

Infoblox DDI for cloud and virtualization

THE AUTOMATION GAP: A BARRIER TO REALIZING THE POTENTIAL OF VIRTUALIZATION AND HYBRID CLOUD DEPLOYMENTS

Enterprise IT departments are always striving to deliver higher-quality, agile services to their business stakeholders—at the lowest possible cost. IT organizations have migrated from purely traditional physical data centers to highly virtualized data centers. In recent years, these IT organizations are moving to private or public clouds because cloud technologies provide enhanced IT agility and flexibility. IT leader surveys indicate that cloud adoption trends will continue to accelerate in the months and years to come because of the business benefits— mainly faster time to market for new services.

While private and public clouds provide powerful capabilities, there are still gaps that prevent IT organizations from truly realizing the promise of cloud technologies. Automation at the network layer is one of those gaps. Unlike automation at the server and storage layers, the deployment and configuration of critical network resources continues to be mostly manual. This hampers agility, increases the roll-out time for applications, and increases the human resources needed to manage the cloud environment. So, while servers and storage can be configured and provisioned in minutes, network setup tasks can take hours or days.

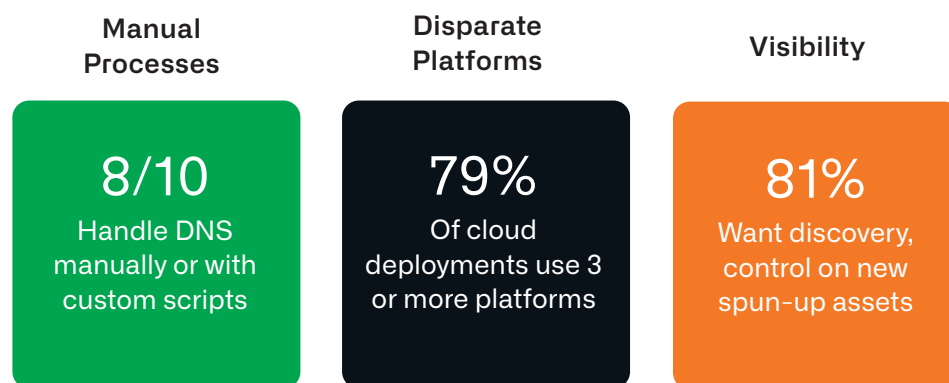


Figure 1: Study conducted by ReRez Research on behalf of Infoblox

KEY FEATURES

- Reliability**
 Cloud Platform Appliances continue functioning even with loss of connectivity to the Infoblox Grid Master thereby increasing reliability.
- Scalability**
 Infoblox Flex-Scale architecture enables Cloud Platform Appliances to be provisioned per cloud per data center for expandability, and multiple appliances in a single data center can share API workload for increased scale.
- Visibility for Easy Auditing and Compliance**
 New dashboard widgets and new reports provide real-time information about cloud elements and new reports.
- Lower Administrative Overhead**
 The Cloud Network Automation GUI allows administrators to view and administer cloud tenants, networks, VMs, IP addresses, VPCs and DNS via a single interface; and automation of networking tasks significantly reduces labor.

COMMON NETWORKING CHALLENGES IN CLOUD ENVIRONMENTS

- Network configuration for virtual machines (VMs) is time consuming and slows down rollout:**
 It takes administrators hours or sometimes days to provision networks and IP addresses for VMs, instances, VPCs, and workloads, making it difficult to provide self-service style cloud services at a fast pace. Manual reclamation is cumbersome and error prone, leading to a sprawl of unused IP addresses and DNS records.
- Solutions lack visibility and auditing capability for IP addresses and DNS records for VMs:**
 IT needs to know which IP addresses and DNS records were assigned to which resources at any point in time for security and auditing purposes.
- IT teams lack consistent and centralized IP address and DNS management:**
 Without centralized management across the IT infrastructure (multiple data centers, physical, virtual and cloud), VM and network management gets more time consuming and expensive and can lead to configuration errors.
- Cloud orchestration platforms for native DDI services are incomplete and unreliable:**
 Existing orchestration solutions provide only rudimentary cloud network automation capabilities. They most often lack high availability, have no central view of DHCP lease information across multiple DHCP server instances, and provide very limited DNS and IPAM capability.
- Lack of multi-cloud and hybrid cloud correlation:**
 Virtually every enterprise has a combination of platforms ranging from traditional networks to public cloud (such as AWS, Google Cloud Platform or Microsoft Azure) to private cloud (such as Nutanix, OpenStack or VMware) to supported hypervisors (such as VMware ESXi, Microsoft Hyper-V, Nutanix AHV or KVM). Without a consolidated view across all of the different platforms, IT teams struggle with correlating multiple, disparate tools that use different terms and language which leads to increased errors and incomplete, out-of-date information.

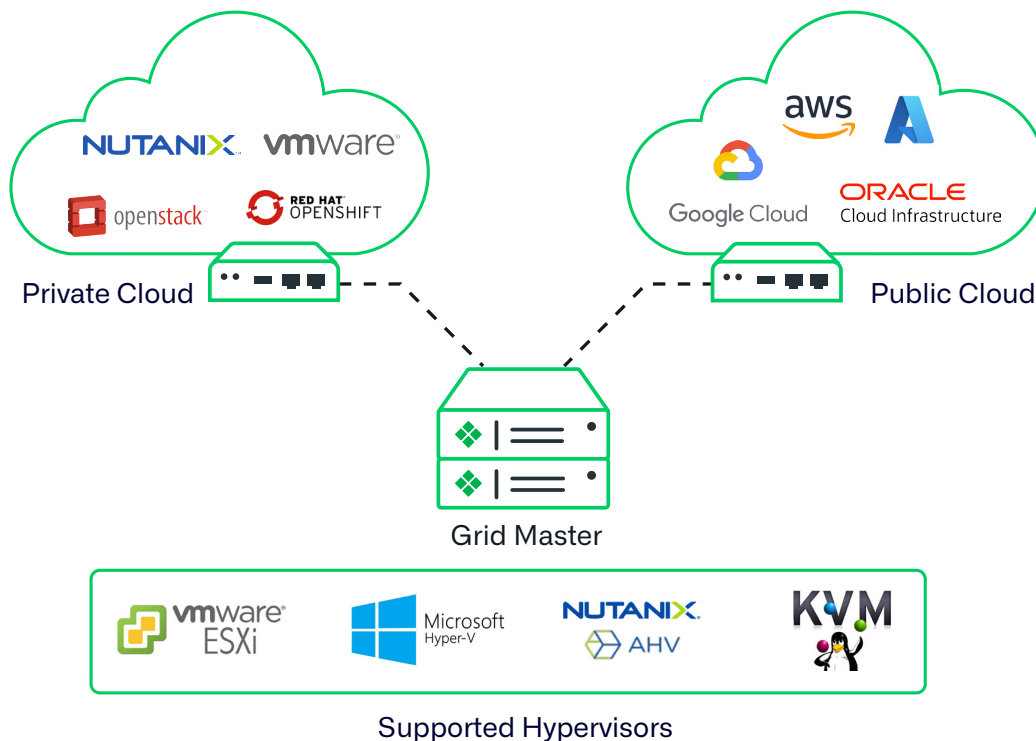


Figure 2: Only Infoblox supports traditional networks and multi-vendor private/public/hybrid clouds with the industry leading DDI solution.

INFOBLOX CLOUD NETWORK AUTOMATION SOLUTION COMPONENTS

- 1

Cloud Network Automation License (for Grid Master)

 - Centralized, integrated management user interface across cloud and virtualization platforms
 - Detailed visibility of cloud-based resources including VMs, tenants, networks, VPCs and more
 - Tenant views and tenant-based management
 - Cloud-specific reporting and auditing capabilities

- 2

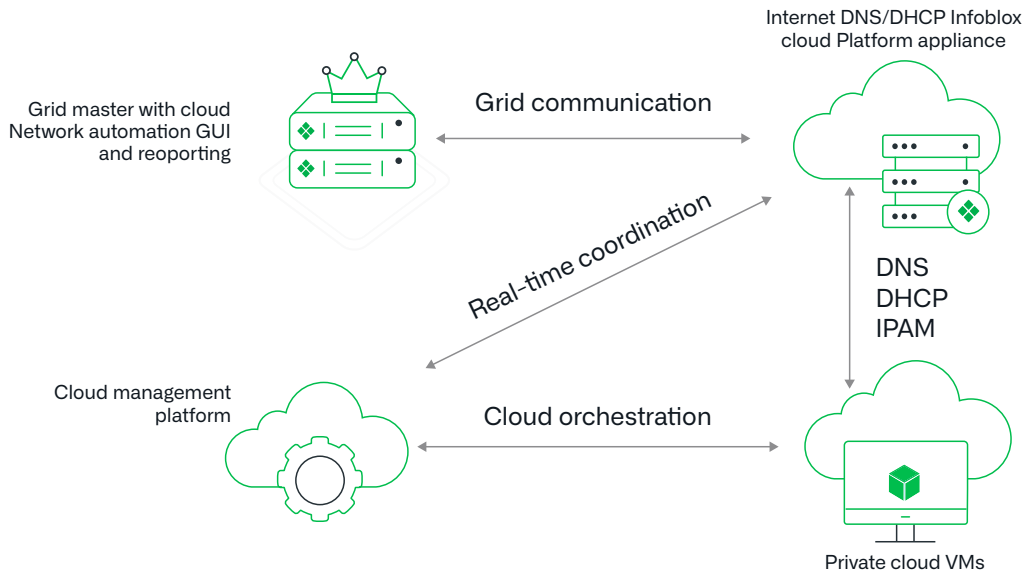
Cloud Platform Appliances

 - Virtual appliance options purpose-built for cloud deployments
 - Supports communication with cloud management platforms through Infoblox adapters
 - Deployed in data centers to increase scale and reliability of cloud deployments

- 3

Infoblox Adapters

 - IPAM integration with cloud/orchestration platforms (VMware, OpenStack, Red Hat Ansible, Terraform, Kubernetes and Docker)
 - Rich APIs to manage NIOS objects with RBAC
 - Integrations supported by Infoblox



- Denver
- Tokyo
- London

Figure 3: Deployment model with Infoblox Cloud Network Automation

INFOBLOX DDI FOR CLOUD AND VIRTUALIZATION CLOSSES THE AUTOMATION GAP IN CLOUD AND VIRTUALIZATION DEPLOYMENTS

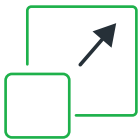
Infoblox DDI for Cloud and Virtualization helps IT organizations get more agility, scalability, and reliability from their cloud deployments—with fewer human resources. With Infoblox, you can efficiently control and secure your virtualized or hybrid cloud deployment.

Make Clouds More Agile



Infoblox dramatically shortens the time needed for provisioning and de-provisioning critical network services in cloud and virtualized environments. Manual tasks that took hours or days now happen automatically in minutes or seconds. In addition, Infoblox provides unprecedented visibility into VM IP networking details. From discovery to IP addresses to DHCP lease and DNS histories, Infoblox gives administrators the visibility and control they need to deliver high-quality cloud services.

Make Clouds More Scalable



Through the Cloud Platform Appliance's flexible deployment architecture, critical network services can be deployed in a variety of ways to suit your unique requirements. Cloud Platform Appliances can now be deployed in scale-up or scale-out fashion, enabling vertical (more tenants per cloud) or horizontal (more private clouds at various data center locations) expansion.

Make Clouds More Reliable



Infoblox is capable of delivering local, redundant (highly available) DDI services for every cloud instance at every location. This enables greater availability and local survivability.

Reduce Human Resource Requirements for Cloud Network Management



In addition to the massive manual labor savings gained through task automation, Infoblox provides ONE central management GUI for all cloud network automation tasks, regardless of the number, size, and geographical location of the clouds. This management GUI—alongside the Cloud Dashboard Widget and new cloud reports—saves significant time and effort and manual labor, reducing overall human resource requirements.

SUMMARY

Cloud deployments continue to be a high priority for enterprise IT departments, and their adoption is likely to accelerate in the years to come. The promise of greater business agility will continue to require greater and greater levels of automation. With DDI for Cloud and Virtualization, Infoblox automates key, critical networking tasks for cloud teams, a capability not currently offered by cloud platform providers or networking vendors.



Infoblox unites networking and security to deliver unmatched performance and protection. Trusted by Fortune 100 companies and emerging innovators, we provide real-time visibility and control over who and what connects to your network, so your organization runs faster and stops threats earlier.

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