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IT MANAGEMENT MADE SIMPLE

Buyer's Guide to Automated Layer 2 Discovery & Mapping Tools

4 Critical Components of Successful Layer 2 Discovery

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INTRODUCTION TO AUTOMATIC LAYER 2 DISCOVERY & MAPPING

Layer 2 discovery creates a detailed view of network interconnections, down to the devices connected to a switch, subnet details, and VLAN information. With layer 2, you can automatically discover *everything* connected to a network—devices, servers, virtual machines, deployed software, VLANs, port-to-port connectivity, and other resources—has tremendous benefit for IT professionals looking to **save time and be compliance-ready**.

A comprehensive Layer 2 discovery & mapping solution will *automatically* discover, map, document and inventory the entire IT infrastructure including network devices, servers, workstations, deployed software, VMware virtual machines, VLANs and port-to-port connectivity. It offers three major benefits that pay off every day:

1. First, you'll save hours because you'll have a definitive map, inventory, and visual of the network topology and interdependencies that you can refresh at any time. You will be immediately aware of "forgotten" equipment from previous projects or team members that can be decommissioned or reassigned to new tasks.

2. You will be compliance-ready with a 100% accurate inventory as well as a simple to understand topology of the network. These tools are perfect for internal requirements or external audits.

3. Your map will give you a "first response" tool to find and fix problems in today's complex network. Pinpointing network connection problems only takes minutes, not hours, so you and your team can focus on solving the problems faster than ever before.

4 CRITICAL COMPONENTS OF SUCCESSFUL LAYER 2 DISCOVERY

When looking for a truly complete layer two monitoring and management solution, don't settle for a partial list of capabilities. Here are the four Layer 2 critical components you need to keep your network running efficiently:

1. **Automatic & comprehensive discovery**
2. **Comprehensive inventories**
3. **Automated mapping**
4. **Compliance readiness**

Each element supports the other. Let's break down what makes each one critical to network and application monitoring success.

1. Automatic & Comprehensive Discovery

Take Advantage of Dependency Awareness

Without automatic Layer 2 discovery & mapping, you are forced into a time-consuming and error-prone manual process of document connectivity, identifying interdependencies, and locating devices and systems. It can pull you off other projects and it can take days to fully document and validate physical connectivity. Despite your best efforts, the inventory may well be out of date before it's completed due to configuration changes that invariably take place every day in a network.

A strong automatic discovery tool eliminates the time and potential errors generated through manual processes. It delivers all the information you need to succeed: physical connectivity, device type, asset/inventory and configuration information. It should also be capable of detailed VMware discovery and classification as well as full support for discovery and management of native IPv6 and IPv4 devices. The solution should discover dependencies across all networked devices automatically without manual intervention.

Dependency awareness provides knowledge of how a network is connected and an understanding of how dependencies between the devices on the network to a network monitoring tool. By focusing on the location of the problem, dependency awareness executes alert suppression – eliminating alert storms – and speeds up fault resolution. For example, if a router fails, a single alert is sent, while alerts for all other connected devices are suppressed because dependency aware understanding of all connectivity between routers, switches, servers and other network attached devices.

2. Comprehensive Inventory

Never Lose Anything Again

Understanding a network from top to bottom gives staff the information they need to keep it running securely and at peak performance without spending time on updates or feeling unsure of the information at hand. You will take advantage of the ability to auto-discover new devices, port-to-port connectivity changes, or updates to physical-to-virtual associations, saving uncounted hours of manual intervention.

A comprehensive inventory delivers detailed platform identification and classification for routers, switches, wireless access points, printers, Windows, Unix, Linux, Macintosh, firewalls, hubs, and more from all the leading network manufacturers including: Cisco, Juniper, Foundry, HP, Nortel/Bay Networks, 3COM, Netgear, Dell and VMware machines. You can collect important system information like software, OS, BIOS, Windows service inventory, and warranty status and well as document and archive assets including your routers, switches, wireless access points, printers, Windows, Unix, Linux, Macintosh, firewalls, hubs, and more.

With this information you'll never lose track of your network devices and you'll know immediately when devices are added, removed or changed with automatic alert notifications.

3. Automatic Mapping

Rapidly Pinpoint Network Issues

You can't troubleshoot network issues easily without Layer 2 device connectivity information. An up-to-date Layer 2 map is a valuable first-responder tool that makes short work of identifying the source of a network event problem. Seek out a solution that dynamically updates maps as changes occur in the network and look for maps that are easy to customize, manipulate and publish using Microsoft® Visio™ or PDF.

With detailed device views, you can quickly find out what's connected to what, so you can decrease mean time to repair. Focus your time and energy on solutions rather than problem isolation. You will have full visibility into physical, logical and virtual connectivity, including IP and VLAN-specific information with auto-generated, integrated Layer 2/3 topology maps. Tools built into the maps, such as Layer 2 Trace and IP/MAC Finder, offer the fastest way to locate a problem and validate connectivity of any device on the network.

4. Compliance Readiness

Confidence in Your Information

With a manually created inventory, it's simply not possible to create truly accurate network and server network diagrams. Automating the process – including updates to the network as they happen – is the only complete way to respond to audit and compliance requirements with 100% confidence.

Part of your job is to ensure that all your network resources are connected at all times, even when the network grows, offices are moved or datacenter resources are consolidated. This is no small task. Leveraging comprehensive network inventory and configuration information supports reporting/documentation needs of all internal business processes such as Information Technology Infrastructure Library® (ITIL) and external regulatory requirements like PCI, SOX, FISMA, Basel Accord, and HIPAA.

That's why automated Layer 2 discovery is so important in today's complex networks; it makes it easy to comply with confidence to quarterly and annual reports or external audits. Automated discovery ensures you'll have:

- **Accurate network and server inventory**
- **Information that you can believe in**
- **Up-to-date network diagrams**

CONCLUSION

Comprehensive and automatic Layer 2 discovery makes your job easier by saving you time and making you compliance-ready. Save hours of manual documentation and tracking down your network connections to create accurate maps and inventories. Avoid the time and room for human error when updating inventories for newly added or removed devices. Compliance with certainty and pinpointing network issues are simple with insight into the detailed view of network interconnections.

Ultimately, understanding your network at the Layer 2 level frees up your time to solve the problems and work on other projects that urgently need your attention.

VENDOR COMPARISON WORKSHEET

Required Functionality

	VENDOR 1	VENDOR 2	VENDOR 3
Discovers physical connectivity, device type, asset/inventory and configuration information. Including VMware, IPv6 devices, native IPv4 devices.			
Inventories platform identification and classification for Routers, Switches, Wireless Access Points, Printers, Windows, Unix, Linux, Macintosh, Firewalls, from leading network manufacturers like: Cisco, Juniper, Foundry, HP, Nortel/Bay Networks, 3COM, Netgear, Dell, VMware.			
Auto-generates integrated Layer 2/3 topology maps with full visibility into physical, logical and virtual connectivity, including IP and VLAN-specific information. Dynamically updates maps as changes occur in the network. Maps are easy to customize and manipulate. Exports to programs like Microsoft® Visio™ or PDF. Auto-discovers new devices and alerts you to any network changes.			
Finds the location and validates connectivity with Layer 2 Trace and IP/MAC Finder of any device on the network.			
Supports compliance reporting and documentation needs of internal business process and regulatory requirements like PCI, SOX, FISMA, Basel Accord, and HIPAA. Export to CSV or Excel formats.			