

BLOX FEST

Infoblox 

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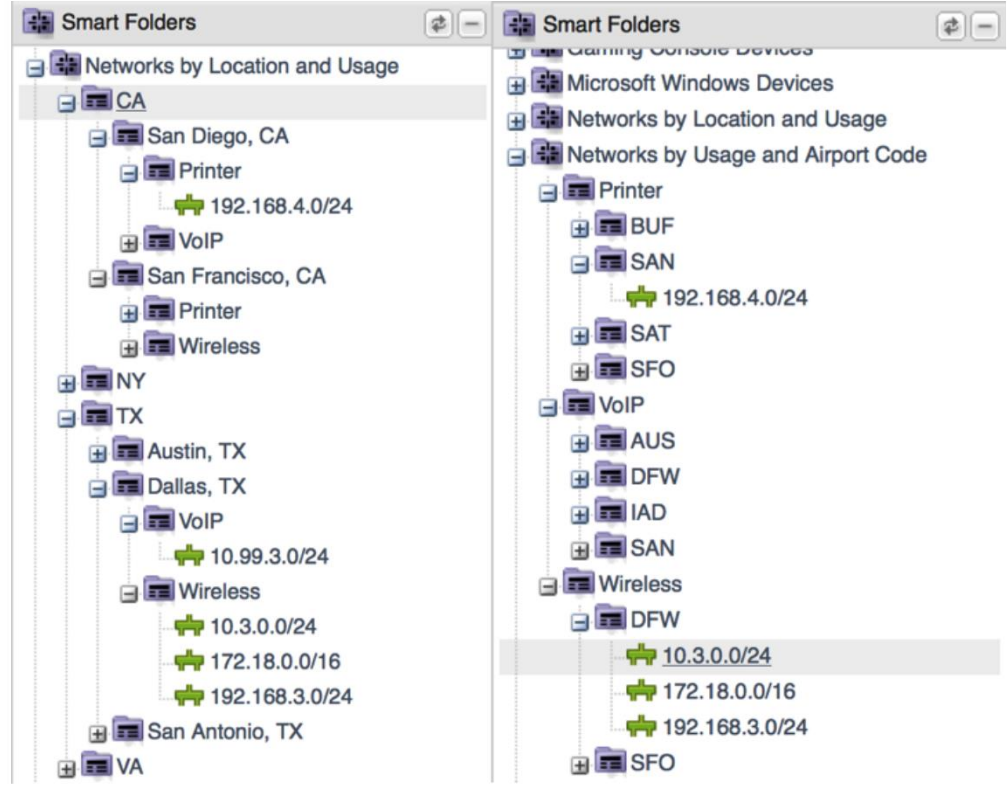
Topics Covered

- Best Practice IPAM
- Extensible Attributes
- Data Sources and Data Accuracy
- Use Cases

Best Practice IPAM

Best Practice IPAM

What is Best Practice IPAM



Best Practice IPAM

Requirements Best Practice IPAM

- Modeling flexibility
- Protocol Data integration
- MetaData
- Dynamic
- Searchable
- Configurable
- Reporting
- Granular Administrative Rights
- Approval process



Best Practice IPAM

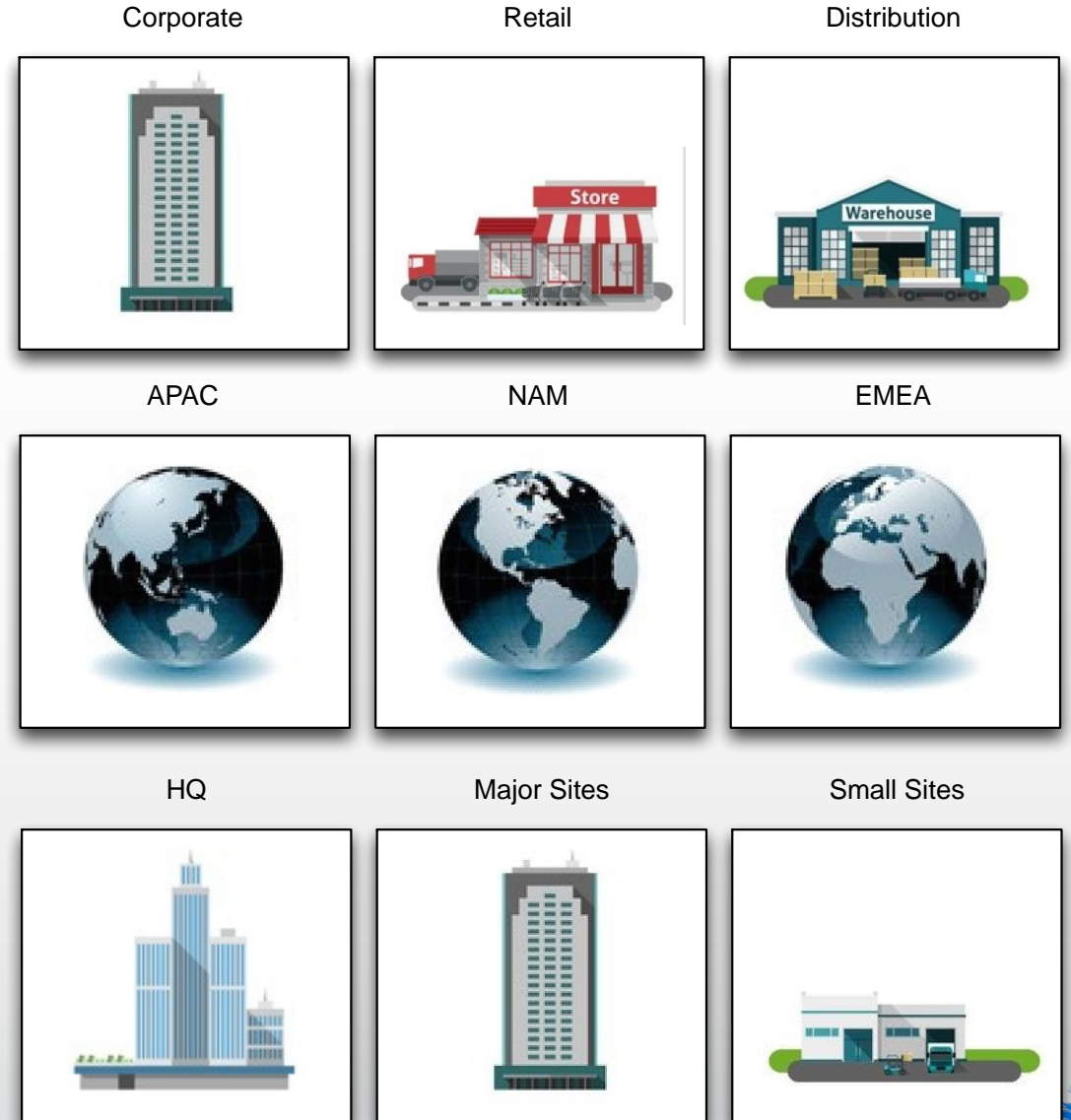
Benefits of Best Practice IPAM

- Accurate Inventory
- Delegated Administration
- Workflows
- Provisioning
- Troubleshooting
- Security

Best Practice IPAM

Best Practice IPAM - Architecture

- IPAM is network driven
- MetaData allows us to:
 - Mirror organizational design
 - Sort on multiple criteria
 - Create dynamic monitoring based on business needs



Best Practice IPAM

Best Practice IPAM - Architecture

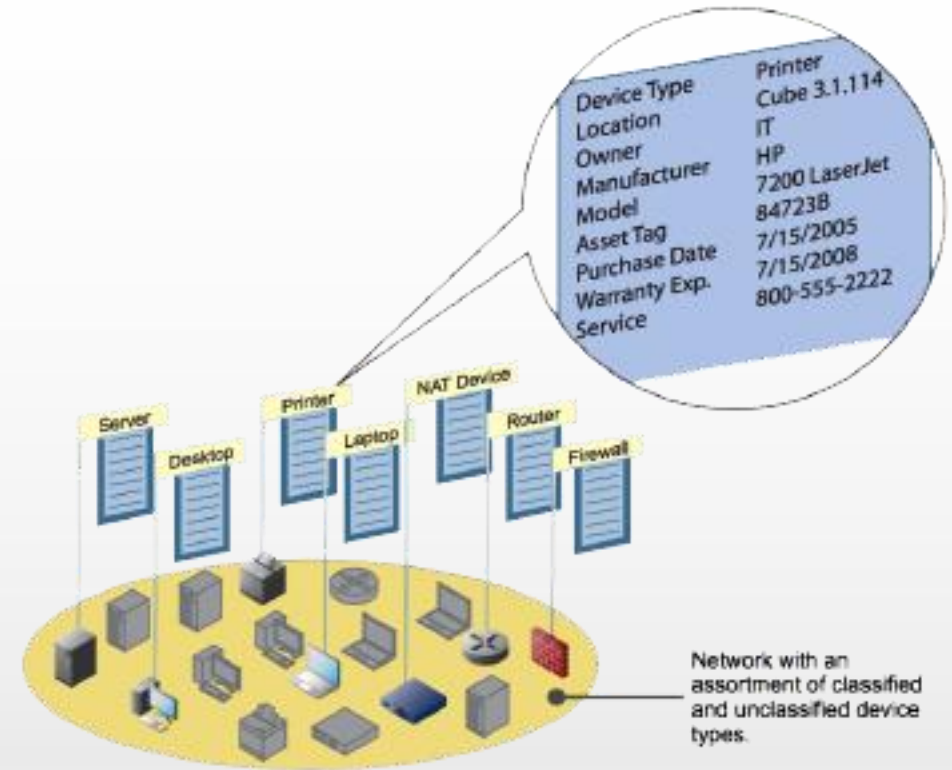
- Demonstration
 - Search and organize by Business Unit
 - Search Networks by Location and organize by type
 - Search by region and sort by business unit



Extensible Attributes

Purpose of Extensible Attributes

- Infoblox uses Extensible Attributes (EA) to create Metadata
- Extensible Attributes can be associated with any object not just IP Addresses
- Extensible Attributes are flexible to match your organization
- Provides a powerful tool to search and organize IPAM based on business driven attributes



Extensible Attributes

Extensible Attribute Overview

- Building block of IPAM
- Three optional settings
 - Optional
 - Recommended
 - Required
- Assign to ANY object type

Add Extensible Attribute Wizard > Step 2 of 2

Enable Inheritance

Allow Multiple Values

Default Value: Choose One

Required

Recommended

Optional

When restricting extensible attributes to specific object types, the appliance will remove the attributes from objects that are not specified in the table.

Restrict to Specific Object Types

Name
No data

Log Attribute Values When Objects are Updated

Cancel Previous Next Save & Close

Data Sources

Data Sources and Accuracy

What is and isn't IPAM Data

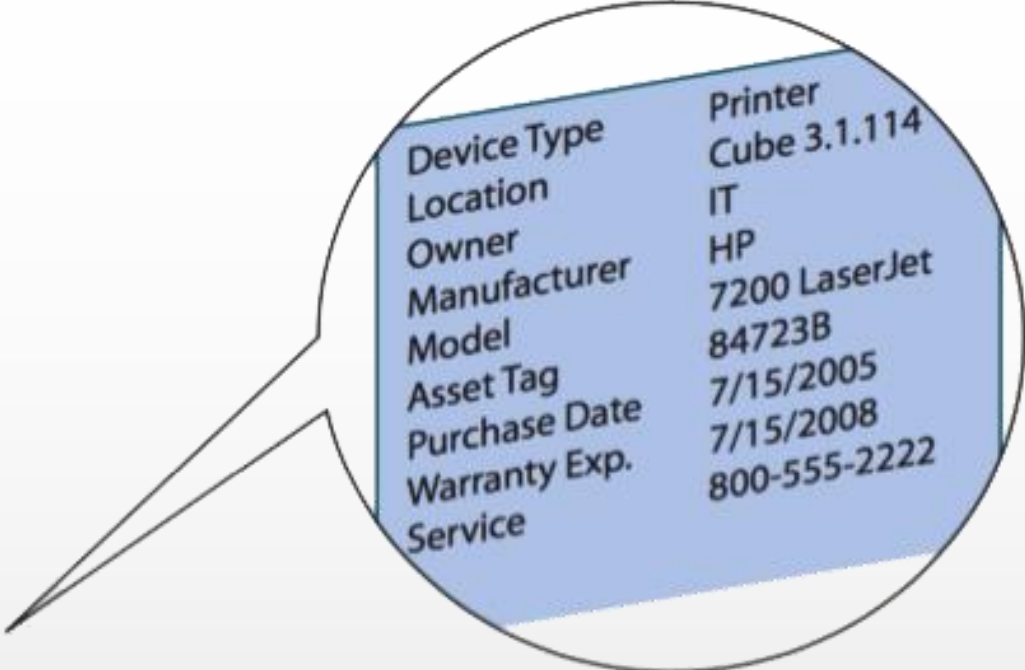
- It's not just from network and server team
- Facilities, Operations even HR can have valuable data
- Any data related to network attached hosts



Data Sources and Accuracy

What is and isn't IPAM Data

- Is not IPAM
 - Isolated Spreadsheets
 - Stuff in your head
 - Comments in multiple devices
- Is IPAM
 - Centralized Data
 - Information relating to IP Devices
 - Did I say, Anything related to IP Devices



Device Type	Printer
Location	Cube 3.1.114
Owner	IT
Manufacturer	HP
Model	7200 LaserJet
Asset Tag	84723B
Purchase Date	7/15/2005
Warranty Exp.	7/15/2008
Service	800-555-2222

Data Sources and Accuracy

Data Accuracy

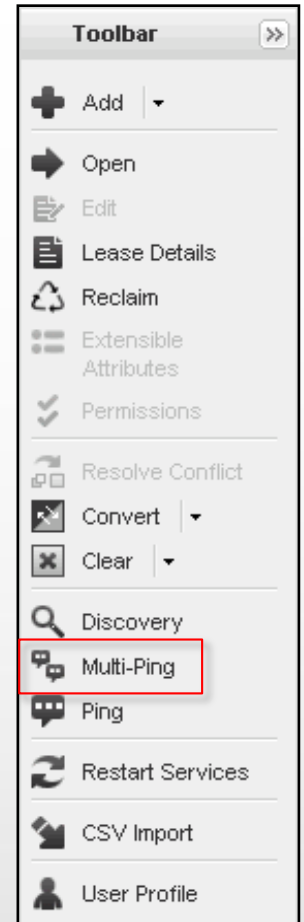
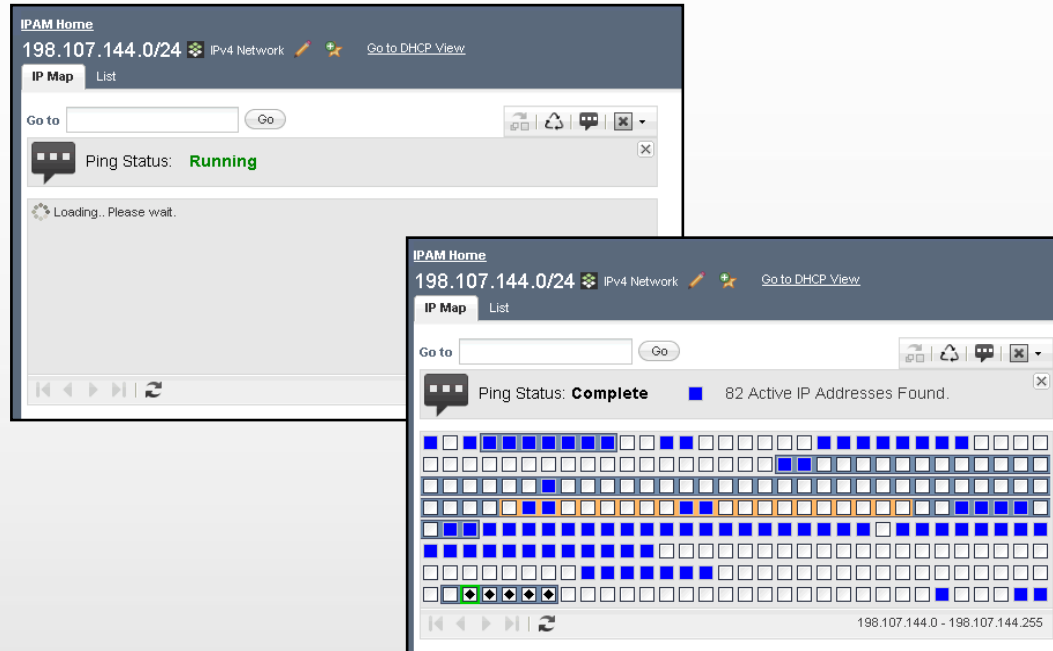
- Garbage in, Garbage out wont work
- We need tools
 - To keep the data honest
 - To update it proactively



Data Sources and Accuracy

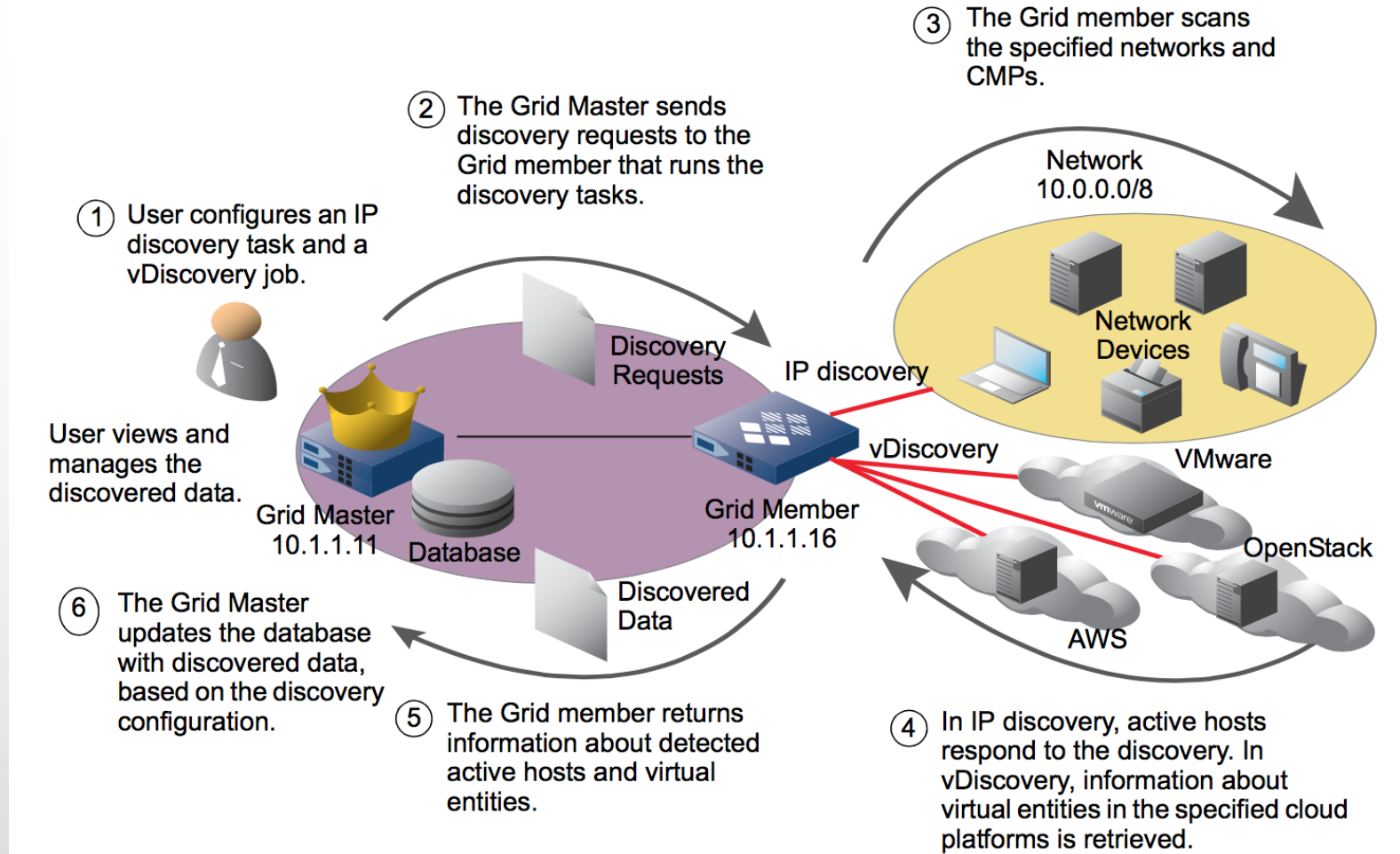
Data Accuracy: Ping and Multi-ping

- Multi-Ping allows you to force a Ping of every IP address displayed in the IP MAP screen
 - Pings originate from the Grid Master
 - Only available for IPv4 networks



Data Sources and Accuracy

Data Accuracy: Network Discovery



Data Sources and Accuracy

Data Accuracy: VM Discovery

- VM Discovery

vDiscovery Job Wizard > Step 2 of 5

Server Type*

Host*
OPENSTACK
VMWARE

Port*

Protocol*

Username*

Password*

Cancel Previous Next Save & Close

Data Sources and Accuracy

Data Accuracy: Network Insight

- Covered in our Add-Ons Session

Discovered Data	
NetBIOS Name:	OS: 6.10.2
Discovered MAC Address: 00:50:56:9c:4c:1c	Last Discovered: 2014-04-11 08:07:44 PDT
Device Type(s): vllBOS	Open port(s): TCP:53,443 UDP:67
Attached Device Address: 10.60.30.210	Discovered Name: infoblox.localdomain
First Discovered: 2014-03-13 16:54:00 PDT	Discoverer: ndp3.infoblox.com
Attached Device Description: Juniper Networks, Inc. ex4200-40t internet router, kernel JUNOS 10.2R1.8 #0: 2010-05-27 21:05:57 UTC builder@shoth.juniper.net:/volume/build/junos/10.2/release/10.2R1.8/obj-powerpc.bsd/sys/compile/JUNIPER-EX Build date: 2010-05-27 20:44:44 UTC Copyri	Attached Device Model: EX4200
Attached Device Name: junos-rack2	Attached Device Port Description: ge-0/0/30.0
Attached Device Port Name: ge-0/0/30.0	Attached Device Vendor: Juniper
Attached Device Port: 543	Attached Device Type: Switch-Router
Device Vendor: Infoblox	Device Model: IB-VM-2220
Device Management IP: 10.60.30.10	Device Port Type: ethernet-csmacd
Device Port Name: eth1	Port Duplex: Full
Port Link: Not Connected	Port Speed: Unknown



Data Sources and Accuracy

Data Accuracy: Conflicts and resolution

IPAM Home > 192.168.0.0/16
192.168.2.0/24 IPv4 Network [Go to DHCP View](#)
IP Map **List**
Quick Filter: None [Show Filter](#)
Go to:

IP Address	Name	MAC Address	Status	Type	Usage
<input type="checkbox"/> 192.168.2.0			Used	IPv4 Network	
<input checked="" type="checkbox"/> 192.168.2.1			Used	IPv4 DHCP Range	DHCP
<input type="checkbox"/> 192.168.2.2			Used	IPv4 DHCP Range	DHCP
<input type="checkbox"/> 192.168.2.3			Used	IPv4 DHCP Range	DHCP

Toolbar

- Add
- Open
- Edit
- Lease Details
- Reclaim
- Extensible Attributes
- Permissions
- Resolve Conflict**
- Convert
- Clear

View/Resolve Conflict for 192.168.2.1

Description Discovered address is within an existing DHCP range but does not match an existing lease, fixed address, or exclusion range.

Discovered

MAC Address 00:1e:bd:81:10:ff

NetBIOS Name

OS Cisco 870 router or 2960 switch (IOS 12.2 - 12.4)

Last Discovered 2013-09-27 10:52:57 PDT

Create a fixed address
 Create a reservation
 Ignore this conflict

IPAM Use Cases

IPAM Use Case #1

Respond to vulnerability announcement

- Vendor announcement about a vulnerability
- Need to find all HP Printers model LJ213



IPAM Use Case #2

Find objects based on Operating System

- Finding all systems running Apple IOS



IPAM Use Case #3

Find hosts connected to a particular network device



Questions?

