Automating Network Services for Nutanix AHV Virtualized Workflows

Organizations are adopting virtualization, cloud and hyper-converged infrastructure but need agility and flexibility to realize promised efficiencies. NIOS 8.5 added vNIOS for Nutanix Acropolis Hypervisor (AHV) to solve these problems and accelerate DDI deployment and management in private cloud platforms like VMware and OpenStack. NIOS 8.6.2 builds on this capability with the Nutanix 5.20.x Plug-in to advance hypervisor server virtualization with rapid IP address provisioning on virtual machines (VMs), automatic de-provisioning of IP addresses from de-commissioned VMs and unified management of private and hybrid cloud networks.

Challenges Faced

Nutanix AHV, integral to Nutanix Acropolis, is a comprehensive enterprise virtualization solution. AHV delivers the capability to run enterprise applications, including:

- Combined VM operations and performance monitoring
- Backup, disaster recovery, host and VM high availability
- Dynamic scheduling
- Broad ecosystem support

Despite these capabilities, many network teams still rely on spreadsheets to manage IP address and DNS provisioning, making it impossible to quickly deploy cloud services. While organizations can spin up multiple VMs in minutes, it may take hours, days or longer to provision the corresponding IP addresses and DNS records. Achieving time to value can be challenging.
Solution overview
Infoblox vNIOS for Nutanix AHV lets organizations eliminate friction in deployments. It automates key provisioning processes and helps drive projects to completion, delivering the promised business value and agility. In addition, vNIOS for Nutanix AHV delivers new levels of automation for the core IP network services: DNS, DHCP and IP address management. At the same time, Infoblox centralized management administers DDI services on multiple virtualization platforms, including VMware, Microsoft and OpenStack. Through a single pane of glass, NIOS 8.5 manages IP address provisioning, DNS records and DHCP while avoiding a proliferation of management platforms.

Feature Highlights
Infoblox vNIOS for Nutanix AHV, in combination with the Infoblox Grid, provides the following capabilities:

- Automated IP address provisioning allows faster VM provisioning and prevents “VM confusion” by automatically reclaiming IP addresses when VMs are de-commissioned.
- Smart Folder offers visibility to IP addresses, DNS records, VMs, networks and tenants by group, VLAN or network, including overlapping IP address ranges.
- Infoblox Grid automates high availability and disaster recovery failover for core IP services, including DNS and DHCP.
- Infoblox Grid delivers role-based access control, audit trails and automated one-touch updates to all Grid members.
- Nutanix, OpenStack, VMware and Hyper-V cloud platforms can be managed from one console.

Figure 1: vNIOS for Nutanix AHV extends the Infoblox Grid to remote sites and/or public clouds
Value Proposition and Benefits

Infoblox vNIOS for Nutanix AHV delivers the following benefits:

- Enhances the native AHV functionality, making it more robust and production ready
- Improves deployment time by eliminating manual configuration errors and automating provisioning processes
- Reduces administrative friction in cloud deployments through network automation and visibility
- Delivers visibility of VM components in dynamic, virtualized networks
- Broad ecosystem support
- Supplies the tools to configure, view, change, track and report on network conditions across multiple network environments simultaneously
- Delivers comprehensive tracking, logging and reporting for audit and compliance purposes

For more information or to get answers on adopting virtualization, cloud and hyper-converged infrastructure and automating network services for Nutanix AHV virtualized workflows, contact your Infoblox account team, see our core network integrations or contact us at Infoblox.com.