



Your Checklist for Success

Everything You Need to Know About
Hybrid Application Dependency
Mapping for Change Management



Application Dependency Mapping in any network aims to help you piece together a comprehensive map of your entire ecosystem from end to end. Blind spots are where mistakes or breaches occur, and in today's hyper-connected IT world, it is easy to lose sight of both the big picture and the details. In this white paper, we will consider:

- Why a business needs application mapping, and why a tool that shows dependencies is so valuable;
- What data you should gain from an application discovery tool;
- The importance of real-time passive mapping vs. active or scheduled mapping;
- The difference between an Agentless solution and competitive tools; and,
- Some application dependency mapping use cases that could show quick business benefit

Application mapping: What's the Big Deal?

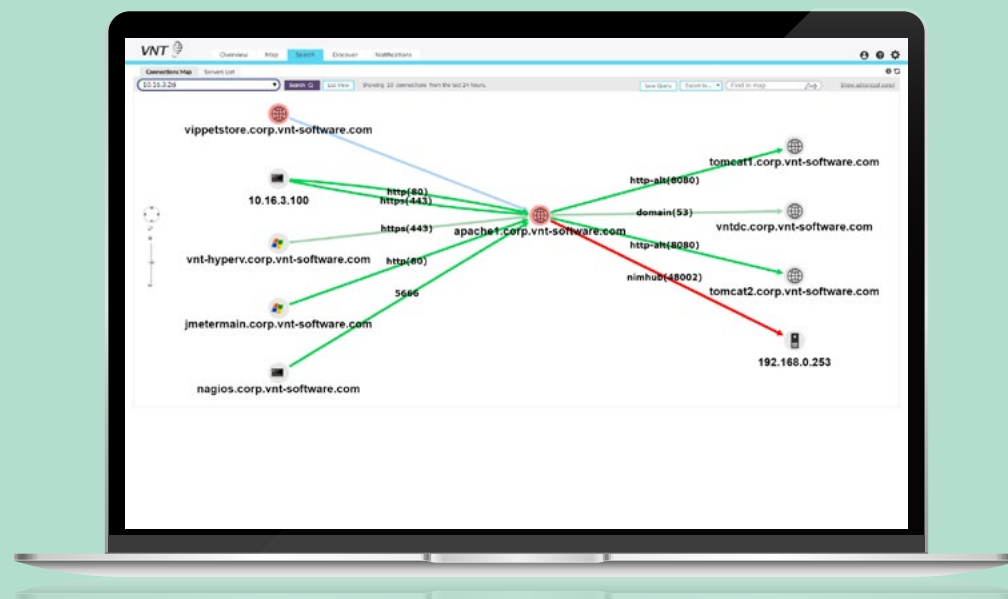
Knowing your asset inventory is not enough in today's fast-paced IT world. Traditionally, enterprises had relatively simple networks, but most companies today are working in a heterogeneous environment with on-premises infrastructure, as well as multi or hybrid cloud, Hypervisors (e.g., VMware, Hyper-V), container systems, and microservices; visibility more challenging than ever before. To stay on top of your environment, your business needs to have a view of all server hardware, software applications (including versions), certificates and patch levels, and virtualized and cloud technologies.

You should also be able to quickly see how these devices and applications connect and communicate to each another, and how changes to one affect the other.

This is where application mapping or network discovery tools come in. This technology can identify and map out all the instances, communication channels, and applications that are being used in your IT ecosystem, as well as the ports and services that are being used. The best solutions can also quickly and easily define VPCs, Subnets, and Security Groups on Cloud Providers (e.g., AWS, Azure, and GPS).

When displayed on an intuitive map, you have a visual representation of your application dependencies that can be shared, more deeply examined, or used for planning and troubleshooting.

This visualization can be used for business strategy, organizing by business context, and prioritizing critical alerts and information in real-time.



Think Platform and OS Agnostic

It is important to consider what environments are included in your application mapping solution; after all, you don't want to limit your future business structure or technology changes. The optimal solution will not be limited to any particular infrastructure, and will include legacy solutions and bare-metal, as well as containers and multi-cloud. A platform independent choice means you always have full visibility.

The same logic goes for any solution that is fixed to a certain operating system or uses templates for specific mapping options. A choice that utilizes network or wire data will always remain flexible if your business needs change.

When businesses don't follow this best-practice, complexity can spiral. According to the latest Next Generation ITAM Report, "the average IT organization uses 11 or more different inventory and discovery tools, with more than 40 being common. All but the most efficient elite groups admit to having some lingering degree of Excel spreadsheet reliance to bridge the discrepancies. In a recent survey, 1 EMA found that each respondent spent an average of 15 hours every week resolving discovery discrepancies. It stands to reason those superior capabilities in discovery, rationalization, and reconciliation are essential ingredients in next-generation caliber automation."

Why Dependencies?

Knowing what you have in your ecosystem is an important first step, but it is essential to recognize the effect that all of your servers and applications have

on one another; this is not included in Native Cloud solutions for network discovery. If you cannot see the dependencies within your applications it is difficult to estimate the impact of changes, or to identify a problem's root cause.

When it comes to use cases like change impact analysis (see below), application dependencies are a true must-have. Getting the most out of network or application discovery means having a clear visual of all dependencies in the network, preferably shown in a user-friendly way (for example, with an easy-to-read color scheme that simplifies the learning curve for reading the application map for all stakeholders involved).

Sharing Data with a CMDB

Perhaps your company already uses a Configuration Management Database, and you're looking for ways to get more out of the system. Integrating with the right application mapping tool can add valuable data to your existing inventory. While a CMDB is a basic warehouse or repository of information about what you have, adding insight into dependencies and communications can take it to the next level.

An out-of-the-box integration with a CMDB such as IBM CCMD, ServiceNow ITSM, Cherwell Service Management, or CA CMDB can provide one single source of reference for all your assets.

Understanding the ways in which they communicate and depend on one another can streamline operations, improve collaboration, and reduce human error. As always, the best vendors will be accommodating on integrations; then, if your CMDB changes in the future, you can maintain the flexibility you need.

The Importance of Passive Mapping over Active Scanning

Whether calling it periodic scanning or active scanning, the fact is that it is an insufficient form of scanning. Today's complex and fast-paced

data centers need continuous scanning capabilities, and this can only be done effectively with passive mapping technology. Here's the difference.

Periodic scanning will be scheduled by IT admin or your vendor of choice, usually occurring during off hours, since it has a heavy impact on network performance.

This could be sufficient from the user perspective, but not when it comes to attaining an accurate understanding of your data center.

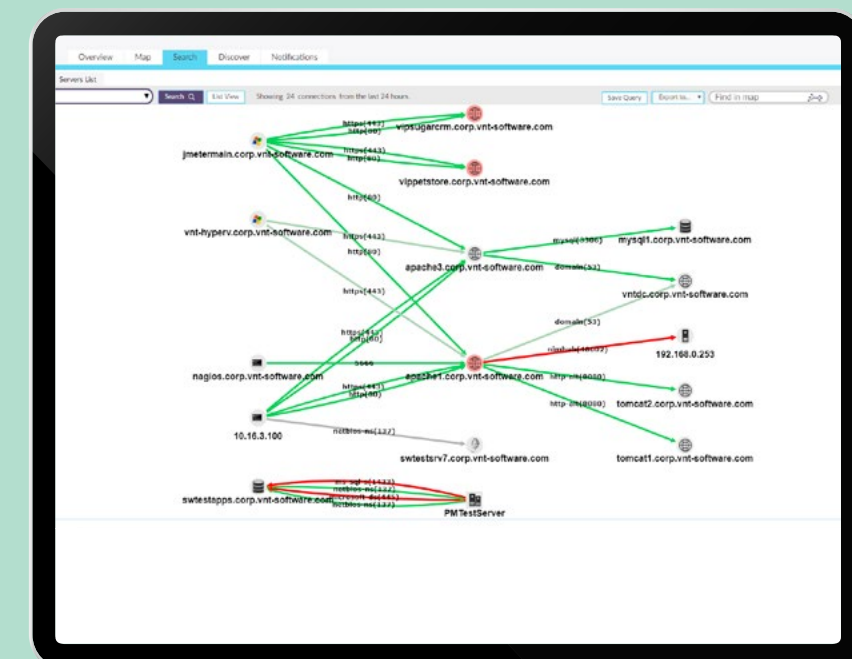
In contrast, continuous scanning through passive technology gleans its intelligence from a complete set of data, giving you an accurate map of dependencies and traffic throughout the day, including when you're scaling up to, or are at peak. No additional network traffic is created and, since it doesn't touch any endpoints, creates no risk of disrupting critical processes. Since passive monitoring technology uses no credentials, it is a far better choice for creating baselines, scaling to monitor large amounts of data, and ensuring zero impact on performance.

To Agent or Not to Agent?

Many application mapping solutions use agents for discovery, justifying this by claiming better accuracy or affordability; however, agents are a cumbersome and complex solution when it comes to discovery. First, you need to put

agents everywhere or you run the risk of having gaps in your map and losing comprehensive visibility. And second, the use of agents means that you need to know in advance what you're monitoring. Since they rely on human knowledge, this makes agent-based solutions less reliable than the alternatives. The cost of agents might be cheaper than packet pieces and other hardware, but there are other options on the market.

In contrast, using wire data is a much more accurate and lightweight method of discovery and speeds up both onboarding and time to value. Network traffic is identified in real time, giving immediate insight into dependencies and changes. Wire data is also independent of pre-existent developer designs or network blueprints, so unexpected connections and dependencies can be found, even if they are more than a single hop away. Without any hardware or agents needed, network discovery using wire data is also far more transparent in terms of cost and maintenance.

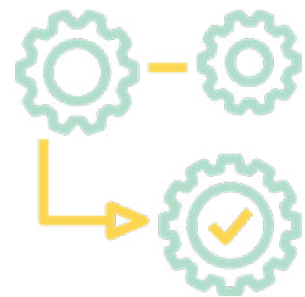


Use Cases for Application Dependency Discovery

What you're gaining with application dependency mapping is visibility. As such, visibility is a foundational step in dozens of business use cases. Following are some of the most popular business benefits of the technology.



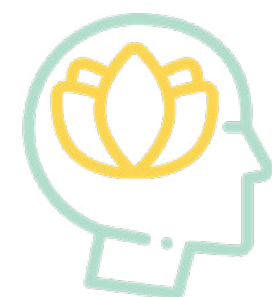
Business Application Mapping: Understanding of what servers and applications you have, as well as discovery of dependencies and communications, and the defining of subnets, VPCs and security groups on AWS. By understanding connections and gaining an accurate map, you can retire or consolidate assets with peace of mind regarding the ensuing business impact.



Change Management: Prioritize asset needs by recognizing their space within your entire ecosystem. Uncover each asset's relevance with respect to business-critical systems and services using your map as the foundation for planning and implementing change, from changes as small as single application retirement to full cloud migrations.



Root Cause Analysis: Identify the points of failure for any issue within your environment, and quickly isolate the smartest path to full recovery. Your map should show you failed connections, context for bottlenecks or disruption of service, as well as systems that need to be examined in more detail.



Peace of Mind: Find the applications, servers, and systems that will be affected in case of a breach or an outage, setting smart security policies ahead of time that handle these events. This provides the confidence that your network is a known quantity, leaving nothing to chance, from backups and disaster recovery, and to incident response in case of a cyberattack.

About VNT

VNT creates interactive, real-time maps of your entire IT ecosystem, offering granular detail. Our solution is completely platform-agnostic and has limitless use-cases. Uniquely, VNT works without credentials, firewalls or agents. With network discovery based on real traffic, you gain ultimate visibility of all dependencies and communications. Use this to efficiently assess costs, discover a hybrid ecosystem, or model workloads for migration.

Our platform is easy to deploy, is highly scalable, and can be integrated with all your current tools and products seamlessly. Whether you're primarily on the cloud, use hybrid or multi-cloud environments, or reside on-premises, VNT can be used to discover, plan, and maintain the most comprehensive real-time map for your application ecosystems. You can easily configure your map to manage IT assets by business context, prioritizing the right alerts and, more importantly, keeping your business running smoothly.

Contact us at info@vnt-software.com to see a live demo.

