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UNPRECEDENTED VISIBILITY FOR NETWORK MANAGEMENT WITH INFOBLOX NETWORK INSIGHT

PRODUCT SUMMARY

Infoblox Network Insight delivers actionable network intelligence by integrating DNS, DHCP, and IPAM data with network infrastructure data—providing unprecedented visibility across the entire network.

It automates the collection of information on all layer-2 and layer-3 devices connected to the network, enabling network administrators to easily gather, correlate, and view network data to increase agility, reduce risk, and lower costs.

Network engineers, administrators, and architects are flooded with data and information in a myriad of logs, reports, alerts, and anecdotal notes. They have to quickly prioritize day-to-day issues and perform a variety of operational tasks, along with trouble-shooting both reported and suspected problems—all in the face of dynamic scaling supporting a wide range of services. These jobs are further complicated by disparate, sometimes conflicting data because operational silos each have their own set of tools for collecting and analyzing data and using it to plan execution.

To address these challenges, Infoblox Network Insight delivers actionable network intelligence by integrating Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), and IP address management (IPAM) data with network infrastructure data—providing unprecedented visibility across the entire network. Network administrators can easily gather information, analyze it, and take the appropriate actions to better manage their networks and deliver network services. Network Insight also improves security, reduces service interruption risk, and breaks down operational silos in IT.
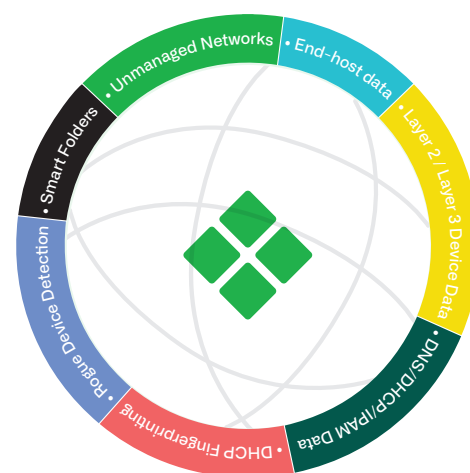
GATHER. ANALYZE. TAKE ACTION!

Gather the Right Information

Network Insight automates the gathering of information on all layer-2 and layer-3 devices—such as routers, switches, firewalls, and load balancers—connected to the network, and it can be fine-tuned by intervals, schedules, targeted networks, IP ranges, and individual IP addresses. While the task of gathering information is automated, an on-demand mechanism is also readily available. The garnered data contains:

- Network infrastructure device data
- Network infrastructure interface data
- VMware ESX/virtualization data

To ensure that device data is gathered properly, various techniques are used to collect it, including:

• SNMP

• Smart IPv4 subnet ping sweeps

• NetBIOS scanning

• Switch-port data collection

• Port scanning

• Complete ping sweeps

• Auto ARP refresh before switch-port polling

Polling intervals for switch port data collection are user-defined and can be set on a hourly, daily, weekly, or monthly schedule with various parameters such as "hourly polling started 10 minutes after the hour," or "every 2 days." Network teams can use this flexible scheduling mechanism to optimize data collection around their specific needs as well as to control bandwidth usage during peak service times.

Figure 1: Network Infrastructure data in the "Devices" tab

IPAM data, along with real-time DNS and DHCP data, is integrated with infrastructure device data and presented in Network Insight. In today's market some products collect device data and other products provide IPAM, DNS, and DHCP data; Infoblox Network Insight does both, creating intelligent IPAM data and integrated workflows in a single GUI.

Analyze: Better Data Means Better Decisions.

Network Insight's graphical user interface (GUI) with easy-to-use navigation across integrated data enables network administrators to quickly draw conclusions about network issues and tasks. Networks, devices, and end-hosts—currently managed or not—are visible within the Network Insight GUI. Port administration and operation status information, interface characteristics, trunk status, and assigned virtual local-area networks (VLANs) are all available. End-host (asset) data provides insight to the type of asset, the interface it is connected to, its MAC address, its IP address, and VLANs the asset is assigned.

Cross-sectional data views are accomplished through Smart Folders, which narrow the scope of data presented through filters and logic. More than 50 different filters can be applied in a virtually unlimited number of combinations. The slicing and dicing of the data using Smart Folders provides powerful logic by getting to the core of what network teams monitor and control.

Take Action!

With the network data logically presented in the GUI and automatically populated within Smart Folders, network professionals can take the necessary actions for the tasks at hand. The integrated data views and workflows deliver the critical business benefits of greater agility, reduced risk, and lowered cost derived through process improvements and the breakdown of operational silos.

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Improved Workflow Experiences

Network Insight reduces the risk, time, and cost associated with specific tasks in several areas.

1. Validating Deployment of New Networks and Assets

Networks are no longer static grids of copper, fiber, and hardware.The introduction of the cloud, virtualization, and mobility makestoday's networks more dynamic than ever. Building networks outand then tearing them down is a common practice for networkadministrators. Such activities support growing, fast-paced enterprisesas they extend their geographical presence into branch offices,create DevOp environments, and support a variety of external userswith various needs. Teams that design these networks do so with anumber of considerations, including targeted use, capacity, expectednetwork traffic flows, redundancy requirements, and other designparameters. The final deployment can be easily viewed with NetworkInsight, making it a simple task for network administrators to confirmthe deployed network matches the originally architected design.
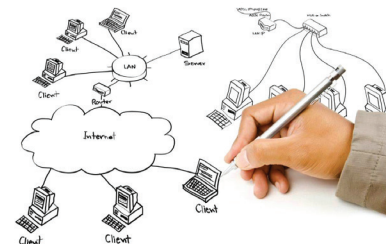
2. Locate and Remediate Potential Security Breaches

It is interesting to note that less than 10 percent of organizationsare fully aware of the devices accessing their networks.[1] This lack ofvisibility is allowing users to personalize their work environmentswith everything from private printers to home routers. It is also goodcover for anyone with more malicious intent to access the network.Clear visibility across the entire network helps improve security andreduce service-interruption risk.

Take, for instance, the enterprise that had on two separate occasions, two branch offices go down with the only symptom being that users in each branch office could not access corporate applications in the HQ data center.

The trouble-shooting for such an issue brought a team of IT professionals together for a full day of comparing their operational siloed data, pointing fingers, and conjecturing—with each team's effort focused on excluding its area of responsibility as the root cause rather than collaborating to resolve the issue.

Ultimately it was determined that the PCs in the branch office all had IP addresses that were not part of the networks defined on the routers serving that office. The PC IP addresses all started with 192.168 rather than the expected 10.10. Ultimately a home router was found plugged in, and it was clear that the router was using its own DHCP to issue IP address leases in the branch office. This issue would be immediately detectable with Network Insight.

3. Mergers and Acquisitions and Other NetworkExpansion Scenarios

When corporations merge through business acquisition, the adoptionof another network can be a very difficult task, fraught with IPaddress-overlap issues, lack of original design documentation, andother information gaps. Without the proper tools and visibility, in someacquisitions, deciphering details and executing a plan to merge thetwo networks into a single, cohesive one can take more than ninemonths. Firms that have, on a regular basis, acquired companies andadopted their networks have the luxury of past experience to guidetheir processes and fine-tune the steps, but even for them, not everysituation is the same. For firms that may go through this processonly once or twice, there is too much emphasis on getting the jobdone with little or no time spent on developing a working, efficientprocess. Network Insight integrates the data collection process andre-assignment process into a single solution set with workflows thatenable the untangling and re-introduction of an acquired network—allfrom a single pane of glass. This integration can turn a nine-monthproject into a two-week project.

...the company learned that attacks on the non-standard and misconfigured wireless network devices resulted in the disclosure of more than forty-five million credit card records... The estimated cost of the resulting cleanup and legal settlements associated with this attack amounted to a quarter of a billion dollars.[2]

4. Breaking Down Operational Silos in IT

In today's IT organizations, there are naturally occurring operationalsilos. These silos exist in response to the level of knowledge thatsubject-matter experts must have in order to perform the complicatedwork in their given areas. However, the nature of today's dynamicnetwork requires cohesiveness across IT services, and thatnecessitates shared, authoritative data. Operationally there is a "tax"that these silos synthetically impose on the organization. NetworkInsight can tear down these silos by providing granular, role-basedadministration so multiple teams can use the same tool and thesame integrated data. This means network administrators in chargeof IPAM have complete visibility into other teams' use of assignedIP addresses while the teams themselves have the permissionsand ability to manage their own IP range within Network Insight.Collaboration and visibility across teams is a simple yet powerfulbenefit of Network Insight.

SOLUTION DEPLOYMENT

The Foundation: Infoblox Grid

The Infoblox Grid enables a collection of appliances to perform and be managed as a single, unified system. An Infoblox appliance assigned as the Grid Master pushes global configuration data and updates out to Grid Members, monitors member operations, and synchronizes member changes back into the central database.

Network Insight leverages Infoblox Grid technology to provide flexible deployment options. Whether you use a centralized approach or a distributed architecture, Network Insight ND platforms can be configured to suit your networking strategy.

PLATFORM OPTIONS

Network Insight appliances offer a wide range of models that are designed to deliver enhanced performance, capacity, and availability. They also provide deployment flexibility as physical or virtual appliances.

ND-805	⟷	ND-V805		
ND-1405	⟷	ND-V1405	Hypervisors (Private Cloud) supported	Nutanix AHV, OpenStack, KVM, and VMWare ESXi
ND-2205	⟷	ND-V2205	Public Cloud platform supported	Amazon Web Services, and Microsoft Azure
ND-4005	⟷	ND-V4005		

Infoblox Network Insight Improves Agility While Reducing Risk and Operating Expenses.

Network Insight delivers actionable network intelligence by integrating, in real time, DNS, DHCP, and IPAM data with network infrastructure data to provide unprecedented visibility across your entire network. The collection and correlation of this data enables network administrators to easily gather the necessary information, analyze it, then take the appropriate actions to better manage their networks, validate designs, effectively provision, troubleshoot, and deliver network services. Network Insight improves decision making, reduces security and service interruption risk, and breaks down operational silos in IT.

To learn more go to www.infoblox.com/NetworkInsight or contact sales@infblox.com.

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1 SANS Annual Mobile Security Survey, April 2012
2 BDNA for Security – Strengthened Security Through Visibility, November 2010

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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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