

Save time and eliminate errors with automated IP Address Management

Paul Roberts

Calleva Networks Ltd paul@callevanetworks.com



IP Address Management Can be Simple

- The spreadsheet
 - Disconnected from network
 - No visibility into DNS, DHCP
- Infoblox advantages
 - Comprehensive view of network
 - Central, role based administration
 - Full integration with Microsoft

Business advantages

- Offer agility and features to solve complex network issues
- Reduce network operational costs





Infoblox IP Address Management Single View and All IP Data at Your Fingertips

Allocation

	-	 ίΞ.	ł
		1	
12			
_	_	 	

Configure networks and allocate IP addresses to network devices. Resize, join, or split networks.

Use Infoblox host records to centralize the management of DNS and DHCP data.

Administration



Use network maps and IP maps to view and administer your entire network space, and manage the IP addresses of your network devices.

Reporting



The Dashboard provides widgets that monitor IPAM and network statistics.

The syslog and audit log provide detailed information about system and admin activities.

Tracking



Use network discovery to track your network devices and monitor network performance. Configure how you want the Infoblox appliance to populate the discovered data.



Rich IP Address Management

- View & control of DNS, DHCP IP address data
- Central management, auditing and reporting
- Address history tracking address status
- Network Templates and Network Map
- GUI based workflow approvals
- APIs for 3rd party integration
- Discovery and Wizards
- Extensible Attributes





Administration (Net Map)





IPv6 Management





Allocation (IP Map)

.0.2.6 % Not MAC Address Modela632d9-4 Host MAC Address Modela632d9-4 Host MAC Address Modela632d9-4 Host MAC Address Modela632d9-4	Unused Coeffict Coeffict Unused Coeffict Unused Coeffict Unused Coeffict DHS Object UIS Object Coeffict Coeffict UIS Object Coeffict Coeff
Antowered Brite RelBCS Name: CS Last Discovered: 3969-89-42 47:32:48 PDT Attached Device Name: coret VLAN: 4052 Attached Device Put Name: 2:5 VLAN Name: servemet Attached Device Put Description: BD6808.624T3-Poet 2:5	MAC Address Withedbill2296444 First Deconverse: 2008-08-30 17;16:02 PDT Port Spend: 1G
Related Objects Audit Hastory Interm DRS Verse Type Constant Inv0123.adt intollor default Host Record	Denza Tura Overen



Network Discovery





Extensible Attributes and Smart Folders



Infoblox DDI and Grid





Windows Server 2012 IPAM

- Microsoft's IPAM functionality in Windows Server 2012 lacks many enterprise-grade features
 - No central management, MMC or PowerShell required to configure DNS/DHCP services
 - No IPAM automation for common tasks
 - Discovery limited to AD attached servers
 - No global search
 - No reports



Inconsistent UI

- The UI is a mixture of new UI for IPAM ...
- Old MMC for configuration ...
- And one through PowerShell





- Infoblox provides IT staff, through DHCP Fingerprinting, the ability to identify mobile and static Devices and Operating systems connecting to the Network
- Through the use of DHCP Fingerprinting
 - Access to the Corporate network can be based upon BYOD device type
 - Provide visibility into what devices are connecting to the network
- Microsoft does not have this option with their product



Network Insight – Improve **Agility and Reduce Risk**

ANALYZE

GATHER



Network Insight's intelligent IPAM integrates near real-time infrastructure device data with IP address management

The collection and correlation of the data provides unprecedented visibility the better the data the better the decision

TAKE ACTION



Validate designs, effectively provision, troubleshoot, detect and isolate rogue devices, errors, visualize unmanaged devices and networks



Network Insight in the Grid

Device Tab

Network device data is integrated into IPAM

Know what your infrastructure devices are by vendor, model, OS version, etc.

Das	hboards	Data Manage	ment Smart Fold	ders Grid	Administration				
IPAN	De	vices DHCP	DNS File Distri	bution					
de	fault	Network View	*						
Qu	lick Filter	None	V Ott Filter	On Show Fi	lter				
Go	lo		Go						1
	Ø	IP Address 🔺	Name	Туре	Model	Vendor	Device Version	Location	Description
	¢	10.60.0.0	UIKIOWI	The lite					
	-	10.60.0.11	unknown	VoIP Gateway		Cisco			
	ø	10.60.0.12	tme-3750-48-p	Switch	catalyst37xxStack	Cisco	12.2(55)SE3		Cisco IOS Software, C375
	尊	10.60.30.1	core.tme.tme.i	Switch-Router	cat6506	Cisco	12.2(17d)SXB10		Cisco Internetwork Operat
	应	10.60.30.10	infoblox.locald	VNIOS	IB-VM-2220	Infoblox	6.9.0	Unknown	Infoblox IB-VM-2220 NIOS
	尊	10.60.30.11	anm.infoblox.c	VNIOS	ND-V2200	Infoblox	6.9.0	Unknown	Infobiox ND-V2200 NIOS V
	蓉	10.60.30.12	anp1.infoblox	VNIOS	ND-V1400	Infoblox	6.9.0	Unknown	Infoblox ND-V1400 NIOS V
	亞	10.60.30.13	anp2.infoblox	VNIOS	ND-V1400	Infoblox	6.9.0	Unknown	Infoblox ND-V1400 NIOS V
	尊	10.60.30.14	m1.infoblox.com	VNIOS	IB-VM-810	Infoblox	6.9.0	Unknown	Infoblox IB-VM-810 NIOS \
	牵	10.60.30.15	anp3.infoblox	VNIOS	ND-V1400	Infoblox	6.9.0	Unknown	Infoblox ND-V1400 NIOS V
	\$	10.60.30.200	unknown	Switch	PowerConnect	Dell	3.3.3.3		PowerConnect 6248, 3.3.3
	\$	10.60.30.210	junos-rack2	Switch-Router	EX4200	Juniper	10.2R1.8	rack4p3	Juniper Networks, Inc. ex4
	ø	10.66.71.1	SKO13-kc	Switch-Router	catalyst37xxStack	Cisco	12.2(53)SE2		Cisco IOS Software, C3756
	森	10.66.71.2	test-switch	Switch	cat29xxStack	Cisco	12.2(55)SE2		Cisco IOS Software, C296
	4	10.66.72.1	unknown	Router					
	¢	10.66.100.53	unknown	Router					
	尊	10.120.18.45	demogm1	NetMRI	IB-1420	Infoblox	6.8.1	Santa Clara	Infoblox IB-1420 NIOS Ver
	亞	10.120.18.47	demo-nxv1000	Switch	N1KV	Cisco	4.2(1)SV2(2.1)	PAIX-3-1321	Cisco NX-OS(tm) nexus, S
	*	10.120.25.78	unknown	VNIOS				Unknown	Infoblox ND-V1400 NIOS V
	\$	10.120.25.79	anp3.com	VNIOS	ND-V1400	Infoblox	6.9.0	Unknown	Infoblox ND-V1400 NIOS V
14	4.1	MR							



Visibility into all configured networks

IPAM view automatically indicates managed and unmanaged networks (highlighted in yellow)

From the IPAM view select a network and view the infrastructure devices located on that network

Dasi	hboards	Data Management	Smart Folders G	rid Administ	ration		
IPAM	Devi	ces DHCP DNS	File Distribution				
de	fault	Network View 🐄					
QL	uck Filter	None ‡	Off Filter On Sh	ow Filter			_
Go	to		•				
		Network -	Comment	IPAM Utilization	First Discovered	Last Discovered	Si
	\$	<u> </u>		10.2%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$	H 10.60.1.0/24		0.7%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$	r <u>10.60.2.0/24</u>		3.9%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	4	r <u>10.60.3.0/27</u>		0.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$	r <u>10.60.3.32/27</u>		0.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	4	r <u>10.60.3.64/27</u>		0.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$	r <u>10.60.8.0/24</u>		0.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	4	r <u>10.60.10.0/24</u>		2.7%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$	r <u>10.60.16.0/24</u>		0.3%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$	da 10.00.00.004		0.3%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$ 【	Show Device View	infoblox.localdomain	0.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	4	Conventional	anp1.infoblox.com	0.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	-	Discover Now	junos-rack2	0.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	-	Edit: 0.00.20.002	anm.infoblox.com	.9%	2013-09-27 16:13:57 PDT	2013-10-15 05:13:09 PDT	
	-	Delete #0.01.000	anp3.infoblox.com	0.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$	Extensible Attribut is	m1.infoblox.com	0 0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	\$	Permissions	unknown	.0%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
	4	H 10.60.128.0/24	core.tme.tme.infoblox	.com 3.5%	2013-09-27 16:13:54 PDT	2013-10-15 05:13:09 PDT	
14		NI2	anp2.infoblox.com				



Find & Remediate Potential Security Breaches

Physically Locate a MAC Address

Uncover Rogue Devices

Find & Investigate Suspicious VLANs









Capacity Planning Support

Knowing what you have means knowing what you need

"The effort necessary to track down open ports on a remote switch is so daunting it's easier to just buy another switch" – *Anonymous network admin*





APT / Botnet Malware Requires a New Approach

- Existing security approaches do not effectively address malware that exploits DNS. Examples:
 - Malware repacks to avoid signature-based detection
 - Botnet controllers typically change URLs dynamically to circumvent Web Filters
 - Botnet controllers change IP addresses / use other techniques to circumvent Firewalls

Introducing Infoblox DNS Firewall





2014 – DNS Threat is Significant

- Attacks against DNS infrastructure are growing
 - DNS-specific attacks up 200% in 2013
 - ICMP, SYN, UDP attacks growing significantly too



DNS is #2 attack vector protocol



The Solution - Infoblox Advanced DNS Protection

Unique Detection and Mitigation



- Intelligently distinguishes legitimate DNS traffic from attack traffic like DDoS, DNS exploits, tunneling
- Mitigates attacks by dropping malicious traffic and responding to legitimate DNS requests

Centralized Visibility



- Centralized view of all attacks happening across the network through detailed reports
- Intelligence needed to take action

Ongoing Protection Against Evolving Threats



- Regular automatic threat-rule updates based on threat analysis and research
- Helps mitigate attacks sooner vs. waiting for patch updates

Fully Integrated into Infoblox Grid





- There is more to IPAM now than simply replacing your spreadsheets
 - IPAM + DNS/DHCP Integration
 - MS DNS/DHCP Integration
 - Network Insight
 - DNS Firewall
 - Advanced DNS Protection
- But you can start with just IPAM and grow the solution to fit your needs



Next steps

- Contact us to discuss your requirements
- Request an on-site demo or evaluation
- Engage us to define a deployment approach
- Contact:
 - Paul Roberts
 - paul@callevanetworks.com
 - Tel: 0118 902 6622
- Visit us: <u>www.callevanetworks.com</u>