VIAVI Solutions

Data Sheet

VIAVI TeraVM

TeraVM is a software based L2–7 test tool running on x86 servers and in the Cloud (Amazon, Azure, Openstack etc.), delivering a fully virtualized application emulation and security validation solution to test and secure devices, networks and their services.

Application Support

General
System utilization reports (Location, User, Testbed, Licenses in use, Usage stats)
License check-in default timer
Adaptive Engine
Dynamically and Automatically find the maximum capacity of Devices Under Test
Same test profile can be used for multiple platforms
Faster setup, faster testing, faster results
Network Interface Support
Support for 1/10/40/100 Gbps I/0
Data
Jumbo Frame support with max MTU/Segment configurable
TeraFlowUDP Out-of-Sequence Statistics
TCP / UDP, Teraflow, Ookla speed test
HTTP / HTTPS
HTTP 2.0
SMTP / POP3 (incl. file attachments)
FTP (Passive/Active), P2P applications, DNS
FTP client session count limit
DNS client (w/ HTTP/S applications, incl. IP address resolution)
DNS Server
Address Assignment
Configurable MAC
DHCP, PPPoE (IPv4 and IPv6)
Dual Stack (6RD, DS Lite)
Ethernet Switch
VLAN Tagging (up to 8 concurrent tags)
ACL, 802.1p, DSCP
Enable path MTU discovery

Data Center
VxLAN, GRE, SR-IOV
Automation
REST, CLI, Perl, TCL, XML, Java API
Python, Jython
Cisco LaasNG, Qualisystems (CloudShell), Luxoft Software Defined Lab (SDL), Openstack, Cisco pyATS
Replay Application Repository
Intelligent UDP and stateful TCP Replay: Ability to dynamically change content
Replay large PCAP files: TCP, UDP and raw data playback
IP Replay (w/ DHCP): multiple TCP/UDP streams
Amplify and dynamically substitute data into PCAP files
Video
CMTS, CDN, Multicast: IGMP v1/v2/v3 and MLD v1/v2
Automatic Multicast Tunneling (AMT)
Video on Demand (VoD)
Adaptive Bit Rate (HLS, HDS, MPEG- DASH, Smooth)
Video conferencing, WebEx, Telepresence
HTTP based video
H.265 codec support
Voice
Secure VoIP and WebEx calls in HTML5 UI
Dual-Stack VoIP Gateway emulation
Cisco CUCM, CUBE
VoIP: SIP and RTP (secure and unsecure), SMS
VoIP client scaling with auto generated unique
VoIP with EVS (Enhanced Voice Services)
AKA authentication request per client
VoLTE Emergency calls support

Voice (continued)
Dual Hosted UACs, SIP Trunking
Voice and Video quality metric (MOS simultaneously supported)
EVS codec support, various bit rates, silence suppression
G.711 Support for SID – RFC3889
SIP Updates for IMS including PANI information
MCPTT group calls (including KPI support)
Secure Access / VPN
SSLv2/3, TLSv1.0/1/2/3 and DTLSv1.0/2
TLS Client-side Cipher Suite Selection
Dynamic IPv6 Assignment for AnyConnect VPN Client
Clientless VPN (SSL/TLS/DTLS), IPSec (IKEv1/ v2 (DH groups 31 and 32)), Generic remote access, CSFR support
Cisco AnyConnect SSL and Cisco AnyConnect IPsec VPN Clients
Cisco Umbrella
SAML, SSO, Active Directory based login
802.1x EAP-MD5, EAP and PEAP with MS CHAPv2 Authentication
RADIUS client support with configurable custom AVPs.
802.1X Accounting Start and Stop Records
Site to Site VPN - IPV6/V4
Additional security to limit access to public IP address assigned to TeraVM in public cloud environments
Cisco AnyConnect SSL and IKE certificate based authentication with multiple user provided ECDSA EdDSA certificates
PPTP VPN Client and Server supported
Cisco AnyConnect emulation with SAML based authentication
Cisco AnyConnect STRAP (Session Token Re-Use Anchor Protocol)
Security
40,000+ Malware attacks and Cybersecurity threats, updated monthly
Spam / Viruses / DDoS / Malware
Malware Application Profiles
TCP CUBIC congestion control
DDoS attack applications: • Flood: SYN, Reflective SYN, Reset, UDP, Ping, ARP • Attacks: Teardrop; UDP Fragmentation; Configurable Rates, Start and Stop • Spoof Mac addressing
Good and Bad mixed traffic flows
Statefully scale Cisco specific threats
Ability to use 3rd party threat libraries
Ability to turn on /off Extended Master Secret (RFC 7627) support flag to test Cisco FTD, ASA and other security solutions
Support for TLS 1.3, TLS 1.2 simultaneously on Client and Server
Configurable TLS record size
TCP delayed ack (timer based)
HTTP Strict Transport Security (HSTS) header support
TLS SNI support incl. unique certificate per FQDN

SLA Monitoring
TWAMP-RFC 5357, PING-RFC 792
Cisco Netflow Records/Exporter emulation at scale
Mobility - 5G, 4G, 3G, 2G
Core and RAN: 3GPP Rel.8, 10, 11, 13, 15
vRAN emulation: • 5G-NR, 4G-EUTRAN, 3G-UTRAN, 2G-GERAN at 1,000s of RANs
Core Emulation: • 5G (NSA and SA), 4G-LTE, 3G, 2G with Mobility at millions of UEs and Bearers
5G, 4G, 3G, 2G Core interface testing
Error Injection over 5G-N2 (AMF), 4G-S1 (MME)
Encrypted RAN load for SecGW
GTP tunnel support; GTPv2 (4G) S11/S5; GTPv1 (3G) Gn (4G) S1-U
VoLTE (secure/unsecure), ViLTE
ePDG Wifi Offload (EoGRE)
VoWiFi (functional testing)
Internet of Things (IoT)
Client emulation
CoAP-RFC 7252
NIDD over SCEF, S11-U, S1-U
SCEF Emulation Including Protocol Relay
Cloud Platform Support
Amazon AWS
Google Cloud (GCP)
Oracle Cloud (OCI)
Microsoft Azure
Hypervisors
VMware ESXi
KVM Ubuntu
KVM Redhat
Citrix Xenserver
Hyper-V
Openstack
Kubernetes Cloud Platforms (Containerized TeraVM)
Google GKE
Amazon EKS
NetSecOPEN Tests
NetSecOPEN Test Suite

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