VIAVI Solutions

Product Brief

VIAVI
TeraVM
Security Assertion Markup Language (SAML). Performance validation at scale

TeraVM™ supports validation for single-sign on (SSO) applications using Security Assertion Markup Language (SAML), enabling users to measure the capacity of the Identify/Service Provider by emulating millions of unique Web Browser sessions. TeraVM's stateful per-flow architecture enables users of TeraVM to validate SAML performance with unique client credentials (including the use of digital certificates), with each and every emulated client having unique SAML assertions.

TeraVM supports validation of both SAML authentication flow options:

- IdP initiated (Authenticate with IdP and follow redirect to SP service)
- SP initiated (Attempt connection to SP, follow redirect to IdP, authenticate and return to SP)

Validating SAML 2.0 authentication flows at scale

TeraVM is a stateful traffic emulator which enables users validate SAML SSO in a number of unique ways, this includes concurrent validation of both IdP and SP initiated authentication. TeraVM's per flow architecture further enhances the validation methodology by enabling unique SAML assertions per emulated client.

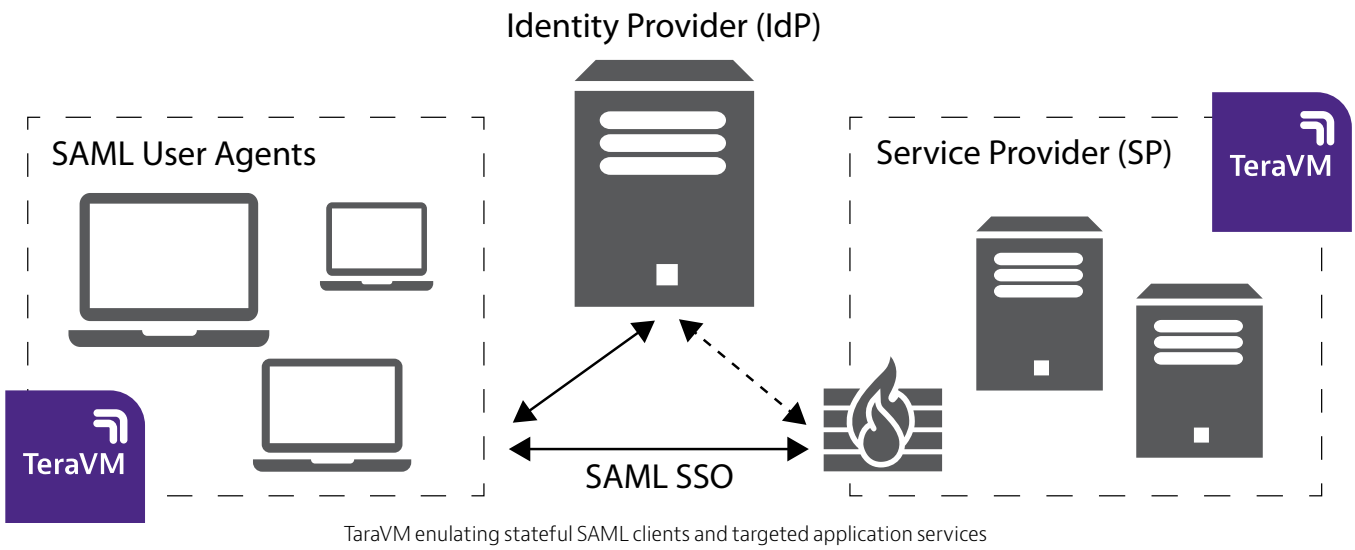
The flexible configuration options means users of TeraVM can assess the reliability of SAML with poorly configured assertions. Furthermore, the per-flow capability enables users to validate performance for more complex SAML scenarios such as realm discovery, using either unique user names, domain names, and/or url associations.

Advantages

- Emulate miliions of SAML sessions
- Unique credentials per client, supports the use of digital certificates
- Supports both IdP and SP authentication flow initiation

Features

- Support of proprietary 3rd party authentication flows
- Cloud platform enabled, support for AWS, Azure, and OpenStack
- Out of millions of SAML sessions, easily pinpoint and isolate failed
- SAML sessions



TaraVM enulating stateful SAML clients and targeted application services

Introducing TeraVM

TeraVM is an application-emulation and security-performance solution, delivering comprehensive test coverage for application services, wired, and wireless networks.

TeraVM is offered as a virtualized solution enabling the flexibility to run anywhere - lab, datacenter, and the cloud, with consistent performance coverage, ensuring that highly optimized networks and services can be delivered with minimal risk.

SAML emulation with the most realistic load scenarios

Using TeraVM SAML, users can emulate the most realistic load scenarios for performance validation of throughput, connections, and latency for single sign-on services. TeraVM supports 3rd party SAML flows which includes Citrix and F5.

TeraVM emulates stateful SAML request and responses used for validation of authentication flows originating at either the IdP or SP and/or the targeted application service. After successful authentication, TeraVM's per-flow architecture can be used to validate performance of the targeted service and can be used to validate robustness of SAML by attempting to connect to additional application services, using the assigned SAML security tokens.

TeraVM can be deployed to cloud services such as Amazon Web Services (AWS), Azure, and/or OpenStack; allowing the user validate access privileges, performance of throughput, and latency of core IdP and SP services, alongside the targeted SP application service in the cloud.

TeraVM SAML use cases

Realm Discovery

Validate performance using unique client credentials (username) and/or url requests originating at the emulated client.

SAML Assertions

Validate key SAML assertions such as lifetime of SAML tokens, validate new IdP profiles and/or malformed or with incomplete assertion values

TeraVM Capability Overview	
General	Real-time isolation of problem flows
	Elastic test bed (up to 1Tbps)
Network interface support	Support for 1/10/40Gbps I/0
	Mellanox ConnectX-4 support for 56/100Gbps

TeraVM Capability Overview	
Data	TCP / UDP, Teraflow, Ookla speed test
	HTTP (v1/2, incls. stateful response parser)
	SMTP / POP3 (incl. file attachments)
	FTP (Passive/Active), P2P applications, DNS
Address assignment	Configurable MAC
	DHCP, PPPoE (IPv4 & IPv6)
	Dual Stack (6RD, DS Lite)
Ethernet switch	VLAN tagging (up to 8 concurrent tags)
	ACL, 802.1p, DSCP
Data center	VxLAN, GRE, SR-IOV
Replay	Replay large PCAP files TCP, UDP and raw data playback
	Amplify and dynamically substitute data into PCAP files
Video	Multicast: IGMP v1/v2/v3 & MLD v1/v2
	Automatic Multicast Tunelling (AMT)
	Video on Demand (VoD)
	Adaptive Bit Rate Video (HLS, HDS, MPEG-DASH, smooth)
	Video conferencing, Webex
Secure access / VPN	Clientless VPN (SSL/TLS/DTLS), IPSec (IKEv1/v2), generic remote access
	Cisco AnyConnect SSL VPN Client, Cisco AnyConnect IPsec VPN
	Cisco ScanSafe
	Juniper Pulse, Juniper Network Connect
	SAML (F5, Citrix SSO), Dell SSO
	802.1x EAP-MD5
Securiy attack mitigation	spam / viruses / DDoS
	Cybersecurity Database
Voice	VoIP: SIP & RTP (secure & unsecure), SMS
	Dual-hosted UACs, SIP Trunking
	Voice & video quality metric (MOS)
LTE/4G	EPC and RAN (Rel.8, 10, 11)
	VoLTE (secure/unsecure), ViLTE
	Wifi Offload (EoGRE)
SLA	TWAMP, PING
Automation	CLI, Perl, TCL, XML, Java API
	Python, Jython
	Qualisystems (CloudShell)
	OpenStack

VIAVI Solutions

To reach the VIAVI office nearest you,
visit viavisolutions.com/contact

tvm-saml-pb-wir-nse-ae
30187450 900 0918