

**DARKTRACE**

# Darktrace / NETWORK



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The Industry's Most  
Advanced Network Detection  
and Response (NDR) Solution,  
Powered by Self-Learning AI.

# Network Complexity on the Rise

Modern networks are expanding far beyond on-premises into virtual environments, cloud and hybrid networks. More than 50% of incidents will come from cloud network activity by 2029 <sup>1</sup>, meaning defenders need a solution that can level the playing field against complex attacks that traverse multiple areas of a digital estate, including north-south and east-west traffic.

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With 63% of employees working remotely or on a hybrid basis <sup>2</sup>, the need to maintain network visibility over remote worker devices is increasingly important, however this is not something other NDR or EDR tools cover.

# Old Tools are Blind to New Threats

Most NDR vendors and network security tools such as IDS/IPS rely on detecting known attacks with historical data and supervised machine learning, leaving organizations vulnerable to novel threats such as zero-days, variants of known attacks, supply chain attacks and insider threats.

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This legacy approach means that at least one organization needs to be 'patient zero' - the first victim of a novel attack – before it can be detected elsewhere. Other NDR vendors also apply models that are trained globally and are not unique to each organization's environment, creating a high number of false positives and alerts that lack business context.

<sup>1</sup> Gartner Market Guide for Network Detection and Response, 2024.

<sup>2</sup> McKinsey Global Institute, 2023

# SOC Teams Under Pressure

Over 70% of SOC analysts report that they are experiencing burn-out <sup>3</sup>, therefore it is necessary for organizations to leverage new approaches for combating network threats to reduce the pressure on their security team without compromising on security outcomes.

With 57% of organizations reporting that their SOC aggregation and correlation capabilities need improvement <sup>4</sup>, SOC teams need to consider alternative solutions such as investigative AI to ease the burden on analysts, reduce alert fatigue and transform their network security operations to a more proactive state.

## Business Benefits

- **Protect your business against known and novel threats**  
in real-time, without relying on historical attack data, threat intelligence or a cloud connection.
- **Gain full network visibility**  
across on-premises, virtual, cloud, hybrid networks, including remote devices.
- **Augment your SOC team with AI**  
that automates the investigation and triage of security incidents at machine speed, saving a significant amount of time and resources.
- **Avoid business disruption**  
with an autonomous response solution that uses a contextual understanding of your business to take precise actions and contain threats in real-time, without impacting business operations.
- **Unify insights across your business**  
by contextualizing data from your network, cloud, identities, OT devices, email, endpoints, third party alerts and threat intelligence in a single solution.

<sup>3</sup> Tines - Voice of the SOC Analyst, 2022

<sup>4</sup> Gartner Peer Community One-Minute Insights - Modern Security Operations Center (SOC) Strategies, 2023

# Industry-Leading NDR, Powered by Self-Learning AI.



## Detection

Detect known and novel threats across your entire network with Self-Learning AI that understands what is normal for your organization. Get full visibility and threat detection capabilities across your on-premises, cloud, hybrid and virtual environments, including remote worker endpoints.



## Investigation

Leverage the power of Cyber AI Analyst to continually investigate and contextualize every relevant alert in your network. Cyber AI Analyst autonomously forms hypotheses and reaches conclusions just like a human analyst would, transforming your SecOps and going far beyond the capabilities of other NDR providers.



## Response

Our Self-Learning AI autonomously responds to both known and novel threats in real-time, taking precise response actions based on a contextual and behavioral understanding of your organization to contain threats without impacting business operations.

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# Key Capabilities of Darktrace / NETWORK

## Detect Known and Unknown Threats Across Your Entire Network

Get complete network coverage and uncover blind spots with precision threat detection.

<b>At a glance:</b>	
Full network visibility	
Uncover anomalous activity in real time	
Detect known and novel threats	
Self-Learning AI, deployed locally	
Analyze encrypted or decrypted traffic	

### Gain full network visibility

Darktrace / NETWORK passively ingests network traffic from on-premises, virtual, cloud, hybrid environments and remote devices – extracting datapoints and analyzing both encrypted and decrypted packets from every connection to uncover unusual activity in real-time.

Unlike other NDR vendors that process your data in the cloud as part of globally trained models, our industry leading Self-Learning AI is deployed locally and trained solely on your data without the need for a cloud connection - giving you tailored security outcomes without compromising on privacy.

### Detect known and unknown threats

Darktrace / NETWORK takes a fundamentally different approach to other NDR vendors, detecting threats without relying on known malware signatures, external threat intelligence or historical attack data. Our Self-Learning AI learns what is normal for your network, detecting anomalous activity plus known and novel threats.

Every connection in your network is continuously analyzed, mapped and modeled for a full picture of your devices, identities, connections and potential attack paths. Our Self-Learning AI identifies any network behavior that could cause business disruption, providing unprecedented business context compared to packet sampling tools such as IDS/IPS and shining a light on both external and internal threats, from zero-days to supply chain attacks and insider threats.

### Precision threat detection

Darktrace Self-Learning AI autonomously optimizes itself to cut through the noise and quickly raise genuine, prioritized network security incidents to your attention – significantly reducing false positives and saving you the hassle of continually tuning alerts manually.

If desired, you can still maintain full control of your deployment and oversee how the output of our AI is processed with an intuitive model editor. Advanced users can directly change or disable every setting and create custom detections with ease and no need for costly development.

Darktrace is real AI. The system really trains itself, I never have to interact with any of the models. The system is astonishingly accurate.

■ Josef Buttinger

Corporate IT & Security Manager // EV Group

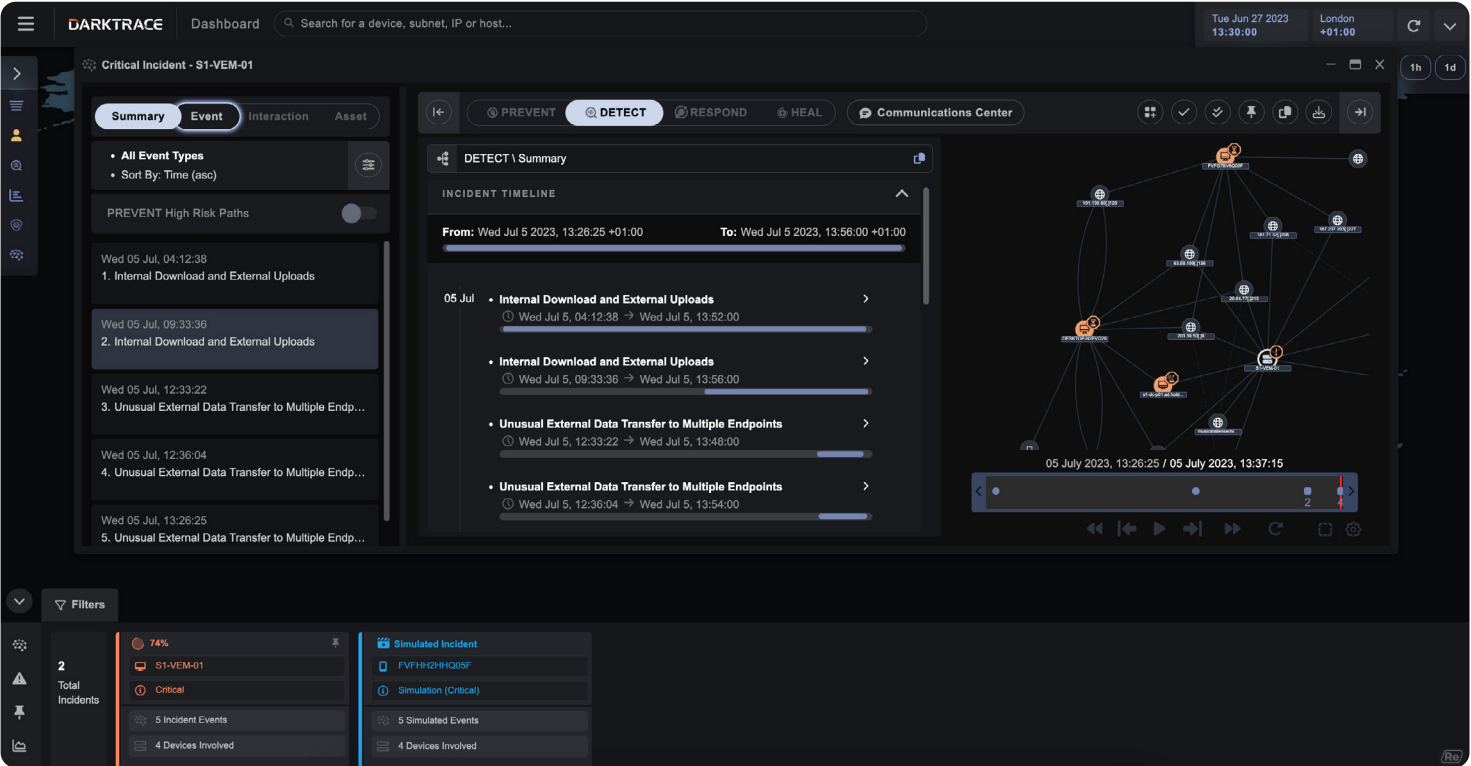


Figure 01: Darktrace / NETWORK learns what is normal behavior for your entire network, detecting any anomalous activity and prioritizing anything that could cause business disruption.

# Detection Model Examples

Darktrace / NETWORK provides coverage for all 14 MITRE ATT&CK categories, detecting threats at every stage of the attack lifecycle without relying on historical data, static rules or signature-based methods. Here are just a few examples of the detection models that Darktrace / NETWORK can use to identify relevant anomalous behavior and threats in your network.



## Internal Reconnaissance

- Device / Suspicious SMB Scanning Activity
- Device / Network Scan
- Device / RDP Scan
- Device / ICMP Address Scan
- Device / Suspicious Network Scan Activity other NDR providers.



## Lateral Movement

- Device / Multiple Lateral Movement Model Breaches
- Anomalous Connection / Unusual Admin RDP Session
- Device / SMB Lateral Movement
- Compliance / SMB Drive Write



## C2 Communication

- Anomalous Server Activity / Outgoing from Server
- Anomalous Connection / Multiple Connections to New External TCP Port
- Anomalous Connection / Rare External SSL Self-Signed
- Device / Suspicious Domain



## Exfiltration

- Unusual Activity / Enhanced Unusual External Data Transfer
- Anomalous Connection / Data Sent to Rare Domain
- Unusual Activity / Unusual External Data Transfer
- Compliance / FTP / Unusual Outbound FTP



# Investigate Alerts in Your Environment with the Industry's First AI Analyst

Darktrace / NETWORK leverages the power of Cyber AI Analyst, bringing cognitive automation to your data, drastically reducing triage times.

**At a glance:**

- Harness the power of Cyber AI Analyst
- Augment your SOC team
- Automate alert triage and investigation
- Detailed network forensics
- Complete business context

**Augment your SOC team capabilities**

Unlike prompt-based LLMs that just create incident summaries or other vendors with basic AI investigation capabilities, Cyber AI Analyst is the only technology on the market that can truly operate like an experienced human analyst. It helps your SOC team automate the investigation of security incidents at machine speed and drastically reduce triage times.

Cyber AI Analyst continually analyzes and contextualizes every alert in your network with an understanding of what is normal behavior for your organization. It autonomously forms hypotheses and reaches conclusions just like a human analyst would, saving your team a significant amount of time and resources.

**Uncover sophisticated threats with detailed investigations**

Our Cyber AI Analyst intelligently investigates all alerts in your network, connecting seemingly benign events to uncover sophisticated threats and correlating related activities into a single incident. By piecing together network anomalies which may appear harmless, Cyber AI Analyst autonomously identifies subtle malicious actions and uncovers advanced network threats, tracking them across the entire kill chain in real-time and at scale.

This comprehensive approach to network investigations enables Darktrace / NETWORK to quickly uncover zero-day attacks, insider threats and much more, preventing your business from becoming patient zero and providing a far superior outcome compared to legacy NDR solutions that only focus on 'known bad' behavior.

**Get complete business context**

Contextualize relevant alerts from all areas of your environment in a single solution. Darktrace Cyber AI Analyst tracks connections and events across your network, endpoints, cloud, identities, OT devices, email and remote devices, helping you detect and investigate modern threats that traverse your entire digital estate.

Add your existing EDR to Darktrace / NETWORK and Darktrace / CLOUD to create the foundation of an incredibly effective XDR solution in comparison to XDR vendors that lack native capabilities beyond their EDR origins. Security teams can leverage the Darktrace ActiveAI Security Platform to add proactive and recovery capabilities as well as covering email, identity and OT within a single connected solution.



Self-Learning AI investigates behavior on the endpoint alongside behavior in Microsoft 365 and across our entire cloud environment.

■ Terry Wright

Head of IT Infrastructure, Scope Markets

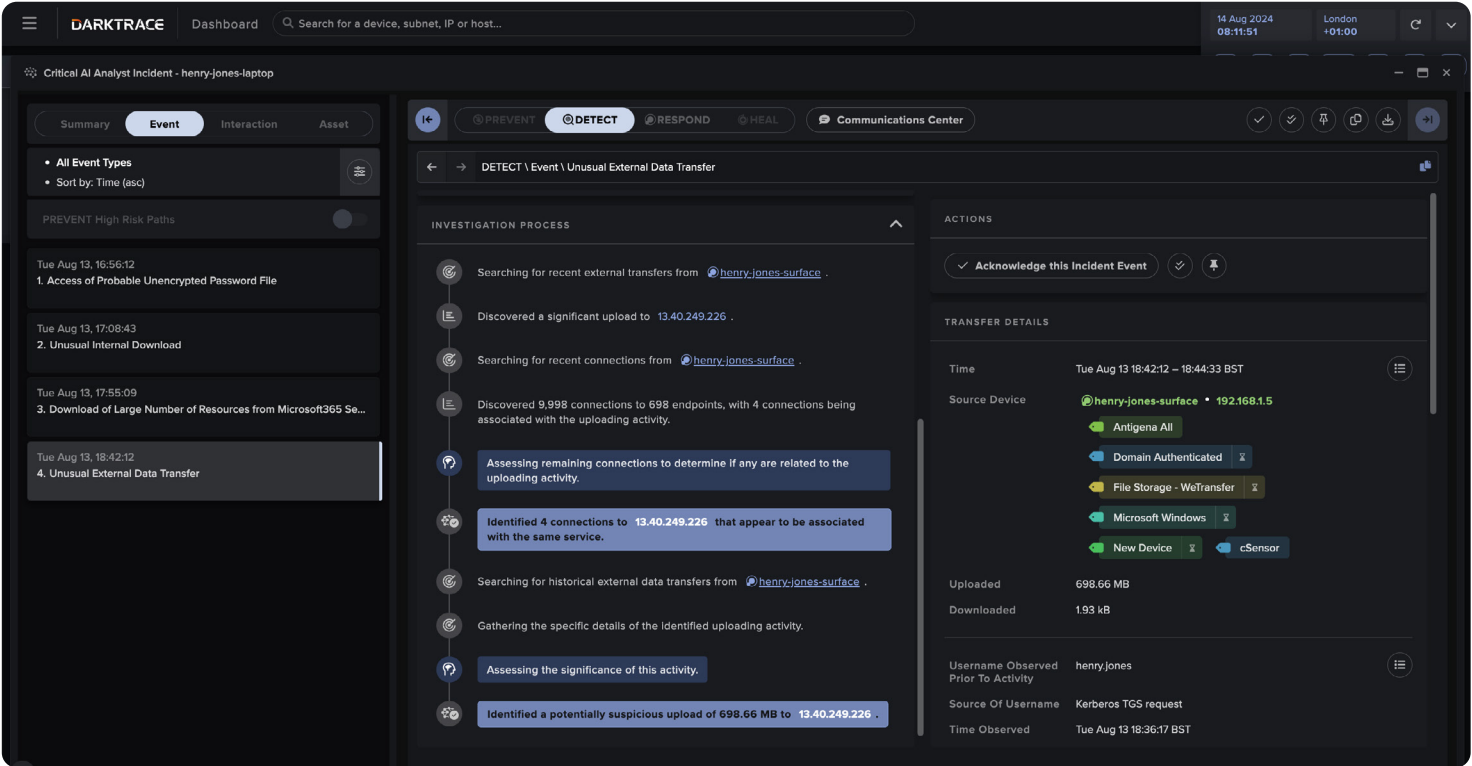


Figure 02: Cyber AI Analyst continually analyzes and contextualizes every relevant alert in your network with an understanding of what is normal behavior for your organization. A detailed timeline of the incident and a full summary is provided to reduce time to meaning for your team.

# Neutralize Network Threats with the First Autonomous Response Solution Proven to Work in the Enterprise

Autonomously contain and respond to attacks in real-time without disrupting business operations.

At a glance:
Autonomous response
Pattern of life and behavioral context
Targeted actions to avoid disruption
Native and third-party response actions
Fully customizable

### Autonomous threat response

Darktrace / NETWORK rapidly contains and disarms threats based on the overall context of the environment and a granular understanding of what is normal for a device or user - instead of relying on historical attack data. Darktrace / NETWORK is the only NDR solution that can autonomously enforce a pattern of life based on what is normal for a standalone device or group of peers.

Darktrace / NETWORK autonomously takes precise response actions in real-time to contain threats without disrupting business operations - either natively or via third party integrations. Actions can also be taken for remote user devices when combined with Darktrace / ENDPOINT, no matter where the endpoint is or whether they are off the corporate network.

### Stay in full control

Darktrace / NETWORK autonomously takes the most effective response to network threats with little to no maintenance required and minimal initial setup. While most clients utilize our default response actions, you can still fully customize or create entirely bespoke response logic if desired. Make precise adjustments based on device types, IP ranges, office hours and various other parameters.

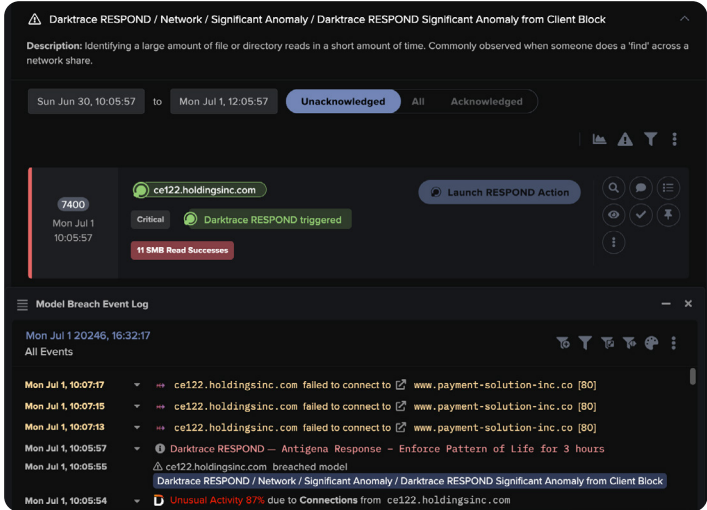


Figure 03: Get full visibility of the events leading up to an incident, including how our AI autonomously responds to protect your business.

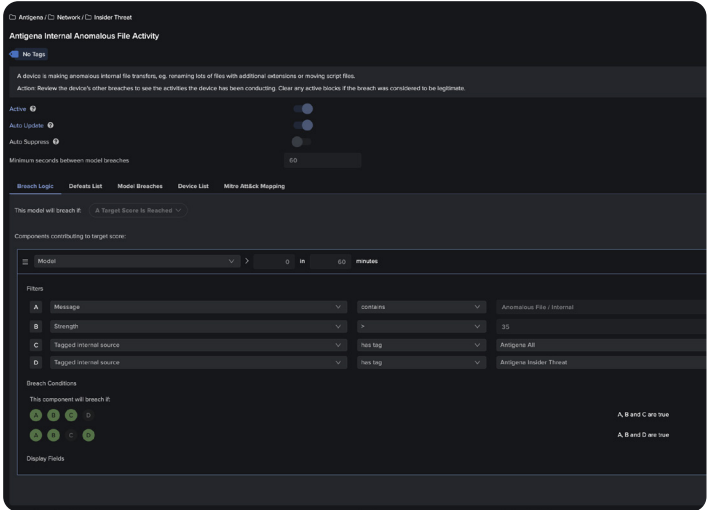


Figure 04: An example of the Darktrace Model Editor, which provides the ability to fine-tune response logic in granular detail if desired.

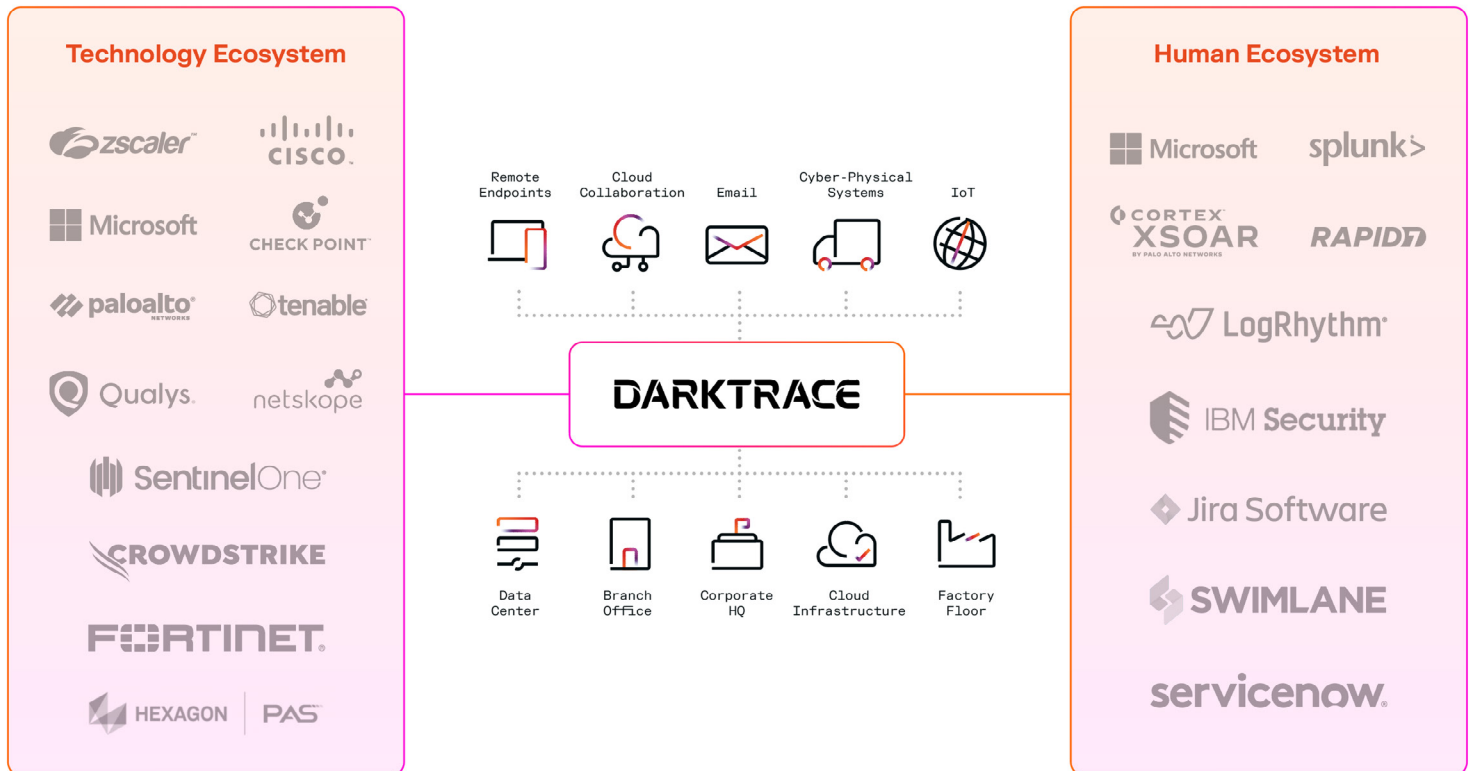


Figure 05: Examples of the hundreds of native integrations that you can use with Darktrace to facilitate threat detection, investigation and response actions, as well as operational workflows.

We feel safer knowing that Autonomous Response is monitoring and responding to all of these findings even when our team is unavailable.

■ Richard Robinson  
Network Administrator, LSUA

### Extend our AI to your existing tools

With hundreds of native integrations and an open API architecture, there's no need for complex and costly development. Darktrace / NETWORK takes targeted, native response actions to disarm threats in seconds while also integrating with third party firewalls, ZTNA, SIEM, SOAR and ITSM solutions to extend response capabilities to your existing technology stack. Alerts can be sent wherever needed to complement your existing workflows.

Darktrace / NETWORK also integrates with all major EDR providers such as Microsoft Defender, CrowdStrike and SentinelOne, contextualizing endpoint alerts with telemetry from rest of your environment to detect, investigate and respond to incidents more effectively.

# Extend Network Visibility to the Cloud and Remote Devices



## **Darktrace** / CLOUD

Extend detection and response capabilities to your hybrid cloud environment and gain complete enterprise coverage with Darktrace / CLOUD. Disarm known and unknown novel cloud-based threats in seconds with platform-native autonomous response actions.



## **Darktrace** / ENDPOINT

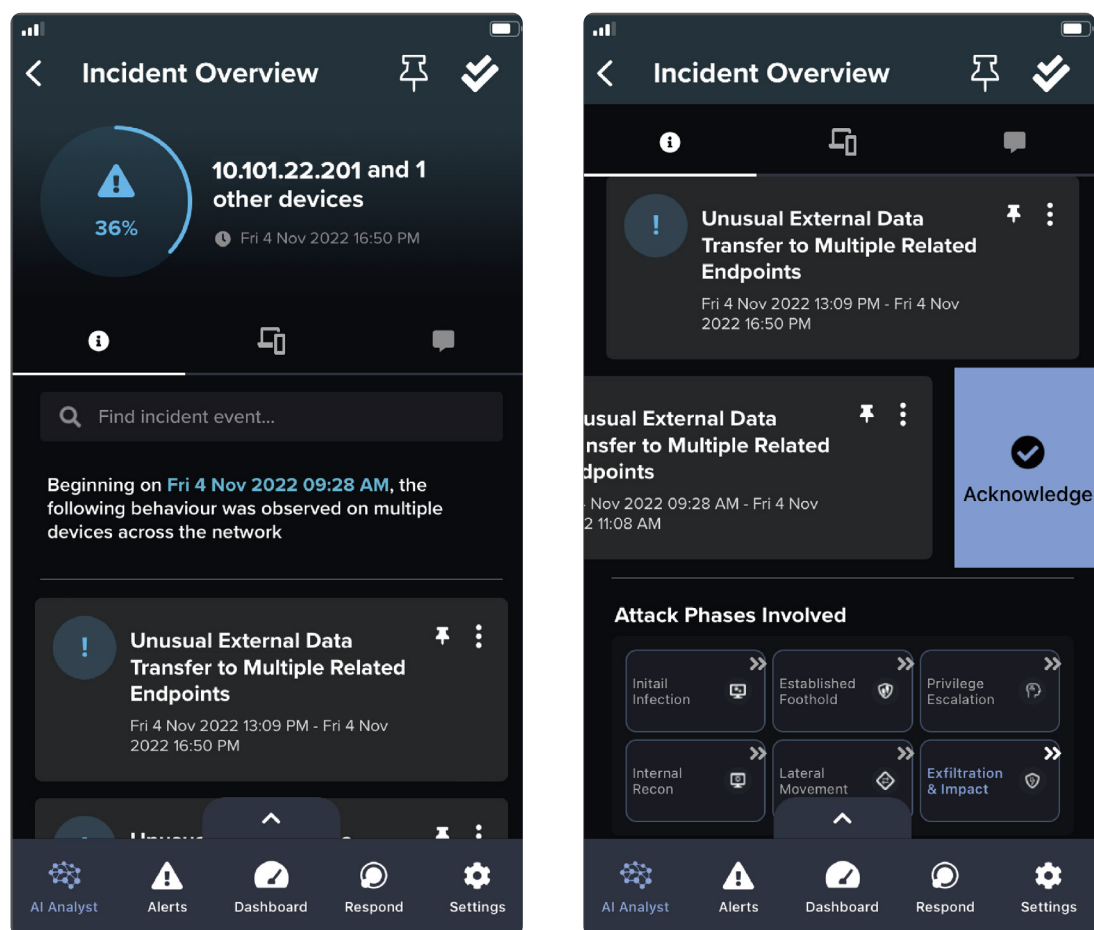
Darktrace / ENDPOINT enables you to maintain network visibility of remote devices and brings autonomous response capabilities to your endpoints, taking targeted response actions to restrict anomalous connectivity at the system level.

# Stay in the loop with the Darktrace Mobile App

The Darktrace Mobile App provides a streamlined user interface for on-the-go network investigation and response, wherever you are.

Investigate anomalous network activity that has been detected, approve autonomous response actions pending human confirmation, share alerts with colleagues and be notified when critical Cyber AI Analyst incidents are created.

The Darktrace Mobile App is available for Android and iOS.





# Deploying Darktrace / NETWORK



From on-premises locations to hybrid cloud and virtual environments, Darktrace / NETWORK can be deployed for any type of network and for even the most complex or bespoke enterprise configurations. Response actions can be taken either natively via Darktrace or via integrations with third party firewalls, EDR, ZTNA, SIEM, SOAR and ITSM solutions.



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## Deployment options

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### Analysis

Darktrace can be deployed in many ways to provide full visibility into your physical and virtual networks. Each deployment starts with the provision of a nominated 'master' instance of Darktrace, which can be deployed as a virtual instance or as a physical hardware appliance. Network data from across your environment is processed and analyzed by the Darktrace master instance, and the output is exposed in the Darktrace Threat Visualizer.

Darktrace provides fully virtualized deployments by hosting a cloud-based master instance within Darktrace cloud environments (AWS and Azure), which can address both virtual and physical network locations. Where required, Darktrace / NETWORK can also be deployed using a hardware appliance that sits parallel to your network and passively ingests raw network traffic. This is typically achieved by connecting the Darktrace appliance to your core switch using a SPAN session. Where multiple masters are required, a 'Unified View' can be used to provide a single, consolidated user interface across all master instances. High Availability (HA) options are also available where required.

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### Collection

Darktrace master instances can process raw traffic themselves and collect network data from local 'probes' across your network, which can be virtualized or physical. In this topology, Darktrace probes perform Deep Packet Inspection (DPI) on ingested data, providing a continuous stream of data to the master appliance at a fraction of the bandwidth of the original traffic. Raw data, such as packet capture data, is kept on the probe and recalled on-demand from the master instance's Threat Visualizer web interface.

vSensors are lightweight virtual probes that can be deployed as a standalone virtual machine receiving packets from a virtual switch, in a public cloud VPC traffic-mirroring scenario, or by collecting packets from host-based osSensor agents deployed on VMs. Darktrace can also integrate with containerized environments such as Kubernetes.

Hardware probes can also be deployed to physical locations where required. A variety of hardware appliances are available depending on the volume of traffic and number of devices in your network. Your Darktrace representative can advise on the most appropriate deployment solution for your environment, especially for larger and/or distributed network configurations.

Darktrace / NETWORK also collects data from host-based Client sensors that are deployed as part of Darktrace / ENDPOINT, integrated third-party services (such as SaaS or cloud applications) or from connected Darktrace products such as Darktrace / EMAIL, Darktrace / IDENTITY and Darktrace / CLOUD.

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### OT

Bring the detection and response capabilities of Darktrace / NETWORK to your operational technology (OT) devices. Darktrace / OT natively covers IT and OT providing visibility of OT, IoT, and IT assets in unison.

Darktrace / OT is deployable in isolation and air-gapped environments without the need for any external connectivity, achieving greater visibility of OT and IT devices across all levels of the Purdue Model.



# Achieve Cyber Resilience with the Darktrace ActiveAI Security Platform

Darktrace / NETWORK is part of the Darktrace ActiveAI Security Platform, combining network security with the rest of your digital estate to enhance your security visibility and control across your cloud environments, endpoints, email, identities and OT devices.

Darktrace / NETWORK integrates with Darktrace / Attack Surface Management to deliver continuous, customized detection of externally exposed assets. When combined with Darktrace / Proactive Exposure Management, your organization can take pre-emptive actions to identify, analyze and mitigate internal and external security risks.

Darktrace / Incident Readiness & Recovery takes information from Darktrace / NETWORK and all other areas of the ActiveAI Security Platform to help you anticipate, detect, contain, recover and learn from any cyber incident. Tailored playbooks for effective recovery are based on a deep understanding of your network and wider threat landscape, helping you to maintain operational continuity against modern adversaries.

Darktrace ActiveAI Security Platform revolutionizes your cyber defenses by helping you proactively prevent cyberattacks, quickly recover from incidents and continually strengthen your security posture, all within a single platform.

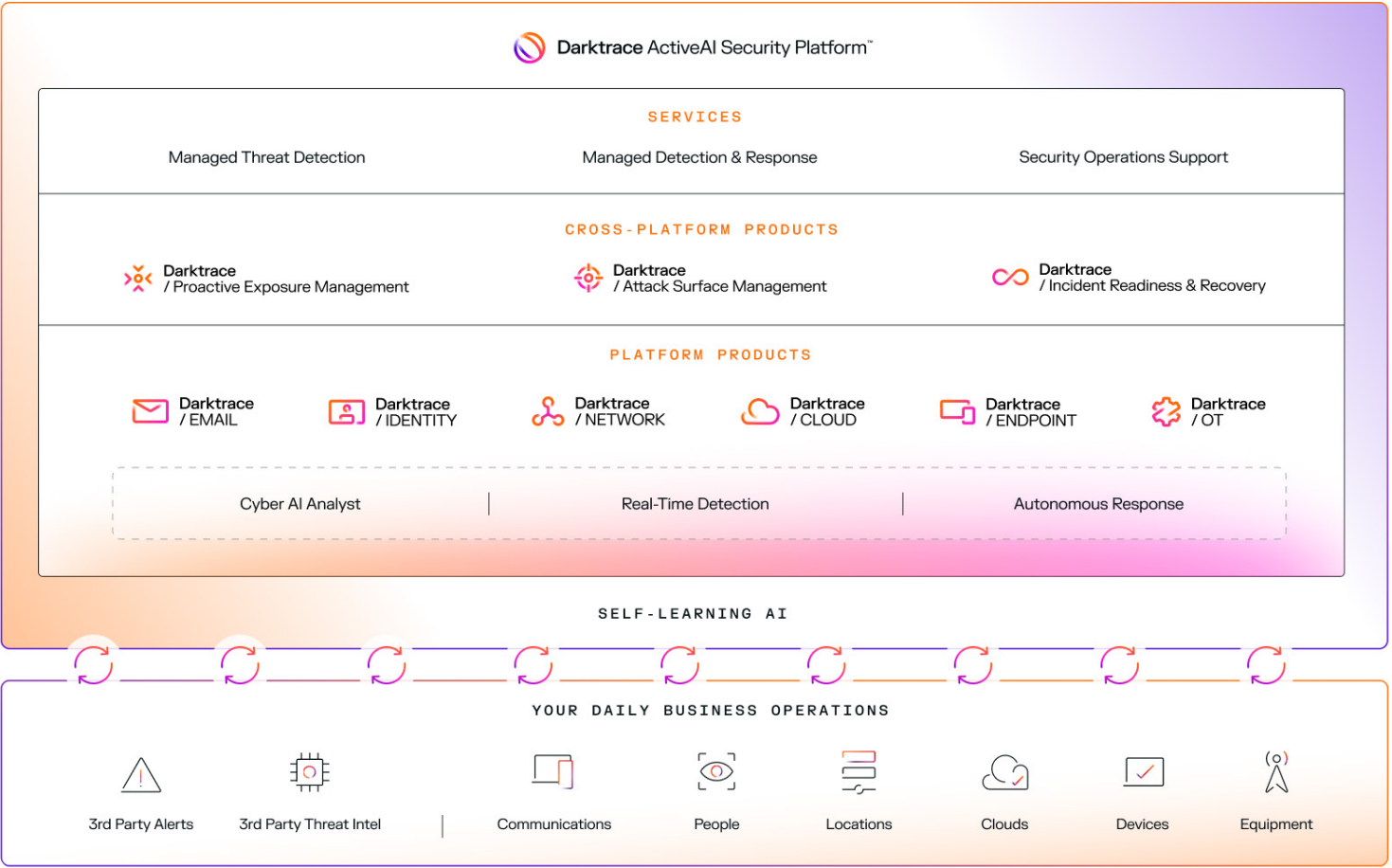


Figure 06: The Darktrace ActiveAI Security Platform.

## Operational Benefits

### ■ Increase operational efficiency

with Self-Learning AI that autonomously tunes itself to surface critical alerts to your attention and remove the hassle of manual tuning.

### ■ Reduce the pressure on security teams

by leveraging Cyber AI Analyst that operates just as a human analyst would, automating the investigation of security incidents and reducing triage times by up to 92% drastically reducing triage times.

### ■ Extend AI to your existing workflows

with hundreds of third party integrations including firewalls, EDR, ZTNA, SIEM, SOAR and ITSM solutions.

### ■ Stay in full control

With advanced customization options and response actions based on device types, IP ranges, office working hours and countless other parameters.

### ■ Go beyond NDR

by proactively preventing cyberattacks and strengthening your security posture with the Darktrace ActiveAI Security Platform.

### ■ Maximize your cyber defenses

with the Darktrace Managed Detection & Response service, helping you focus on security outcomes with support from a 24/7 SOC team.

As we get early notification and specific isolation with context, our response times are significantly better than pre-Darktrace.

■ Network Operations Manager // Hauraki District Council

We realized that Darktrace was detecting what other tools were missing.

■ CIO // Grupo Mexicano de Seguros

Darktrace was simple to deploy, effective in our needs for monitoring and response, and provided us all the information we needed.

■ Senior Information Security Analyst  
// AAA Washington



### Customer's Choice for Network Detection and Response

Gartner Peer Insights Customers' Choice constitute the subjective opinions of individual end-user reviews, ratings, and data applied against a documented methodology; they neither represent the views of, nor constitute an endorsement by, Gartner or its affiliates.

■ **About Darktrace**

Darktrace (DARK.L), a global leader in cybersecurity artificial intelligence, is on a mission to free the world of cyber disruption. Its technology continuously learns and updates its knowledge of 'you' for an organization and applies that understanding to help transform security operations and improve cyber resilience. Breakthrough innovations from its R&D Centers have resulted in more than 200 patent applications filed. Darktrace employs 2,400 people around the world and protects over 9,700 organizations globally from known, unknown and novel cyber-threats.