



WANAWARE ASSET INVENTORY MANAGEMENT

The technological framework of the modern enterprise is broad, constantly evolving, and widely dispersed. Organizations are responsible for managing a highly complex network of Connected Assets, which includes not only traditional IT infrastructure and hybrid cloud environments but also a growing array of SaaS applications, a distributed workforce, and the increasingly critical components of IoT, OT, Edge and Services.

This level of complexity invariably leads to a critical lack of Connected Asset visibility, posing a significant threat to effective technology management and security. To mitigate these risks, comprehensive Asset Discovery is crucial. It's the first step required in reestablishing control, strengthening cybersecurity defenses, and ensuring the success of core technology functions. These functions, as well as Asset Inventory and Lifecycle Management, ensure operational security, compliance, and cost observability.

Connected Asset examples for each category can be found at:

Connected Assets

What Are Connected Assets?

Connected Assets are the technology backbone of any modern organization.

These include a wide array of devices, software systems, cloud platforms, applications, and supporting services, that are connected to a network or the internet and play a fundamental role in supporting business operations

Connected Asset Categories



IT: IT Connected Assets are a core fundamental part of any organization's technology infrastructure



IoT (Internet of Things): IoT Connected Assets are devices and systems embedded with sensors, software, and network connectivity, enabling them to collect and exchange data over a network or the Internet



OT (Operational Technology): OT Connected Assets are hardware or software platforms dedicated to monitoring and controlling physical devices and industrial processes



Applications: Application Connected Assets comprise all elements that constitute an application, including its dependencies and how they interact. These can be deployed in various architectures such as monolithic, microservice, hybrid, or SaaS



Services: Service Connected Assets are distinct functionalities or modules, often leveraged as building blocks for applications, that operate through a network or the internet



Telecom Circuits: Telecom Connected Assets encompass all data, voice, and video communication circuits utilized by an organization



Anything Else with an IP or URL: Organizations frequently possess additional assets that don't neatly fit into the previously mentioned Connected Asset categories.

Why Is Asset Discovery Important?

Unlocking complete and total visibility of all Connected Assets requires comprehensive Asset Discovery. This is essential for effective management, strengthened security, and maximized efficiency and operational effectiveness.

- **Establishing Clarity:** Uncovering all Connected Assets, ensuring that organizations have a clear understanding of what they own, where it is, and how it is being used. This clarity is the foundation for all other benefits.
- **Enhancing Protection:** Armed with an accurate inventory, organizations can swiftly identify unauthorized or unknown assets, closing security loopholes and mitigating risks.
- **Ensuring Compliance:** The extensive records generated by Asset Discovery simplify compliance with regulatory requirements, protecting the organization from potential penalties, reputational damage and operational disruption.
- **Driving Efficiency:** By revealing opportunities for resource optimization, Asset Discovery empowers organizations to make data-driven decisions, leading to cost savings and improved IT efficiency.
- **Optimizing Processes:** A centralized view of all assets makes IT operations smoother, more responsive, and less prone to errors.

What Are The Challenges In Asset Discovery

Organizations face several key obstacles when implementing Asset Discovery, particularly those with complex and expanding IT infrastructures:

- **Asset Sprawl:** Keeping pace with the rapid growth of Connected Assets, particularly in cloud, IoT, and OT, can be overwhelming and lead to visibility gaps.
- **Dynamic Environments:** Frequent changes in the IT environment make it challenging to maintain an accurate and up-to-date asset inventory.
- **Integration Challenges:** Connecting Asset Discovery data to existing IT management systems (CMDBs, ITSM) often involves complex integration tasks.

What Are The Best Practices For Asset Discovery

To ensure effective Asset Discovery and overcome common challenges, organizations should implement these key best practices:

- **Automate Asset Discovery:** Utilize automated tools to significantly simplify and enhance the accuracy of asset identification.
- **Utilize Platform Integrations:** Connect asset discovery systems with current IT Management, Identity, and Security platforms for a holistic view of the IT infrastructure.
- **Define Clear Procedures:** Establish and document clear processes for both asset discovery and ongoing inventory management to guarantee consistency and precision.

What Makes WanAware Asset Discovery Fundamentally Different And Unique?

WanAware's approach to Asset Discovery challenges and reimagines current solutions with several key innovations specifically designed to address the complexities of modern technology environments:

Agentless Discovery

WanAware distinguishes itself from other asset management platforms through its agentless operation. WanAware discovers and inventories Connected Assets without necessitating the deployment of software

agents, clients, or other software on target systems or platforms. Agent based asset discovery platforms can introduce significant security and operational issues including:

- **Agent Installation Issues:** Installing agents on devices can be problematic, especially in environments with diverse or legacy systems. Agents can cause conflicts, performance issues, or installation failures.
- **Operational Overhead:** Deploying and maintaining agents across a large

number of devices can add significant operational overhead for IT teams.

- **Security Compromise Risks:** When agents are not properly secured or managed, they could be exploited by attackers to gain access to systems or networks.

What Makes WanAware Asset Discovery Fundamentally Different And Unique?

WanAware's approach to Asset Discovery challenges and reimagines current solutions with several key innovations specifically designed to address the complexities of modern technology environments:

Agentless Discovery

WanAware distinguishes itself from other asset management platforms through its agentless operation. WanAware discovers and inventories Connected Assets without necessitating the deployment of software agents, clients, or other software on target systems or platforms. Agent-based asset discovery platforms can introduce significant security and operational issues including:

- **Agent Installation Issues:** Installing agents on devices can be problematic, especially in environments with diverse or legacy systems. Agents can cause conflicts,

performance issues, or installation failures.

- **Operational Overhead:** Deploying and maintaining agents across a large number of devices can add significant operational overhead for IT teams.
- **Security Compromise Risks:** When agents are not properly secured or managed, they could be exploited by attackers to gain access to systems or networks.

WanAware simplifies Connected Asset discovery, reduces operational overhead and security compromise risks, while minimizing the performance impact on the systems being monitored.

It also makes it easier to discover assets in environments where installing agents is not feasible or desirable, such as IoT/OT devices or in environments with security or compliance requirements.

No Scanners or Privileged Credentials Required

While other asset management platforms promote an agentless strategy, it's important to note that they frequently depend on discovery scanners that necessitate privileged access. These scanners can effectively pinpoint IT assets in conventional environments such as physical offices, branch locations, and data centers, along with some cloud-based assets. However, they often encounter difficulties when attempting to discover IoT (Internet of Things), OT (Operational Technology), Applications, and Services.

Moreover, the use of discovery scanners can introduce substantial operational and security risks, including the following:

- **Privileged Credential Exposure:** Compromised credentials allow attackers to access sensitive systems and data on scanned devices, potentially leading to privilege escalation or lateral movement within the network
- **Access to Sensitive Information:** Credentialed scans can access highly sensitive information, including user accounts, system configurations, and critical data. Proper controls are essential to prevent this information from being exposed.

WanAware revolutionizes Connected Asset discovery by transcending the limitations of standard scanner and

agent-based approaches. Instead of relying on potentially intrusive and incomplete scans or the complexity of agent-based solutions, WanAware leverages the wealth of asset information already residing within an organization's existing disparate systems and platforms.

By seamlessly integrating these disparate sources, WanAware creates a unified and meticulous Connected Asset inventory. This not only streamlines asset discovery but also ensures that the inventory is continuously updated and reflects the most current state of the organization's assets.

Platform Integrations

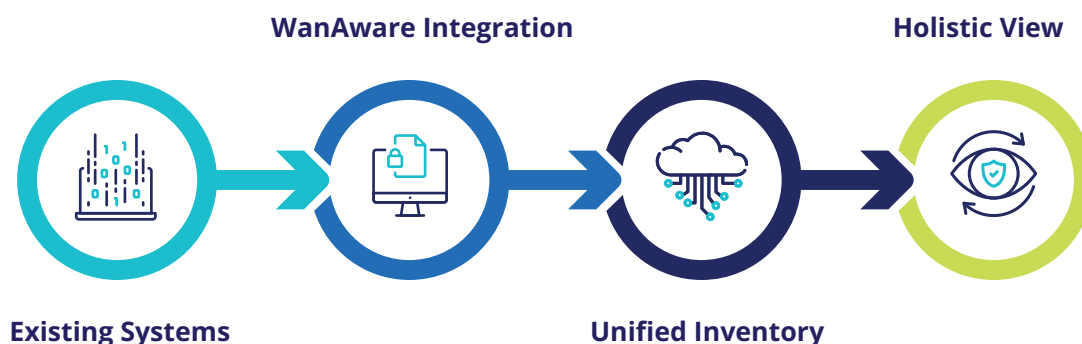
WanAware employs a powerful suite of integrations, seamlessly connecting with an organization's existing disparate systems and platforms to establish an in depth and interconnected asset inventory.

This integration enables WanAware to aggregate asset data from a wide array of sources, both internal and external, enriching it with valuable context and metadata.

By consolidating this information, WanAware provides a unified and holistic view of the technology landscape, streamlining workflows and significantly reducing the need for manual data entry.

Furthermore, these integrations facilitate the bidirectional sharing of asset data

with other systems within the organization's ecosystem. This interconnectivity ensures that asset information remains consistent and up-to-date across all platforms, fostering collaboration and informed decision-making. By breaking down data silos and promoting data fluidity, WanAware empowers organizations to optimize their asset management practices, enhance operational efficiency, and drive business value.



Cloud Providers

- Amazon Web Services (AWS)
- Microsoft Azure
- Google Cloud Platform (GCP)

Security Platforms

- Endpoint Detection and Response (EDR)
 - CrowdStrike
 - Microsoft Defender
 - Firewall
 - Palo Alto Networks
 - Fortinet

Network Platforms

- Edge
 - Cisco Meraki
- Switch

- Cisco Meraki

- Wireless Access Points

- HPE Aruba

- Cisco Meraki

Endpoint Management

- Microsoft Intune

Hypervisors

- VMware
- Microsoft Hyper-V

ITAM/CMDB/ITSM Tools

- ServiceNow
- Jira Service Management

Identity & Access Management Platforms

- Microsoft Entra

Netflow

Schemaless Data Model

WanAware's adoption of a schemaless data model provides a significant advantage in its ability to ingest and manage diverse Connected Asset data. Current data models often rely on rigid, predefined schemas which dictate the structure and format of incoming data. These legacy models create bottlenecks and complexities when ingesting Connected Assets from disparate sources that don't conform to these predefined structures.

- **Flexibility:** A schemaless model, as implemented by WanAware, offers the flexibility to accommodate Connected Asset data in any format, regardless of its source or structure. The schemaless approach eliminates the need to force-fit this data into rigid schemas, thereby streamlining the Connected Asset ingestion process and reducing the potential for data loss or corruption.
- **Accelerated Connected Asset Onboarding:** By eliminating the need for extensive data mapping and transformation, WanAware significantly accelerates the Connected Asset Discovery and Inventory process.
- **Support for Any Connected Asset:** WanAware's schemaless data model enables the discovery and inventory of any connected asset, both present and future.

Infinite Scalability

WanAware's architecture is designed to meet the ever-growing needs of today's dynamic organizations. It offers seamless scalability to handle the increasing demands that come with an expanding technology environment. Whether your organization is adding new devices, migrating to the cloud, or deploying additional applications, WanAware adapts and grows alongside your infrastructure.

Current WanAware Platform Capabilities

- IP Address Support
 - Support for over 10 Billion Public IPv4 and IPv6 Addresses
 - Support for over 100 Billion Private IPv4 and IPv6 Addresses
- Real-time Data Ingestion Support
 - Support for over 1 Trillion simultaneous data streams through the WanAware Data Pipeline
 - Support for 20 Trillion Connected Asset Create, Update, Delete Operations Daily

The architecture of the WanAware platform ensures that performance remains optimal and that you always have a detailed, up-to-date inventory of all your assets. With WanAware, the size or complexity of your infrastructure won't impact your ability to maintain a clear and sweeping view of your Connected Asset landscape. By eliminating performance bottlenecks and providing continuous visibility, WanAware empowers organizations to manage their Connected Assets effectively, regardless of how their technology environment evolves. What are the Challenges in Asset Discovery?

Contextual Awareness

Unlike simple asset lists that merely provide a basic inventory, WanAware goes far beyond by uncovering the critical relationships and dependencies that exist between your IT assets. By meticulously mapping these connections, WanAware creates a proficient and contextual understanding of your entire IT environment.

This deep level of contextual awareness is invaluable for a wide range of critical tasks. For example, when troubleshooting an issue, you can quickly trace the potential ripple effects across interconnected systems. When conducting an impact analysis, you can accurately assess the potential consequences of a change before it's implemented. And when performing a security risk assessment, you can identify vulnerabilities that arise from the interplay

of different assets. Armed with this foresight, you can proactively anticipate the impact of changes, make informed decisions, and avoid unintended consequences that could disrupt your operations, compromise security, or impact your bottom line.

WanAware Asset Discovery is differentiated by its agentless approach, schemaless data ingestion, infinite scalability, contextual awareness, and robust integration capabilities. These features enable organizations to gain a thorough, real-time, and insightful understanding of their IT assets, empowering them to make informed decisions and manage their infrastructure more effectively.



How Does WanAware Perform Connected Asset Discovery

WanAware's Connected Asset Discovery uses a multifaceted approach that integrates with an organization's underlying systems and platforms. This is achieved through various integration options, including Platform Integrations, API Connections for real-time data exchange, Bulk Uploads for large datasets, Manual Uploads for tailored control, and Netflow Integration for discovery through network data flows.

By automating discovery through integrations and allowing for manual input, WanAware ensures effective Connect Asset visibility. Additionally, the platform enriches gathered asset data with contextual information and metadata, providing deeper insights and enabling more effective asset management strategies.

Platform Integrations and Interoperability

WanAware's Connected Asset Discovery integrates with an organization's current IT ecosystem, spanning diverse systems and platforms. This in turn becomes the central point for gathering asset intelligence, pulling data from a wide spectrum of internal systems and external feeds, and intelligently layering it with pertinent context and metadata. By consolidating this wealth of information

into a singular, cohesive representation of the IT environment, WanAware optimizes operational processes and minimizes manual data handling.

Furthermore, these integrations establish a two way data flow with other organizational systems. This interconnectedness assures uniform data and facilitates enhanced teamwork and well informed strategic choices. By dismantling data silos and encouraging seamless data movement, WanAware equips businesses to refine their asset management strategies, boost operational effectiveness, and generate greater business returns.

API Connections

The WanAware GraphQL API supports queries and mutations of Connected Assets including Asset Attributes Asset Create, Update, Delete Operations, Dependency and Interdependency Mapping, Structure Tags, Data Tags. This API is suited for organizations that would like to implement custom integrations, build applications or integrate data into existing systems.

Bulk Upload

WanAware provides a streamlined process for uploading substantial amounts of

asset data using structured CSV file formats. Bulk Upload is particularly valuable for scenarios where a large volume of asset information needs to be imported quickly, such as during the initial setup or for managing Connected Assets that are not easily discovered through automated means.

Manual Inventory

WanAware Connected Asset Discovery primarily focuses on automated asset discovery, however the platform also recognizes that there may be situations where manual documentation is necessary or preferred. This hybrid approach ensures exhaustive Asset Discovery and Inventory.

Manual Asset Discovery Use Cases:

- **Niche Assets:** Specialized or unique assets that may not be easily identified or categorized by automated discovery tools.
- **Exceptions:** Assets that fall outside the standard parameters of automated discovery, requiring additional context or information.
- **Incomplete Data:** Instances where automated discovery yields incomplete or insufficient data, necessitating manual intervention to fill in the gaps.
- **Sensitive Assets:** Assets that require special handling or confidentiality, where manual documentation may be more

appropriate than automated processes.

Netflow

WanAware supports utilizing Netflow data as an additional data source to enhance the asset discovery process, providing insights into network communication and helping to identify devices that might otherwise be missed by traditional discovery methods.

- **Identifying Active Devices:** WanAware can identify devices actively communicating on the network with Netflow data, including those that may not be discovered by other methods.
- **Mapping Network Communication:** Netflow also reveals how devices are interconnected and what services they are using to enhance application dependency and network relationship mapping.
- **Detecting Unauthorized Devices:** The Discovery of unusual network traffic patterns can indicate unauthorized or rogue devices that have connected to the network.
- **Correlating with Other Data:** Netflow data can be combined with other asset information to create a more complete picture of the IT environment.
- **Supplementing Other Methods:** Netflow may also be utilized to supplement other discovery

techniques, providing a more holistic view of connected assets.

Effective management and security of a modern IT infrastructure are fundamentally impossible without a unified, accurate, and continuously updated understanding of every Connected Asset. IT Asset Discovery, therefore, is not only a best practice; it is the foundational element upon which all other IT governance and security strategies must be built. The absence of this robust visibility directly undermines an organization's ability to mitigate risk and optimize resources.

Wanaware

www.wanaware.com

