

Network Ferret

Domain, Protocols and Platforms

What is Discovered

Address Discovery

- Standard ping sweep using address ranges
- Seed router address with expansion based on subnets in router.
- List of addresses from host file or via API (ipv4 and v6).
- Network crawl using addresses found via ARP cache, LLDP, routing tables, OSPF, BGP, GVRP, MPLS, CDP and IGMP.
- Combinations of the above.
- Ability for user to control amount of pinging.
- Ability to automatically control pinging based on ICMP source quench messages.
- Determination of Cisco HSRP addresses and VRRP addresses.
- Multiple strategies for determining device uniqueness. SNMPv3 engine ID, sysName, user specified variable or address list comparison.
- Ability to limit discovery based on private networks, LAN or WAN subnets, mask sizes or a specific exclude list.

Basic Host Discovery

- Standard MIB-II variables such as sysName, sysDescr, etc.
- IPv4 addresses, interfaces, virtual circuit endpoints and the stacking of these objects.
- IPv6 addresses
- Hardware discovery using the Entity MIB and vendor-specific MIBs.
- Application discovery using user-defined port scanning.
- CPU, memory, disks and file systems using the Host Resources MIB.

For switches

- Bridge port discovery using the Bridge MIB and vendor-specific MIBs.
- Repeater port discovery using the Repeater MIB.
- VLAN and VLAN membership discovery using VLAN MIBs and vendor-specific MIBs.

For Routers

- OSPF v2 and v3 discovery.
- BGP discovery
- ISIS discovery
- MPLS objects including Label Spaces and VRFs using MPLS MIBs and vendor-specific MIBs.

Switch and Repeater Connectivity

- Connect repeater ports using a sampling algorithm.
- Connect switch ports using LLDP, GVRP, vendor protocols EDP and CDP, spanning tree and proprietary matching algorithms.
- Discovery of Link Aggregation (LAG) objects.
- Discovery of VLAN trunking.
- Grouping of VLANs across switches.
- Inference of unmanaged layer 2 devices both at the leaf nodes and internally.
- Reporting of devices discovered but not attached to a layer 2 device.

Router Connectivity

- Connects router ports by analyzing routing tables and via inference.
- Connects aggregated router links via a sampling algorithm when no other info is available.
- Discovers OSPF neighbors, BGP peers and ISIS links.
- Discovers LDP peers and MPLS Pseudowire connections.
- Connects Frame Relay virtual circuits using a sampling algorithm.

Switch/Router Connectivity

- Discover links between routers and switches where the normal L2 connectivity information is missing. Uses protocols such as ARP, CEF and other strategies.

VMWare

- Discover VMWare model via SNMP or the VMWare API.
- See Domain Model Guide for objects discovered.

Other Information

Developer Features

- Network Ferret runs standalone and generates CSV files and HTML reports so Network Ferret can be evaluated before writing any integration code.
- Extensive logging allows for easy debug of any discovery issues.
- MIB dump capability allows for easy field collection of information on suspect devices.
- Record capability allows developers and testers to consistently recreate the same test scenarios.

SNMP Support

- SNMP v1, v2 and v3.
- Support of GETBULK for greater efficiency.
- Uses AES and DES encryption for SNMPv3.

Vendor Support

- Network Ferret was designed with a vendor-specific infrastructure to handle all of the special cases where vendors do not follow standards or devices do not behave as the standards dictate.

Performance

- Network Ferret Proxy allows discovery through firewalls.
- Fixed number of threads (< 50) will not drain the host system.
- Can work on hundreds of devices concurrently.
- Ability to control the amount of ICMP and SNMP traffic.

Platform

- Network Ferret is written in Java and will work with JRE 1.5 or newer.
- Pinging, if used, is platform specific. Windows, Solaris and Linux are supported. 32-bit.
- Pinging source code will be made available for those who need to support other platforms.
- A custom interface to a non-Java application can be created.

Embedding Options

- For non-Java applications, Network Ferret can run as a server. It uses Google Protocol Buffers for data transfer.
- For Java applications, Network Ferret can run synchronously or asynchronously.
- In both cases, Network Ferret can run concurrent discoveries.