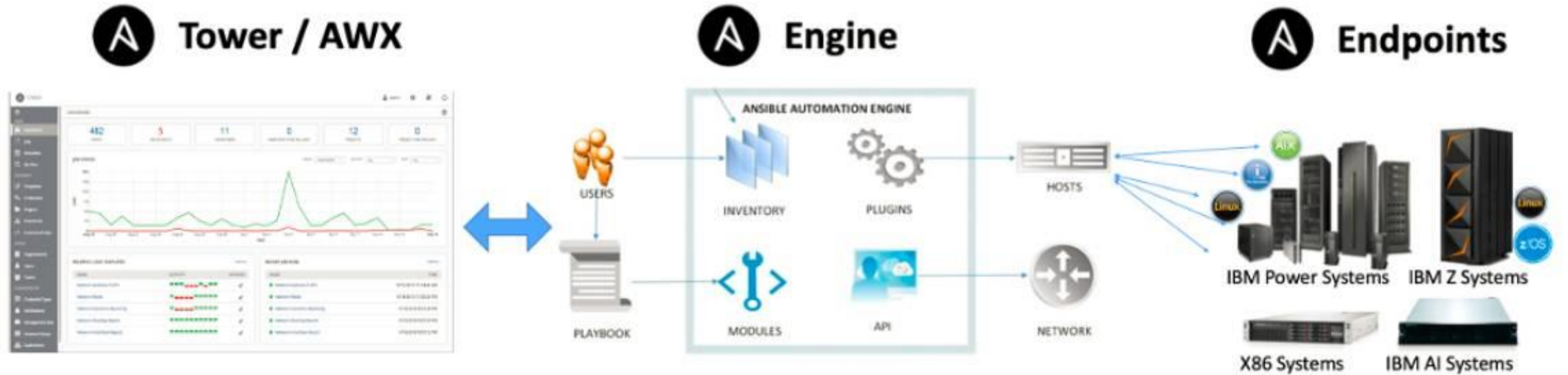
Ansible Tower / AWX
- Provides enterprise-wide dashboard showing Ansible estate

runs on Linux

Ansible Engine
- API layer provides enterprise-wide control – i.e., runs playbooks

runs on Linux

Ansible Endpoints
- Enterprise-wide automation; Ansible modules executed here

ibm.github.io/ansible-power-aix/

☰ IBM Power Systems AIX

Search docs

GETTING STARTED

Installation

Quickstart

REFERENCES

Modules

Playbooks

Roles

COMMUNITY GUIDES

Contributing

Helpful Links

REQUIREMENTS

Requirements

🏠 » IBM Power Systems AIX Collection for Ansible

○ Edit on GitHub

IBM Power Systems AIX Collection for Ansible

The **IBM Power Systems AIX collection** provides modules that can be used to manage configurations and deployments of Power AIX systems. The collection content helps to include workloads on Power platforms as part of an enterprise automation strategy through the Ansible ecosystem.

Ansible Content for IBM Power Systems

IBM Power Systems is a family of enterprise servers that helps transform your organization by delivering industry leading resilience, scalability and accelerated performance for the most sensitive, mission critical workloads and next-generation AI and edge solutions. The Power platform also leverages open source technologies that enable you to run these workloads in a hybrid cloud environment with consistent tools, processes and skills.

IBM Power Systems AIX collection, as part of the broader offering of **Ansible Content for IBM Power Systems**, is available from Ansible Galaxy and has community support.

Build, Deploy, Manage **Cloud Native Apps** that Can Run Anywhere

Self Service Portal

Service Catalog
Language runtimes, databases, m/w …

Build Automation

Deployment Automation

Application Lifecycle Mgt

RED HAT® OPENSHIFT

IBM AAS Product #5639-OCP

OpenShift 4.5
Try it now

Kubernetes
Container Orchestration

CoreOS /
Red Hat Enterprise Linux

Container Runtime

babylon
Everyone's personal health service.

Personalized, Engaging

FREE
25%
ADMIT ONE
SALE

Starbucks now
Hi Phil! You are near Starbucks
Oxford st. Currently 50% off on your
favorite drink: Vanilla Latte!
slide to open

Location Aware

Physical   Virtual   Private   Public

Red Hat OpenShift On Power – Platform Support

Platforms and Infrastructure

Red Hat OpenShift Container Platform is fully supported running on Red Hat Enterprise Linux as well as Red Hat Enterprise Linux CoreOS. Version information for each OCP minor version will be shared below, or as part of the product release notes.

Operating Systems	4.3	4.4	4.5
Control Plane			
Red Hat Enterprise Linux CoreOS	4.3	4.4	4.5
Compute Nodes			
Red Hat Enterprise Linux CoreOS	4.3	4.4	4.5
Red Hat Enterprise Linux 7	Not Tested	Not Tested	Not Tested
Red Hat Enterprise Linux 8	Not Tested	Not Tested	Not Tested

Tested Platforms

Infrastructure as a Service (IaaS)[2]	4.3		4.4		4.5	
	UPI	IPI	UPI	IPI	UPI	IPI
Power 8	Tested	Not Tested	Tested	Not Tested	Tested	Not Tested
Power 9	Tested	Not Tested	Tested	Not Tested	Tested	Not Tested

https://access.redhat.com/articles/5025441

Red Hat OpenShift On Power - Processor

Maximum logical CPUs

Red Hat defines a logical CPU as any schedulable entity. So every core/thread in a multicore/thread processor is a logical CPU.

Architecture	RHEL 3	RHEL 4	RHEL 5	RHEL 6	RHEL 7	RHEL 8
x86	16	32	32	32	N/A[3]	N/A[3]
Itanium 2	8	256 [512]	256 [1024]	N/A[3]	N/A[3]	N/A[3]
x86_64	8	64 [64]	160 [255]	448 [4096][13]	768 [5120][14]	768 [8192]
POWER	8	64 [128]	128	128	768 [2048][16]	768 [2048]
System z	64 (z900)	64 (z10 EC)	64 (z13)	64 (z13)	256 (z13)	340 (z14)
ARM	N/A	N/A	N/A	N/A	N/A	256

https://access.redhat.com/articles/rhel-limits

IBM | Red Hat

Red Hat OpenShift On Power - Memory

Maximum memory

The architectural limits are based on the capabilities of the Red Hat Enterprise Linux kernel and the physical hardware. Red Hat Enterprise Linux 6 limit is based on 46-bit physical memory addressing. Red Hat Enterprise Linux 5 limit is based on 40-bit physical memory addressing. All system memory should be balanced across NUMA nodes in a NUMA-capable system.
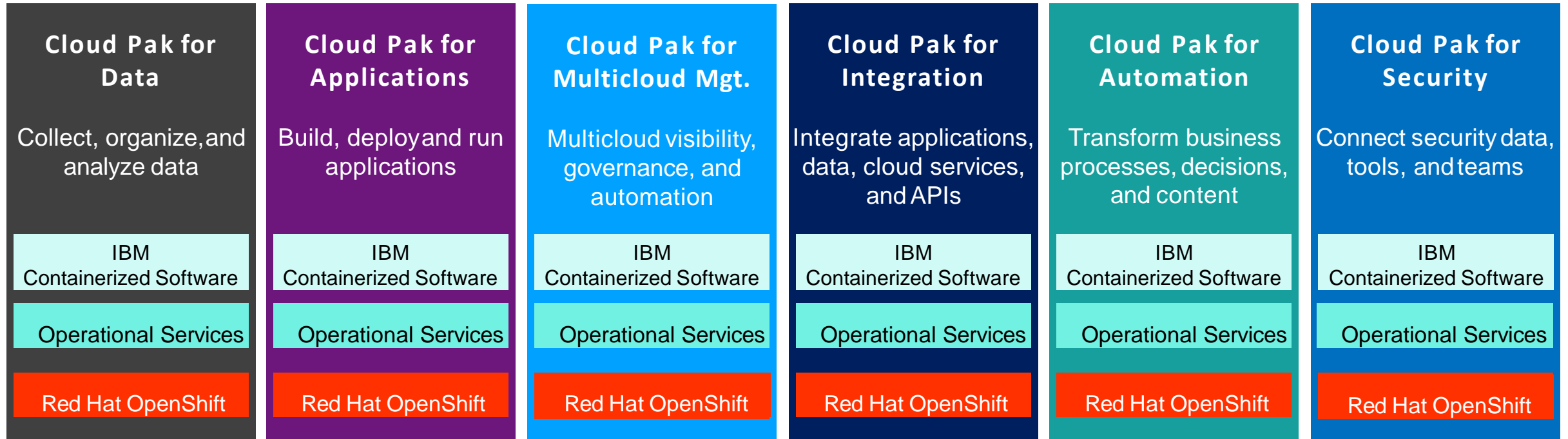
Architecture	RHEL 3	RHEL 4	RHEL 5	RHEL 6	RHEL 7	RHEL 8
x86	64GB[1]	64GB[1]	16GB[2]	16GB[2]	N/A[3]	N/A[3]
Itanium 2	128GB	2TB	2TB	N/A[3]	N/A[3]	N/A[3]
x86_64	128GB	256GB [1TB]	1TB	12TB [64TB][11]	12TB [64TB][12]	24TB [64TB]
POWER	64GB	128GB [1TB]	512GB [1TB]	2TB	32TB[17]	32TB [128TB]
System z	256GB (z900)	1.5TB (z10 EC)	4TB (z13)	4TB (z13)	10TB (z13)	16TB (z14)
ARM	N/A	N/A	N/A	N/A	N/A	1.5TB [256TB]
Maximum x86 per-process virtual address space	Approx. 4GB	Approx. 4GB	Approx. 3GB[2]	Approx. 3GB[2]	N/A[3]	N/A[3]
Maximum x86_64 per-process virtual address space		512GB	2TB	128TB	128TB	128TB
Maximum POWER per-process virtual address space						4PB[19]

https://access.redhat.com/articles/rhel-limits

Red Hat OpenShift On Power

Cloud Paks and Red Hat OpenShift on Power Systems

Cloud Pak for Data	Cloud Pak for Applications	Cloud Pak for Multicloud Mgt.	Cloud Pak for Integration	Cloud Pak for Automation	Cloud Pak for Security
Collect, organize, and analyze data	Build, deploy and run applications	Multicloud visibility, governance, and automation	Integrate applications, data, cloud services, and APIs	Transform business processes, decisions, and content	Connect security data, tools, and teams
IBM Containerized Software	IBM Containerized Software	IBM Containerized Software	IBM Containerized Software	IBM Containerized Software	IBM Containerized Software
Operational Services	Operational Services	Operational Services	Operational Services	Operational Services	Operational Services
Red Hat OpenShift	Red Hat OpenShift	Red Hat OpenShift	Red Hat OpenShift	Red Hat OpenShift	Red Hat OpenShift

Runs on choice of IBM Power Systems Infrastructure-as-a-Service (IaaS)

PowerVC
PowerVM

Linux · AIX · i for Business

KVM *(dev only)*

Red Hat Enterprise Linux

Bare-metal

Red Hat Enterprise Linux CoreOS

Helps you modernize and build containerized software faster!

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