

SOLUTION NOTE

SCALE AUTOMATION ACROSS HYBRID, MULTI-CLOUD ENVIRONMENTS WITH INFOBLOX AND RED HAT ANSIBLE

SUMMARY

Modern organizations depend on automation to accelerate application delivery and maintain consistent operations across hybrid, multi-cloud environments.

As organizations adopt hybrid, multi-cloud and cloud-first strategies, manual processes can no longer keep pace with the scale, speed and complexity of modern infrastructure, making automation a critical enabler for digital transformation. Infoblox DDI (DNS, DHCP and IP address management) platform, combined with Red Hat Ansible Automation Platform (AAP), delivers a unified automation solution that eliminates manual, ticket-driven workflows. Authoritative DDI data from Infoblox enables Ansible playbooks to automatically allocate IP addresses, provision DNS records and maintain real-time network state throughout the infrastructure lifecycle. This joint solution improves agility, reduces errors and provides secure, standardized automation at scale.

CHALLENGES

Hybrid, multi-cloud architectures introduce new complexity in how organizations deploy and manage critical network services. While Red Hat AAP accelerates orchestration and configuration workflows, many network services, such as DNS, DHCP and IP address allocations, remain manually managed. These manual processes slow application delivery, create IP conflicts and limit the scalability of automation across teams because of the following challenges:

- **Inefficient IP Allocations Cause Outages:** Manual assignment of IP addresses across on-premises and cloud environments leads to conflicts, overlapping ranges and avoidable outages.
- **Disconnected Systems Delay Provisioning:** Fragmented management tools and the absence of a unified automation layer across hybrid, multi-cloud networks slow application provisioning and make it difficult to scale automation effectively.
- **Siloed Teams Hinder Efficiency:** NetOps, CloudOps and DevOps rely on separate workflows and ticket-based processes, reducing operational efficiency and limiting the agility required for modern deployments.

KEY CAPABILITIES

Improve Agility

Automating the provisioning of DNS and IP addresses reduces the time to deploy applications.

Reduce Errors

Automation eliminates the risk of IP conflicts and other errors associated with manual IP address management (IPAM) and DNS management.

Ensure Reliability

Keeping IPAM and DNS records up to date across hybrid, multi-cloud networks enhances the reliability and accuracy of critical network services.

Lower Operational Costs

Leveraging existing skills and scaling automation improves operational efficiency, optimizes resource allocation and lowers costs.



INFOBLOX AND RED HAT ANSIBLE JOINT SOLUTION

Red Hat AAP provides a powerful, enterprise-ready framework for orchestrating, provisioning and managing IT infrastructure across hybrid, multi-cloud environments. It standardizes automation across teams, enabling consistent workflows and eliminating repetitive, error-prone tasks. Infoblox complements the AAP platform with the industry's most comprehensive DNS, DHCP and IPAM (collectively known as DDI) solution.

The certified Ansible Collections for Infoblox Universal DDI™ and Infoblox NIOS DDI automate provisioning of critical network services, strengthen governance and enhance collaboration across NetOps, CloudOps and DevOps teams. These integrations fit seamlessly into broader automation strategies—including continuous integration (CI)/continuous delivery (CD) pipelines and infrastructure-as-code workflows—ensuring consistent, repeatable processes across hybrid, multi-cloud environments.

Together, Infoblox and Red Hat AAP provide network-aware automation that accelerates enterprise agility and scales automation. As illustrated in Figure 1, the joint solution reduces the time to provision new applications and infrastructure, often from days down to minutes, by automatically retrieving the next available IP address and creating the necessary DNS records from Infoblox's authoritative database. By enforcing automated provisioning via Ansible, organizations can effectively eliminate human errors and IP conflicts, leading to significantly improved network reliability and lower operational costs.

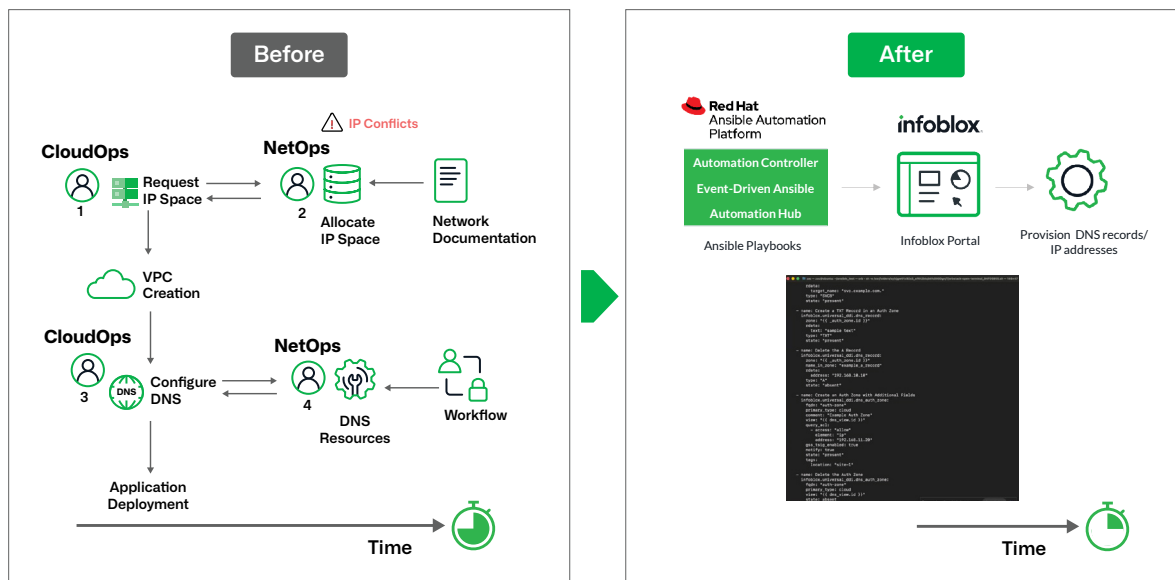


Figure 1: Example before-and-after scenario without and with Infoblox and Ansible integration

USE CASE: AUTOMATE IP ADDRESS ALLOCATION

Hybrid, multi-cloud environments lack centralized visibility into IP address usage, forcing teams to manually track allocations across disconnected tools and spreadsheets. This results in IP conflicts, inefficient use of network resources and delays that impact application deployment.

With Ansible Collections for Infoblox DDI, IP address allocation becomes fully automated. Ansible playbooks request the next available IP directly from the Infoblox platform, ensuring each address is accurately provisioned, tracked and released throughout the lifecycle of the resource. This automated, authoritative workflow prevents IP conflicts and improves governance and compliance across hybrid, multi-cloud environments.

USE CASE: AUTOMATE DNS PROVISIONING

Manual DNS management across disparate systems, different APIs or multiple interfaces cannot keep pace with rapid provisioning across on-premises and cloud environments. This results in delays to application provisioning.

Infoblox provides unified DDI management, and through the certified Ansible Collections, DNS records are automatically created, updated and removed as part of the Ansible playbooks used to provision infrastructure. This eliminates manual processes and maintains consistent availability across environments.

USE CASE: ACCELERATE WORKFLOWS EFFICIENCY

NetOps, CloudOps and DevOps teams rely on separate tools and ticket-based processes, creating handoff delays and operational friction. These silos slow down service delivery and complicate troubleshooting.

Infoblox and Ansible provide a shared automation framework that enables teams to consume the same network-aware playbooks and authoritative DDI data. This eliminates bottlenecks, reduces rework and ensures efficient, predictable delivery of network services as part of application provisioning workflows.

GETTING STARTED

Organizations can use the certified Infoblox Ansible Collections to automate the provisioning of DDI services across hybrid, multi-cloud environments. These out-of-the-box integrations eliminate manual ticket-based workflows, reduce configuration errors and ensure consistent, reliable updates as infrastructure is deployed or modified.

The certified Ansible Collections are available for both the [Infoblox Universal DDI™ Product Suite](#) and [Infoblox NIOS DDI platform](#) in the Red Hat Automation Hub. Explore the automation integrations to accelerate agility, strengthen governance and scale automation in hybrid, multi-cloud environments:

- **Infoblox Universal DDI Ansible Collection**
- **Infoblox NIOS DDI Ansible Collection**



Infoblox unites networking, security and cloud with a protective DDI platform that delivers enterprise resilience and agility. We integrate across hybrid and multi-cloud environments, automate critical network services and preemptively secure the business—providing the visibility and context needed to move fast without compromise.

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