Red Hat Summit

Connect

Ansible Automation Platform Deployment-Strategien im Vergleich

RPM, Container, Operators

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What we'll discuss today

- Introduction to the deployment strategies
- Components in AAP2.5+
- Tested deployment strategies
- Topology comparison
- A quick comparison
- Recommended courses
- Q & A

Introduction to the deployment strategies

Ansible Automation Platform Deployments

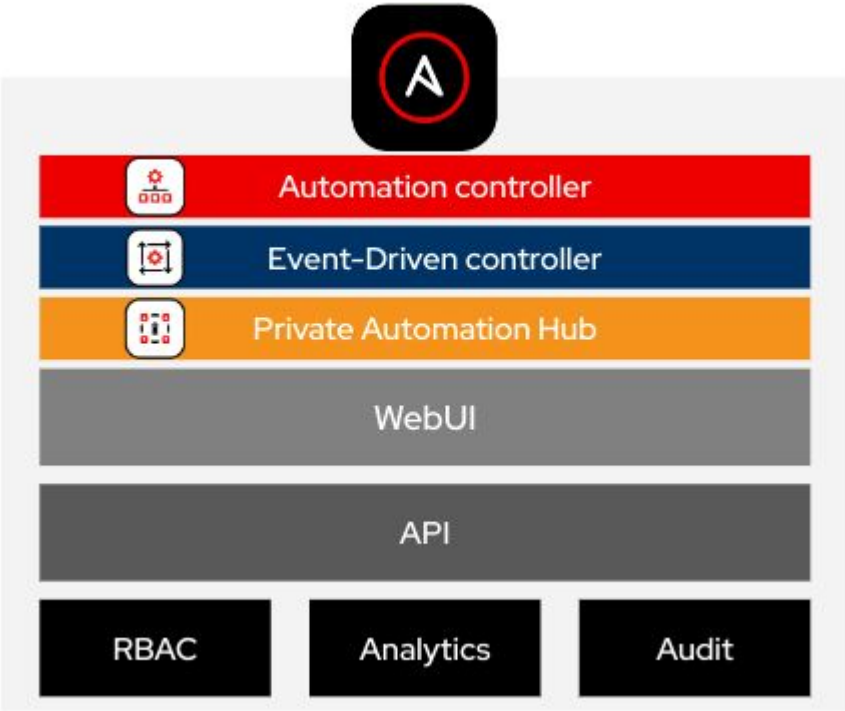
Possible deployment strategies for AAP

- Red Hat Ansible Automation Platform on Microsoft Azure
- Red Hat Ansible Automation Platform on Microsoft Azure Red Hat OpenShift®
- Red Hat Ansible Automation Platform on AWS Cloud
- Red Hat Ansible Automation Platform available on Google Cloud
- **Red Hat Ansible Automation Platform via Red Hat Enterprise Linux**
- **Containerized Red Hat Ansible Automation Platform**
- **Red Hat Ansible Automation Platform on OpenShift**

Components of Ansible Automation Platform 2.5+

Introducing Unified UI

- Centralized control
- WebUI and API
- Role-based access control
- Centralized logging
- Credential management
- Ansible analytics integration



Tested deployment strategies

Topologies

Growth Topology:

Best suited for small to medium-sized setups that can scale over time.

Enterprise Topology:

Ideal for large enterprises requiring robust, scalable automation with high availability.

Containerized Ansible Automation Platform

The containerized installer deploys Ansible Automation Platform on Red Hat Enterprise Linux by using using Podman which runs the platform in containers on host machines.

Two Main (opinionated/tested) **Topologies:**

- Container Growth Topology
- Container Enterprise Topology

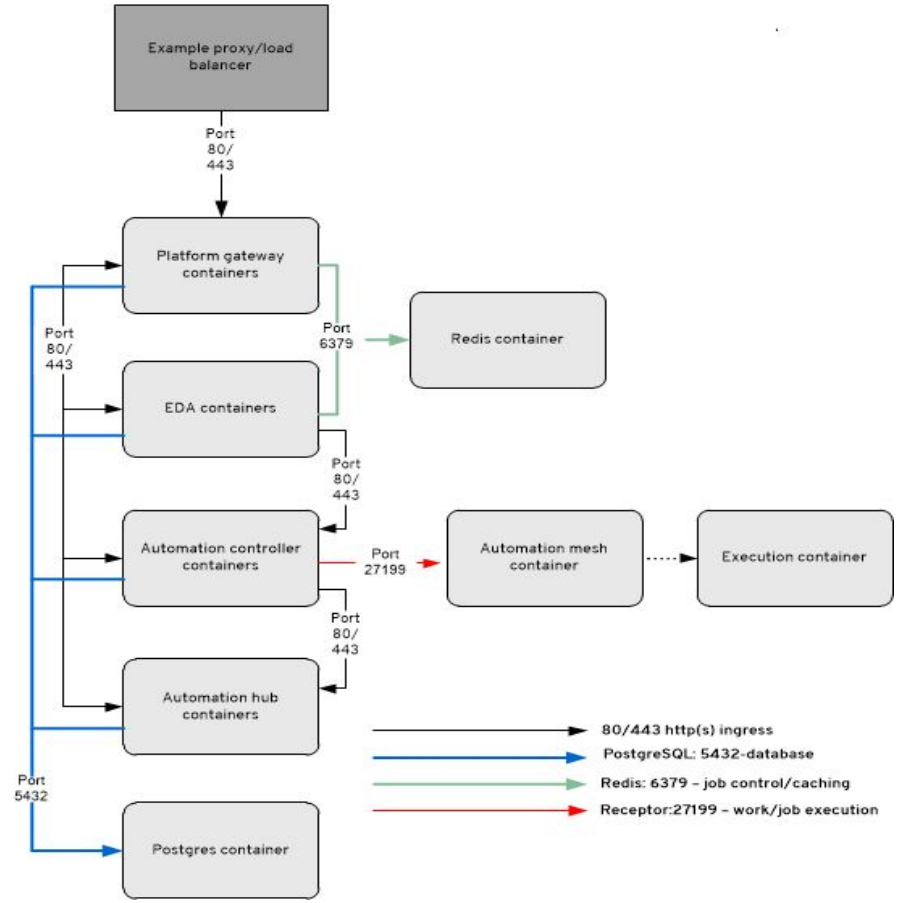
Container Growth Topology

Infrastructure:

- Intended for organizations that are getting started with Ansible Automation Platform.
- All-in-one deployment
- Not ideal for scaling or adding mesh.
- Suitable for small test environments.

Key Characteristics:

- Easy to deploy and manage
- Protected from the underlying OS changes.



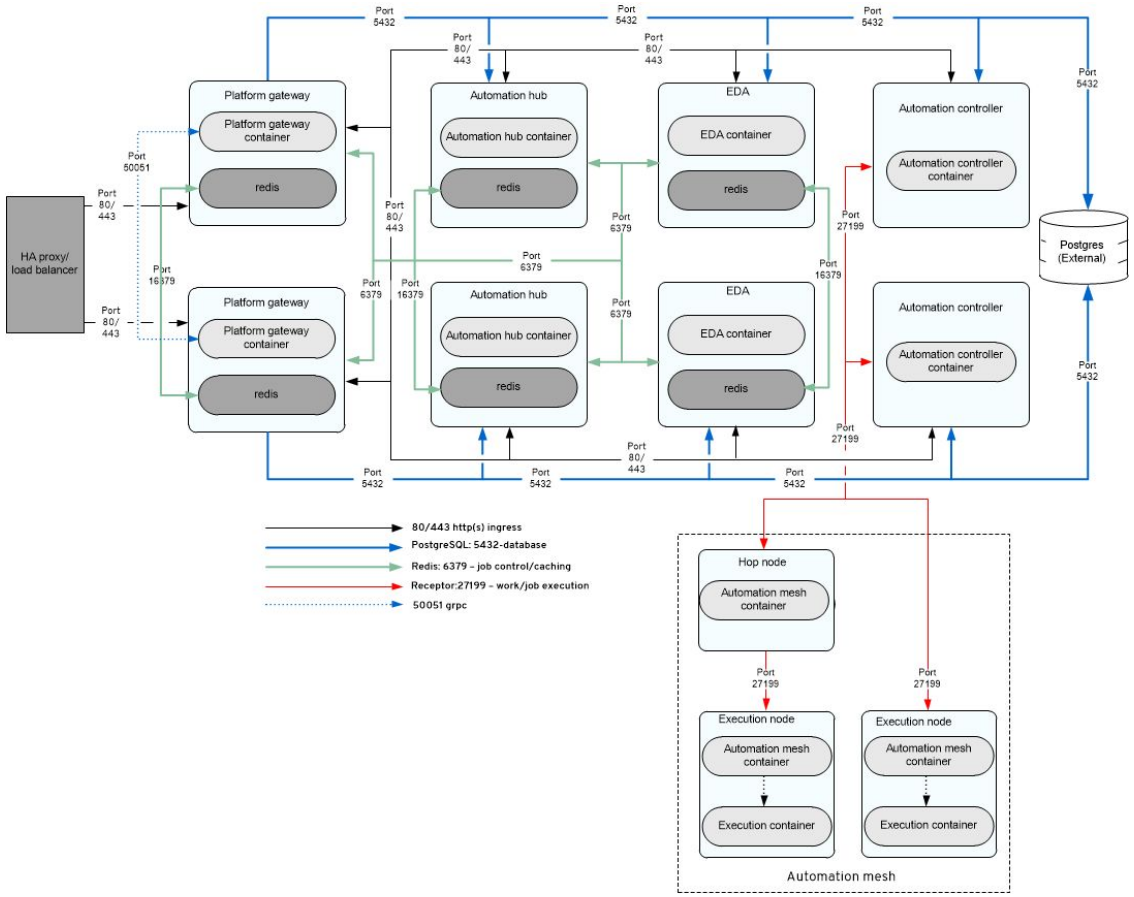
Container Enterprise Topology

Infrastructure:

- Intended for deployment with redundancy or higher compute for large volumes of automation
- Lightweight deployment, smaller footprints
- Suitable for scaling or adding mesh.
- Suitable for HA environments.

Key Characteristics:

- Protected from the underlying OS changes and system dependencies.
- Isolated from other applications and are more secured.
- Simplified upgrades

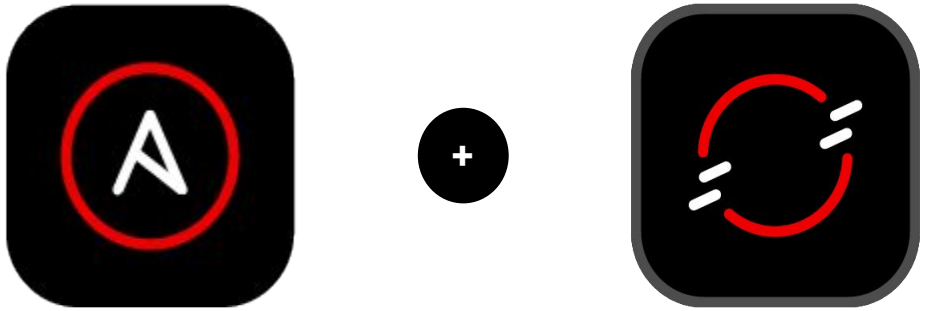


Ansible Automation Platform Operator

Red Hat tests Ansible Automation Platform 2.5+ with a defined set of operator deployment topologies to give you opinionated options.

Two Main (opinionated/tested) **Topologies:**

- Operator Growth Topology
- Operator Enterprise Topology



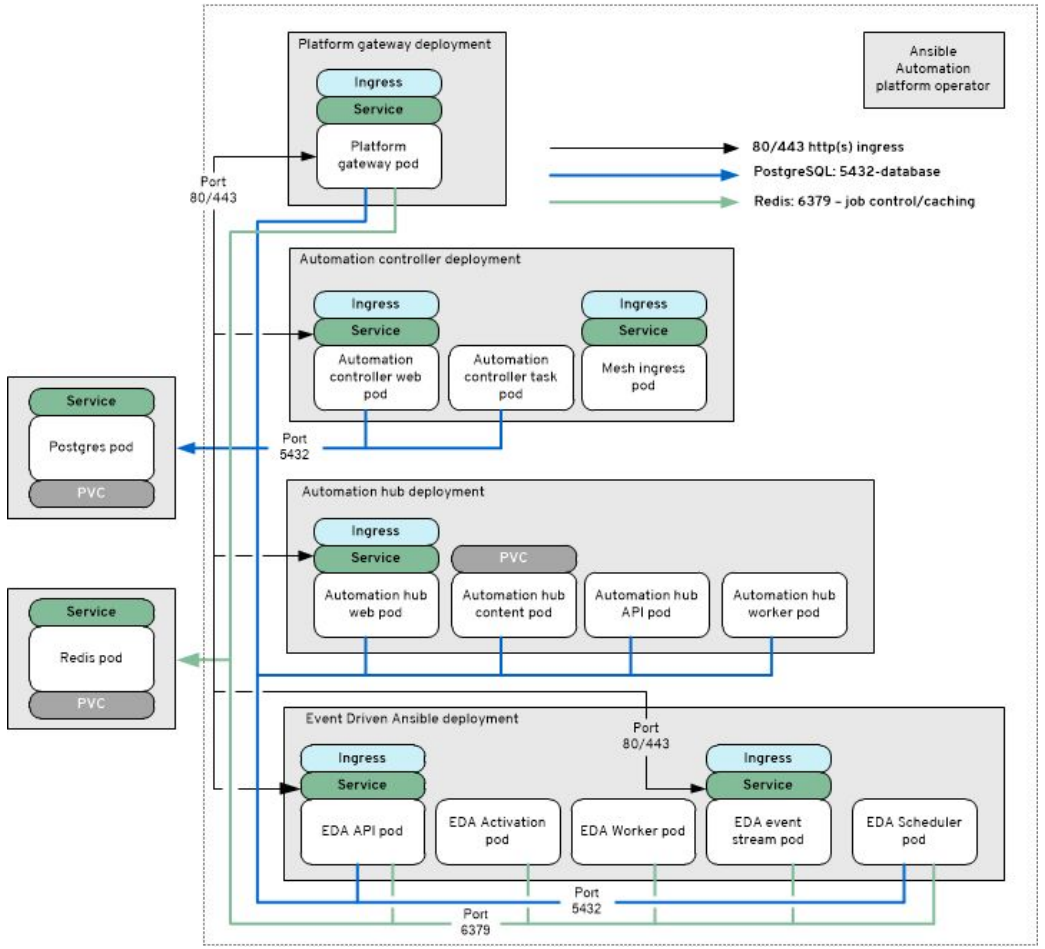
Operator Growth Topology

Infrastructure:

- Suitable for smaller environments with limited resources.
- Components are deployed in a minimal configuration, sharing resources where possible.
- Focuses on horizontal scaling as needs grow.

Key Characteristics:

- Limited redundancy.
- Lower upfront resource requirements (fewer nodes, shared components).



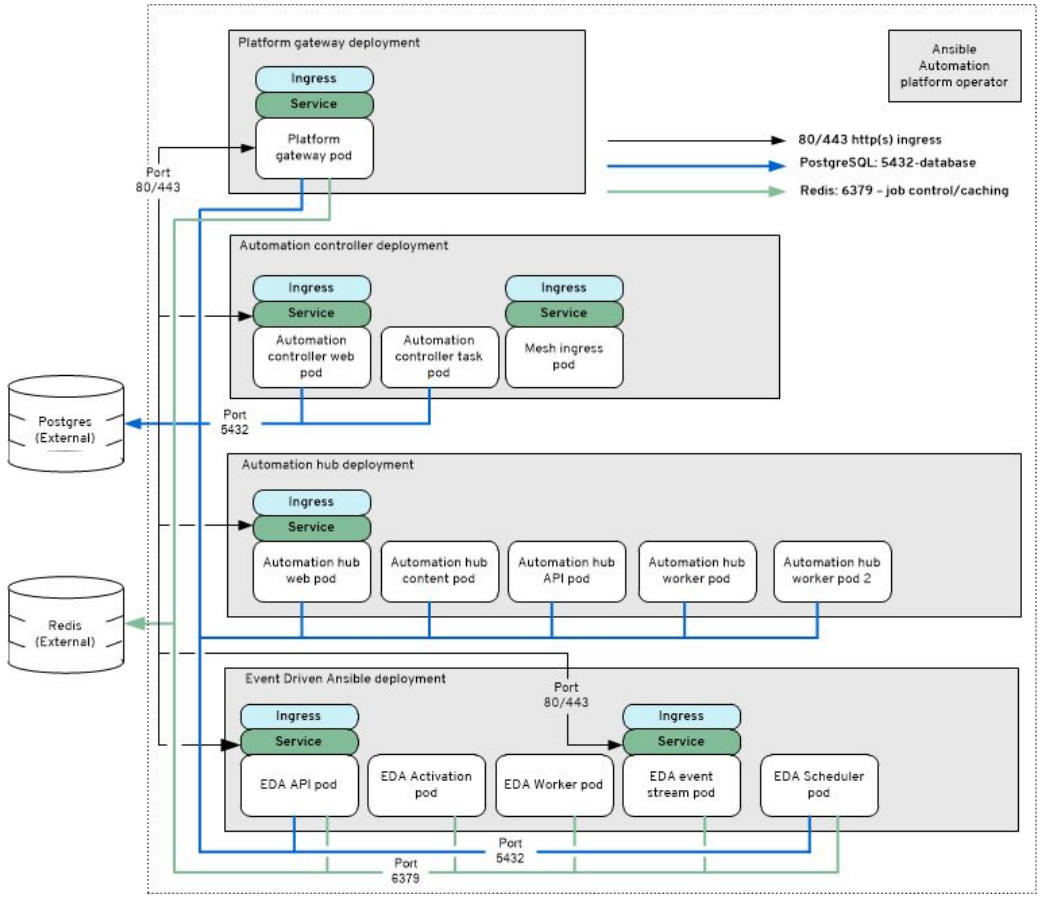
Operator Enterprise Topology

Infrastructure:

- Designed for large-scale, high-availability deployments.
- Multiple instances for each component: Automation Hub, Controller, etc.
- Redundancy is built-in, with multiple instances per component.

Key Characteristics:

- High availability and fault tolerance.
- Optimized for enterprise environments with strict SLAs.



Topologies Comparison

Growth Topology:

Pros: Low cost, easy scaling.
Cons: Limited fault tolerance, not suitable for high availability.
Best Fit: Best suited for small to medium-sized setups that can scale over time.

Enterprise Topology:

Pros: High fault tolerance, enterprise-grade.
Cons: Potentially higher cost, more complex setup.
Best Fit: Ideal for large enterprises requiring robust, scalable automation with high availability.

Ansible Automation Platform Environments

Deployment strategies we discussed today. A quick comparison..

RPM based AAP

- Traditional deployment
- At least 5 virtual machines for all components
- **Marked as deprecated and will be removed in AAP 2.7!!**

Containerized AAP

- Smaller footprint
- As small as one virtual machine for all components
- Podman based containers to replace RPM installation
- Runs as rootless containers for maximum out-of-the-box security
- Installer variables may differ from RPM installation
- Uninstall capability
- README.md file

AAP operator

- Easiest installation using UI
- OpenShift Container Platform 4.12+
- Namespace or cluster scoped
- Additional cost and skills needed
- Easy to upgrade using operator but involves downtime
- Add execution node without downtime

AAP 2.6 supported upgrade and migration paths

TL;DR:

- **An Upgrade** = Same OS and same install method
- **A Migration** = Different OS and/or different install method

When upgrading from RHEL 8 to RHEL 9/10, an operating system migration is required prior to or alongside any AAP upgrade or platform migration. This applies to all RPM and containerized installations not already on RHEL 9 or RHEL 10. OpenShift-based deployments are unaffected by RHEL versioning at the host level.

Tech Preview migration documentation is now available.

✅ AAP 2.x to 2.6 – Supported Upgrade & Migration Paths

From AAP Version	If on…	You can…	To…
2.4	RPM (RHEL 9)	⬆️ Upgrade	2.6 RPM
2.4	RPM (RHEL 9)	↗️ Migrate & Upgrade	2.6 Containerized / OCP
2.4	OpenShift Operator	⬆️ Upgrade	2.6 OpenShift Operator
2.5	RPM (RHEL 9)	⬆️ Upgrade	2.6 RPM
2.5	RPM (RHEL 9)	↗️ Migrate & Upgrade	2.6 Containerized / OCP
2.5	Containerized	⬆️ Upgrade	2.6 Containerized
2.5	Containerized	↗️ Migrate & Upgrade	2.6 OpenShift Operator
2.5	OpenShift Operator	⬆️ Upgrade	2.6 OpenShift Operator
2.6	RPM or Containerized	➡️ Migrate (same version)	2.6 Containerized / OCP

Recommended Courses

Learn AAP, Containers with Podman, and OpenShift Cluster

DO374 - Developing Advanced Automation with Red Hat Ansible Automation Platform

DO467 - Managing Enterprise Automation with Red Hat Ansible Automation Platform

DO188 - Red Hat OpenShift Development I: Introduction to Containers with Podman

DO180 - Red Hat OpenShift Administration I: Operating a Production Cluster

DO280 - Red Hat OpenShift Administration II: Configuring a Production Cluster

Questions?

Jetzt Session bewerten!

Einfach QR-Code scannen, Session aus der Liste wählen und bewerten. **Vielen Dank!**

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