

EBOOK

Why Does **Asset Management** Matter for **Cybersecurity**?



AXONIUS

THE LINE BETWEEN IT AND SECURITY IS BLURRING. WHAT WAS ONCE A SIMPLE DELINEATION BETWEEN KEEPING INFORMATION SAFE AND PROVIDING THE TOOLS NECESSARY TO GET WORK DONE IS NO LONGER CLEAR.

Read on for a look at why asset management – once a pure IT play – matters for cybersecurity, and how both IT and security teams can benefit from cybersecurity asset management.

WHAT DO WE MEAN BY "IT ASSET MANAGEMENT"?

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When we look at what has been traditionally called "**IT asset management**", we're referring to a set of practices surrounding the financial, inventory, contractual, and lifecycle management of an IT asset. In this case, an "IT asset" is really any device or cloud instance that is used for business purposes.

Some of the responsibilities of an IT asset management program would include:



ASSET INVENTORY - Getting a detailed inventory of all hardware, software, and network assets



LICENSE MANAGEMENT - Making sure that all assets are running properly licensed software



LIFECYCLE MANAGEMENT - Deciding which assets should be decommissioned, and managing the software licenses on these assets and updating the inventory

Using the traditional definition, IT asset management would fall squarely in the hands of the IT and desktop support teams. But the process of gathering data about every asset and understanding what software is running is critical and foundational to cybersecurity.

IN THIS EBOOK, WE'LL LOOK AT WHAT WE CALL "CYBERSECURITY ASSET MANAGEMENT" – OR THE PROCESS OF:

01 **Gathering data** from any source that provides detailed information about assets

02 Correlating that data to **produce a view of every asset** and what is on it

03 **Continually validating** every asset's adherence to the overall security policy

04 **Creating automatic, triggered actions** whenever an asset deviates from the policy

In this context, cybersecurity asset management (or "**modern asset management**") becomes the nexus for cybersecurity projects and decisions.

ASSET MANAGEMENT & ENDPOINT PROTECTION

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When it comes to endpoint security, we have access to an amazing array of tools. From next-generation AV, to cloud and AI-based EPP/EDR products, there are a staggering number of tools to choose from – and organizations spend millions to protect their endpoints.

Despite how effective these endpoint protection tools can be, there are fundamental challenges that arise and can only be answered by asset management.

01



WHICH ASSETS ARE MISSING AN ENDPOINT AGENT?

02



WHICH ASSETS HAVE THE AGENT INSTALLED, but the agent isn't functioning properly?

The only way to find assets missing an agent or with an agent not working is by gathering data from multiple sources. Asking the agent console, **"Which devices are missing your agent?"** won't work, as EPP/EDR tools don't know which devices exist that should have the agent installed.

ASSET MANAGEMENT & VULNERABILITY MANAGEMENT

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Today's vulnerability assessment tools do an incredible job of identifying known vulnerabilities present in the devices they're aware of.



THE VA SCANNER CONSOLE – to see all instances that are known and being scanned

But how can we ensure that all assets – including workstations, laptops, virtual machines, and other IT assets – are being scanned?



IAM SOLUTIONS – Sources like AD or Azure AD that authenticate and authorize users and devices

To understand which assets are not covered by VA tools, we must gather data from:



NETWORK/INFRASTRUCTURE DATA – To see all assets known to the network, but aren't being scanned

Only when you can understand all assets – and compare all to those being scanned – can you **uncover the difference** and see any asset not being scanned by a VA tool.

ASSET MANAGEMENT & CLOUD SECURITY
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**WHEN IT COMES TO CLOUD WORKLOADS,
MANY OF THE TOOLS WE USE TO SECURE
OUR ON-PREMISE DEVICES DON'T APPLY.**

The dynamic, ephemeral nature of the cloud makes it difficult for some security tools to know when a new instance has been spawned that needs attention.

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VULNERABILITY ASSESSMENT & THE CLOUD

Unlike on-premise machines, VA scanners face challenges with cloud instances. With dynamic IPs, VA tools can't predict where a new instance will pop up – and they can't scan what they don't know.

INSTEAD, WE MUST GATHER DATA FROM:

- 01 The VA scanning console** - To see all instances that are known and being scanned
- 02 The cloud infrastructure console** - To see all instances in the environment

Now, with more than half of all VMs residing in public cloud infrastructure¹, **this mismatch can become a critical security risk.**

Solving the cloud VA coverage gap relies on understanding every time a new instance is spawned, and letting the vulnerability scanner know that there's a new machine to add to its scan schedule.

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ACCESS MISCONFIGURATION & THE CLOUD

Another common cloud asset management challenge is access misconfiguration.

Nearly every day, there's a new story about the latest breach or leak as a result of a misconfigured cloud instance. The nature of the cloud means that anything can be publicly available. One change to a configuration detail can make sensitive data available to sources like Shodan and Grey Hat Warfare.

To ensure all public cloud workloads are properly configured, security and IT teams must continuously monitor changes to configuration details, and understand the context and risk of any change at scale.

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CLOUD ASSET COMPLIANCE

Most security organizations adhere to industry-specific regulations like HIPAA or PCI/DSS, or frameworks like the CIS 20, NIST, or ISO to understand their cybersecurity maturity and map efforts to industry best practices. The Center for Internet Security (CIS) provides objective, consensus-driven security guidelines and specific scored rules for public cloud infrastructure providers including:

CIS Amazon Web Services Foundations Benchmark 1.3.0

CIS Microsoft Azure Foundations Benchmark version 1.2.0

CIS Google Cloud Platform Foundation Benchmark version 1.1.0

CIS Oracle Cloud Infrastructure Foundations Benchmark version 1.1.0

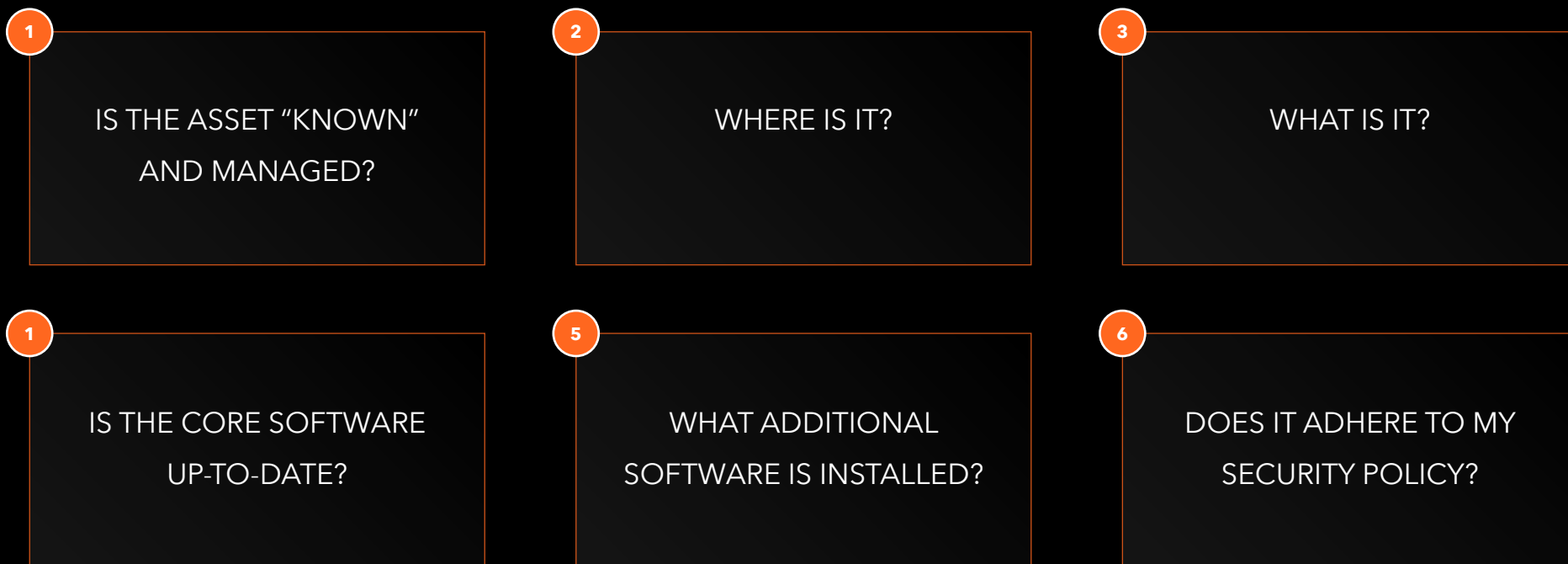
By comparing all public cloud workloads in their environments to the **scored rules in the CIS benchmarks** for individual cloud providers, security teams are able to understand any time an instance deviates from best practices.

ASSET MANAGEMENT & INCIDENT RESPONSE

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When an **incident response (IR) analyst** receives an alert about an asset, several questions immediately come to mind.



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By looking at all that's known about the asset in question - with information from many different data sources - security analysts can quickly gather the context and detail needed to inform their investigation. They can get information on:

01
●○○○○○

The OS and patch level

02
●○○○○○

All other installed software

03
●○○○○○

Known vulnerabilities

04
●○○○○○

Agent coverage and health

05
●○○○○○

Users and admins who have logged in

06
●○○○○○

Available patches

07
●○○○○○

Historical information and changes over time

ASSET MANAGEMENT & CONTINUOUS CONTROLS MONITORING

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Along with the examples cited, it's essential to know any time an asset stops adhering to the overall security policy.

Security teams need an automated way to learn when:

01

AN ENDPOINT IS MISSING A SECURITY AGENT, or the agent stops working

02

AN ASSET ISN'T BEING SCANNED by a VA tool

03

A CLOUD INSTANCE ISN'T COVERED or has become publicly accessible

04

An endpoint has known and/or **CRITICAL VULNERABILITIES**

05

A user has **IMPROPER ACCESS RIGHTS**

In a dynamic, ever-changing environment, quarterly audits simply aren't enough to catch these issues. Only by having an automated process to detect changes that bring assets out of policy can you truly know that the security policy is being adhered to at any given moment.

ASSET MANAGEMENT & SECURITY POLICY ENFORCEMENT

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Finally, knowing when an asset is out of policy is important – but this only matters if you have the resources to do something about it.

Since cybersecurity asset management works by connecting to all the security and management solutions that know about assets, you can then use those same sources to remediate issues.

01

IF AN ENDPOINT IS MISSING AN AGENT, you can use a solution like WMI or Tanium to install the missing agent on any endpoint

02

IF AN ASSET IS MISSING FROM A CMDB or has inaccurate information, update the CMDB entry

03

IF AN ASSET OR CLOUD INSTANCE IS UNKNOWN to a VA scanner, tell the VA scanner to add it to the next scheduled scan

04

IF AN ASSET HAS A CRITICAL VULNERABILITY, apply the patch automatically

These are just a few examples of the automated actions that can be triggered using the tools that already exist in your environment.



Axonius is the cybersecurity asset management platform that gives organizations a comprehensive asset inventory, uncovers security solution coverage gaps, and automatically validates and enforces security policies. By seamlessly integrating with over 300 security and management solutions, Axonius is deployed in minutes, improving cyber hygiene immediately.

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See your assets in context, validate security policy compliance, and automate remediation with the Axonius Cybersecurity Asset Management Platform.

SEE IT FOR YOURSELF