Threat Simulator
Breach and Attack Simulation

Validate your tools, fix vulnerabilities, and prove your network is protected. Part of Keysight's security operations suite.

Problem: Security is Hard, Misconfigurations are Common, and Breaches are Rampant

With a multitude of emerging threats from inside and outside your network, the risk of a security breach has never been higher. All those risk factors are combined with a big human element that assumes everything has been setup and configured properly to get the best outcomes from each security tool. Organizations typically respond to this problem by throwing more money at the problem — acquiring additional security controls while increasing management complexity and complicating visibility for teams such as SecOps that are pressed to provide results and ROI.

But the real problem behind all those things is that it has been extremely difficult to effectively measure your security posture. And when you can't measure security, it becomes harder to manage and improve it.

The result is that you can't quantify the risks to your business, or the return on your security investment, or understand how to optimize it.

KEYSIGHT

Highlights

- Part of Keysight's Security Operations Suite of enterprise security tools.
- Safe and cost-effective way to measure and validate the effectiveness of your production security tools.
- Enables you to perform automated breach and attack simulations on a regular basis.
- Eliminates the assumptions that security controls are deployed and configured correctly.
- Identify environmental drifts from historical visualized results.
- Active validation of all phases of the Attack Life Cycle.
- Reduces compliance audit time with data-driven evidence.
- Prove security attacks are properly identified and reported.
- Justify current and future IT spending.
- Content refreshed at regular intervals, including the provision of malware feeds daily.

Solution: proactive, continuous security validation

To ensure a strong defense, organizations need to embrace an offensive approach that employ up-to-date threat intelligence to continuously verify their enterprise-wide security controls are working as expected and are optimized for maximum protection.

With Keysight's Threat Simulator, enterprises can measure their security posture, gain insights into the effectiveness of their security tools and obtain actionable remediation steps to improve it.

With this data, you can start optimizing the existing security solutions so that you can improve your security without adding another expensive security solution.

Keysight Threat Simulator builds on 20+ years of leadership in network security testing to reveal your security exposure across public, private, and hybrid networks. The ongoing research of our Application and Threat Intelligence team ensures regular updates so you have access to the latest breach scenarios and threat simulations.

Key features

- Flexible, cloud-based breach and attack simulation platform that scales as your network grows.
- Actionable remediation recommendations help you improve and optimize your security controls.
- Multi-tenancy access control and segmentation
- Light, container-based, infrastructure-agnostic software agents are available to enable operations on-premises, on private and public clouds, and on remote user laptops.
- Fast insights on your security posture.
- Fully managed Dark Cloud infrastructure, simulating external adversaries, malicious nodes, and C&C servers in the public domain.
- Modern, web-based interface that's easy to use.
- Built-in integration with top network security controls and SIEM tools.
- A diversified library of MITRE ATT&CK techniques and threat vectors to validate network, endpoint, and email security controls.
- Out-of-the-box attack library enables you to simulate the full Cyber Kill Chain® for popular breaches, relevant software threats, and Advanced Persistent Threats (APTs).
- Scheduler enables continuous security assessments across your enterprise-wide network.
- SIEM-proxy agent facilitates communication with SIEM tools.
- Built in packet capture support.
- Visual ladder diagrams complement predefined security assessments.
- Agent tagging supporting user-provided metadata, making it easier to manage individual agents.
- Agent grouping creates abstraction layers, allowing simple and rapid validations of multiple network segments at once.
- Sigma rules support for supported modules to assist with detection engineering
- Structured Threat Information Expression (STIX™) threat intelligence blueprints and Indicators of compromise (IOC)

Product capabilities

When it comes to network security, your best defense is a good offense. Keysight Threat Simulator is a breach and attack simulation platform that provides enterprise security teams with insights into the effectiveness of their security posture and actionable intelligence to improve it.

A cloud-native, serverless design

Keysight Threat Simulator is a completely cloud-based platform, delivered as a SaaS with also an on-premise option. At its core, it is an implicit microservices architecture orchestrated through APIs. This serverless design enables Threat Simulator to auto-scale on demand — eliminating the need for complex and costly data backhauls.

For the SaaS solution, Threat Simulator eliminates common anxieties with deployment, especially where network architectures are more complex. It offers a modern, simplified web user interface with great 'out-of-the-box' experience.

Keysight Threat Simulator comprises three core components:

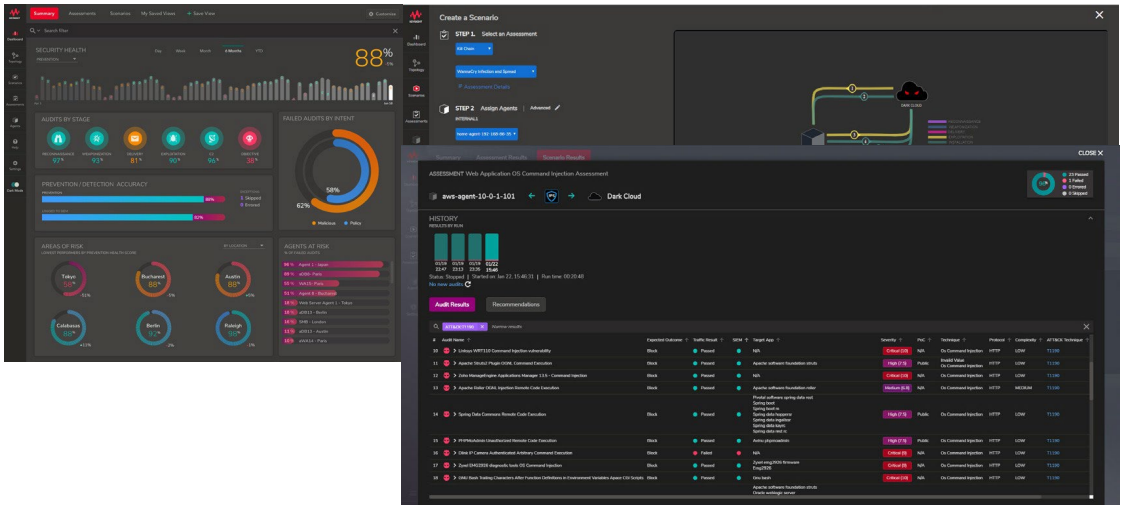
- A user-friendly web-based interface makes it easy to configure and run security assessment scenarios, identify drifts in your security posture and retrieve actionable remediations.
- Keysight-managed Dark Cloud entity creates agents on demand to simulate threat actors in the public domain, such as malicious websites, external hackers, and command and control servers.
- Software agents can be deployed on your enterprise network in docker-container formats or as native applications for Microsoft Windows, Linux, and MacOS.

On-prem edition

Managing data effectively, including factors such as data-sovereignty and data-residency, has posed a challenge for many organizations that are subject to internal or industry-specific regulations. To comply with such requirements, Threat Simulator provides an on-premises version that can be hosted on supported hypervisors, regardless of location or internet connectivity. The on-premises version includes the infrastructure component and a customized on-premises version of the Dark Cloud, which can be deployed on a hypervisor that runs on operating systems like VMware ESXi™ or Linux KVM.

Network security and enterprise tools ecosystem

Threat Simulator offers turnkey integrations with a large ecosystem of network security controls, making it easy to get specific, actionable recommendations to improve and manage your cybersecurity effectiveness. Integration with leading SIEM vendors enable end to end validation on how the prevention/detection works and identifies security sensors that may go dark. Bidirectional communication with SIEM tools provides SOC teams with push events that notify them during attack and breach simulations, enabling them to quickly distinguish simulated attacks from non-simulated ones.



Thread Simulator — Web User Interface (Dashboard, Scenario Builder, Detailed Results)

Network, endpoint, and email security assessments, powered by Threat Simulator: Validate security posture, identify vulnerabilities, and prioritize fixes

Are you looking to improve security operations, but lacking the personnel to do so? We get that. When your team is constantly fighting fires, it can be hard to make time for anything else.

That's why we can offer network, endpoint, and email security assessments, powered by Threat Simulator. Whether you're looking for recurring monthly assessments or a one-time engagement, our trained professionals can give you a detailed analysis of your security posture without the hassle and complexity of adding another tool to your stack. We can safely simulate attacks on your production network, reveal vulnerable misconfigurations, and give you specific, step-by-step instructions to remediate and prioritize fixes.

Our standard assessment covers the entirety of your defensive deployment, and covers network, endpoint, and email security controls. However, you can also choose from a variety of tailored audits to drill down on specific focus areas, such as the following:

- Branch security
- Email security
- Endpoint security
- MITRE ATT&CK groups
- APT campaigns
- WAF security

No matter what you choose, our assessments are quick and cost-effective — complete with personalized reports and remediation guidelines. With our team’s detailed analysis, you gain actionable insight into the flaws a malicious actor is likely to exploit, enabling you to immediately implement fixes to protect your network, users, and applications.

Specifications

Feature category	Feature
General features	Modern, easy to use, web-based user interface
	On-prem edition supported on VMWare ESXi™ and Linux KVM hypervisors
	Actionable remediation recommendations help you to improve and optimize your security controls
	Prevention and detection scores with historical trending to identify drift
	Minutes to the first security insight
	Built-in packet capture support
	Topology viewer
	Dashboards (Summary, Assessment, Scenario, Agents)
Attack and Breach Simulation	Active validation of all phases of the Attack Life Cycle
	Diversified and realistic library of techniques, threat vectors and kill chain modeling
	Always safe: simulated attacks and breaches are only between Threat Simulator agents
	Daily malware feeds and general security audits added every 2 weeks
	Security assessment for network security controls WAF, IDS/IPS, DLP, URL Filtering, Gateway Antivirus and Malware Sandbox
	Endpoint security assessments covering MITRE ATT&CK techniques and MITRE ATT&CK Groups
	Email security assessments for Microsoft Office 365, IMAP, and SMTP.
	Active validation of both datacenter and perimeter-based security controls
	IPv4 support
Threat Simulator Agent	Available as docker-container for Linux distributions (for example, RedHat, CentOS, Ubuntu) to run network-based and email security assessments
	Available as a Windows, Linux, or MacOS native applications to run endpoint, network, and email security assessments
	Infrastructure agnostic allowing operations on-premise, private, and public clouds
	Flexibility to use a single interface for management and test traffic or dedicated test interfaces
SIEM Connector Agent	Light, container-based agent that can run on Linux-based operating systems
	Acts as a proxy between the Threat Simulator backend and the SIEM tool
	IPv4 connectivity
SIEM Integrations	IBM QRadar
	Splunk
	LogZ.io
Endpoint Integrations	CrowdStrike Falcon EDR events
	SentinelOne Singularity threats
	Microsoft Defender for Endpoint
	Trellix ePolicy Orchestrator (On-prem edition)
	Generic vendor support

Ordering info

SaaS unlimited agent-based subscription

All-inclusive security assessment bundle includes:

- Access to the Threat Simulator SaaS web console.
- Software agents deployed on customer's network perimeter.
- Dark Cloud simulation hosted on Keysight's managed infrastructure.
- All network, endpoint, and email-based security assessments.

The license term must be specified and can be bought in multiples of years, with the list price being per unit per year.

Part number	Description
983-2015	1 agent, 1-year subscription
983-2010	5-agents, 1-year subscription
983-2011	10 agents, 1-year subscription
983-2012	25 agents, 1-year subscription
983-2013	50 agents, 1-year subscription
983-2014	100 agents, 1-year subscription

SaaS consumption-based licensing

All-inclusive networking security assessment bundle includes:

- Access to the Threat Simulator SaaS web console.
- Enables a single agent-days per month license per license unit.
- Dark Cloud simulation hosted on Keysight's managed infrastructure.
- All network, endpoint, and email-based security assessments.

The license term must be specified and can be bought in multiples of years, with the list price being per unit per year. The purchase of multiple license units increases the number of Threat Simulator agent-days per month.

Part number	Description
983-2101	Threat Simulator SaaS TIER-1 single agent-day per month license with standard support (1-year subscription). No minimum.
983-2102	Threat Simulator SaaS TIER-2 single agent-day per month license with Enterprise 24x7 support (1-year subscription). Requires a minimum quantity of 60 units per order.
983-2103	Threat Simulator SaaS TIER-2 single agent-day per month license with standard support (1-year subscription). Requires a minimum quantity of 60 units per order.
983-2104	Threat Simulator SaaS TIER-3 single agent-day per month license with Enterprise 24x7 support (1-year subscription). Requires a minimum quantity of 500 units per order.

On-premise agent-based subscription

All-inclusive security assessment bundle includes:

- Access to the Threat Simulator Dark Cloud OVA images.
- Software agents deployed on customer's network perimeter.
- Dark Cloud simulation hosted on Keysight's managed infrastructure.
- All network, endpoint, and email-based security assessments.

The license term must be specified and can be bought in multiples of years, with the list price being per unit per year.

Part number	Description
983-2115	1-agent, 1-year subscription
983-2110	5-agents, 1-year subscription
983-2111	10 agents, 1-year subscription
983-2112	25 agents, 1-year subscription
983-2113	50 agents, 1-year subscription
983-2114	100 agents, 1-year subscription

On-premise consumption-based licensing

All-inclusive security assessment bundle includes:

- Access to the Threat Simulator Dark Cloud OVA images.
- Software agents deployed on customer's network perimeter.
- Dark Cloud simulation hosted on Keysight's managed infrastructure.
- All network, endpoint, and email-based security assessments.

The license term must be specified and can be bought in multiples of years, with the list price being per unit per year. The purchase of multiple license units increases the number of Threat Simulator agent-days per month.

Part number	Description
983-2201	Threat Simulator OnPrem TIER-1 single agent-day per month license with standard support (1-year subscription). No minimum.
983-2202	Threat Simulator OnPrem TIER-2 single agent-day per month license with Enterprise 24x7 support (1-year subscription). Requires a minimum quantity of 60 units per order.
983-2203	Threat Simulator OnPrem TIER-2 single agent-day per month license with standard support (1-year subscription).
983-2204	Threat Simulator OnPrem TIER-3 single agent-day per month license with Enterprise 24x7 support (1-year subscription).
983-2205	Threat Simulator OnPrem 16 agent-days per month license with Enterprise 24x7 support (30-day subscription).
983-2206	Threat Simulator OnPrem 16 agent-days per month license with Enterprise 24x7 support (90-day subscription).