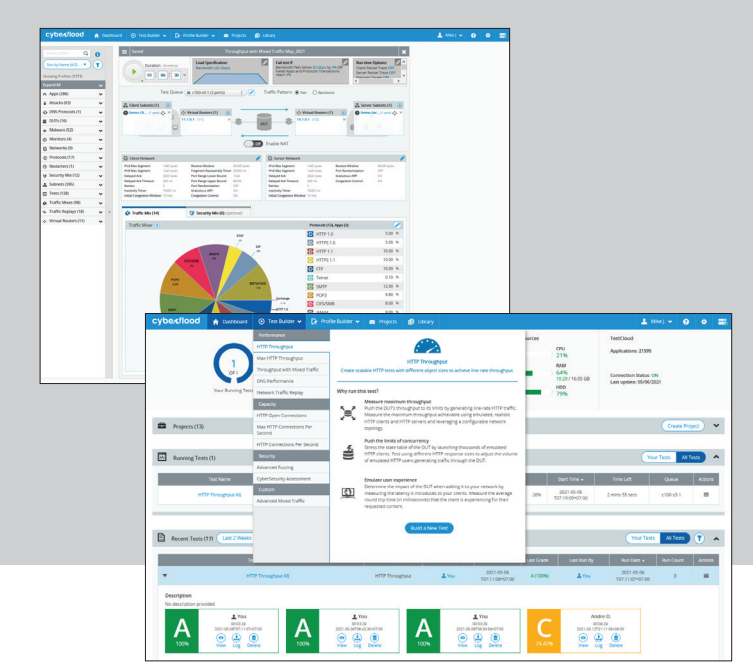
CyberFlood Virtual

Application Performance Testing Solution

VIAVI's revolutionary CyberFlood application testing solution is now available as a virtual, simplified platform, consolidating multiple test functions into a completely virtual test environment.

CyberFlood Virtual offers validation of Quality of Service (QoS) and Quality of Experience (QoE) through quick and simple-to-use performance tests for content aware networks.

Software Defined Networking reduces device cost and overhead by opening a new world of flexibility, scale and performance for enterprises. The convergence of network and application infrastructures into a single extensible and flexible platform requires improved levels of understanding of network effectiveness and performance. VIAVI CyberFlood Virtual is a flexible solution that offers proactive and realistic testing of content aware networks, and is easily hosted on users' premises or compatible cloud based infrastructures.



Applications

- Test SDN environments directly from within a virtual environment with multiple unbounded traffic generation endpoints
- Scale test solutions to handle vast amounts of traffic based on your needs
- Test Next Generation Firewalls
- Generate application load traffic from a growing database of hundreds of thousands of user scenarios and application flows to verify application ID policies and performance
- Use Advanced Mixed Traffic tests to create custom user actions, including IPSec and SSL VPN capacity and throughput
- Validate performance with Amazon Web Service (AWS) environments, Azure, and Google Cloud (GCP)
- Replay custom applications and recorded web sessions at scale
- Assess SD-WAN and SASE environments for scale and performance
- Functional performance licensing available for lower cost and higher virtual instance density use cases
- Optional advanced security testing solutions are also available

User Realism with CyberFlood

CyberFlood utilizes TestCloud™ for access to hundreds of thousands of applications so you can generate traffic with authentic payloads for realistic performance load and functional testing. CyberFlood creates tests with the latest apps from the VIAVI TestCloud, while also providing the ability for users to import their own applications to recreate custom applications at scale.

Features and Benefits

- **Ease of Use —** Extremely easy to use and highly intuitive graphical user-interface that allows for difficult configurations to be set up instantly; from setting up global IPs from a world view map to drag and drop protocols, CyberFlood makes performance testing easy.
- **Economical —** CyberFlood Virtual comes in a number of simple annual subscription licensing options to meet your use case and performance needs. From basic performance testing to a full suite of application testing with updated content, you can choose the right solutions for your needs.
- **Cloud Assessment —** CyberFlood Virtual can be installed on specific cloud infrastructures, such as AWS, Azure, and Google Cloud (GCP) to validate and verify performance of default and/or third-party cloud based traffic inspection solutions.
- **Flexible —** Change the system resources of vCores and memory assigned to CyberFlood Virtual traffic generators to build systems that meet your specific needs.
- **IPSec Testing —** Validate IPSec VPN capacities including tunnel setup, maximum tunnels, and data rates over encrypted tunnel for remote access and site to site use cases.
- **SSL VPN —** Test tunnel setup and data traffic throughput capacity over an expanding set of SSL VPN dialects. Create comprehensive scale and accuracy tests with full control over data plane traffic profiles.
- **Applications —** With CyberFlood, users can quickly and easily test with the latest and most popular applications (updated continuously), all with unparalleled realism and scalability. Users can push their solutions to the limit while ensuring their content aware networks will stand up to real-world demands.
- **Advanced HTTPS Testing —** CyberFlood Virtual provides extensive coverage to test and stress HTTPS traffic at scale. Easily configurable cipher types, cert sizes and a variety of other parameters allow users to create highly realistic HTTPS and mixed traffic tests quickly and easily.
- **CyberFlood Virtual** can also be used with the Avalanche application testing solution for legacy application test cases.
- **Test the Future of Encryption —** CyberFlood is the first to bring quantum-safe cryptography to performance testing. With support for NIST's FIPS 203/204/205 PQC cipher suites and hybrid KEMs such as X25519Kyber768, CyberFlood validates readiness, identifies compatibility risks, and helps you plan for next-gen security upgrades—without compromising performance or QoE.
- **NetSecOPEN Built-in Tests —** NetSecOPEN is a networking industry group where networking vendors, tool vendors, labs and enterprises collaborate to create open and transparent testing standards.

- **AI/LLM Policy and Security Validation —** CyberFlood tests 36 GenAI apps with editable prompts to detect LLM threats such as prompt injection and measures policy impact on performance and QoE.
- **Expansive Use Cases —** Test capacity, performance, and scale of next generation environments, such as SD-WAN and SASE. Validate a wide cross section of performance and user experience factors.
- **ZTNA Testing —** Test the Zero Trust Policy Enforcement Point (PEP), validate that secure network and application access are delivered and verify that connections and per-user access policies are functioning as intended without impacting performance or QoE.
- **Automatic Goal Seeking —** Determine maximum capabilities of a device with minimal user interaction.
- **Realistic Web Testing —** Use web-capture capabilities to import and replay recorded sessions of complex website interactions and traffic to validate performance and comprehensive application policies.

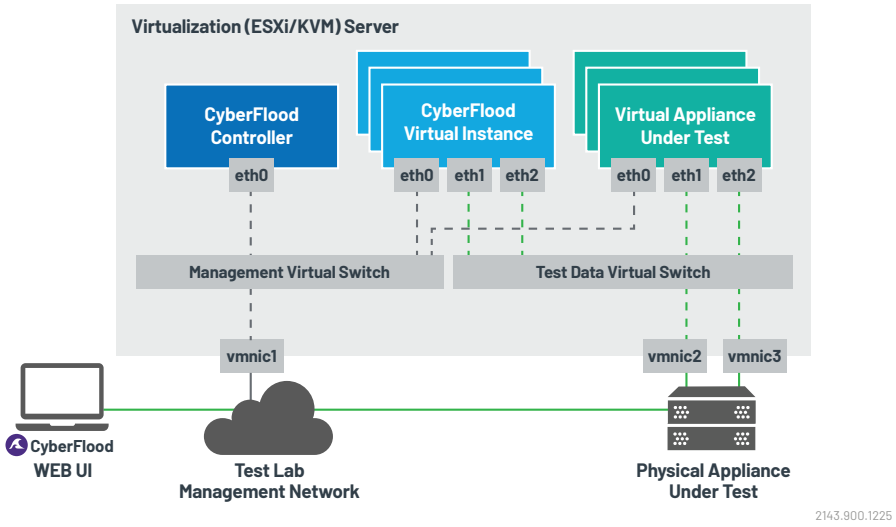
Technical Specifications

Virtual Environments	
Virtual Instances	• VMWARE ESXi 6.7, 7.0, 8.0 • KVM on Linux (64-bit only, bare metal) • AWS • Azure • Google Cloud (GCP)
Virtual Cores	License the number of CPU cores to size CyberFlood to meet your specific scale and performance needs. Minimum requirements: • 2 Ghz or greater CPUs • 4 x vCPUs per virtual instance • 8G RAM per virtual instance
Virtual Controller	VMWARE ESXi 6.7, 7.0, 8.0 KVM on Linux (64-bit only, bare metal) • 2 x vCPUs, 320G HDD, and 16GB of RAM • CyberFlood Controller is available for AWS, Azure, and Google Cloud (GCP)
Licensing	
CyberFlood Performance Testing License	Comes with HTTP/HTTPS bandwidth, connectivity and rate testing, advanced mixed traffic testing, custom traffic replay and DNS
CyberFlood TestCloud subscription	Allows options for always up-to-date download-able content for application scenarios
Avalanche Support	CyberFlood Virtual instances support Avalanche for deep session web testing

Technical Specifications continued

CyberFlood Features	
Web Based Interface	Easy to use multi-user web-based interface makes setting up and executing comprehensive tests fast, easy and consistent
Application Scenarios	Hundreds of thousands of current and popular application and user scenarios
HTTPS/TLS Testing	Support for TLS v1.2 and TLS v1.3 with selectable certificate and cipher suites
Advanced Mixed Traffic Assessment	Create custom and highly configurable tests and assessments with user action lists that execute a set of user application interactions for HTTP, HTTP/2, HTTP/3, HTTPS, SMTP, POP3, IMAP4, FTP, DNS over TLS and HTTPS, and other protocols
HTTP/HTTPS Connections Tests	Open thousands to millions of new connections per second to ensure your DUT can handle the new connection rate of your network
HTTP/HTTPS Bandwidth Tests	Find the maximum throughput achievable using emulated, realistic HTTP clients and HTTP servers and leveraging a configurable network topology
HTTP/HTTPS Open Connection Tests	Open millions of concurrent TCP connections within the state table of your DUT to find the maximum concurrency it can support. Leverage HTTP as the protocol for added realism during this test
VPN Testing	Easily assess capacities and capabilities of site to site and remote access IPSec from tunnel setup to data traffic handling, and use an expanding set of SSL VPN dialects
Mixed Traffic Tests	Measure the impact on application performance when using real-world built-in applications or extended with the power of TestCloud. Individually measure the bandwidth and success rate of each application added to the test to confirm the impact of the network under test
ZTNA Testing	Validate the scale and performance of the ZTNA architecture by emulating authenticated, unauthenticated and unauthorized users via SMAL and OIDC to validate least-privilege access policies.
Traffic Replay	Replay your own traffic profiles at scale to determine the impact of customer traffic flows on network devices and services
DNS Tests	Overload your DUT by sending hundreds of thousands of DNS queries per second for it to process and traverse, as well as process the corresponding events that occur on the DNS responses

Logical Topology



CyberFlood Virtual Topology Diagram

Requirements

The web browser minimum requirements to access CyberFlood controller are:

- Google Chrome (v34.0.1847.131)
- Firefox web browser (version 29.0)
- And minimum screen resolution is 1280 x 800

VIAVI Services

Professional Services

- Test lab optimization: Test automation engineering services
- Service deployment and service-level optimization: Vendor acceptance testing, SLA benchmarking, infrastructure and security validation
- Device scalability optimization: POC high scalability validation testing

Education Services

- Web-based training: 24x7 hardware and software training
- Instructor-led training: Hands-on methodology and product training
- Certifications: SCPA and SCPE certifications

Implementation Services

- Optimized new customer productivity with up to three days of on-site assistance

Ordering Information

Description	Part Number
CyberFlood Virtual Performance License 1 Year Includes: DNS Test Methodology, Throughput With Mixed Apps (Default Protocols), HTTP Open Conns Testing Methodology, Traffic Replay	CFV-PERF-1Y
CyberFlood Virtual Instance 4 Cores 1 Year	CFV-VCORES-04-1Y
CyberFlood Virtual Instance 8 Cores 1 Year	CFV-VCORES-08-1Y
CyberFlood Virtual Instance 16 Cores 1 Year	CFV-VCORES-16-1Y
CyberFlood Virtual Instance 32 Cores 1 Year	CFV-VCORES-32-1Y

CyberFlood Virtual is also available in perpetual licensing options, functional performance licensing, and multi-year options. Please contact VIAVI Sales for more information.

Security Testing options and other bundles are also available. Please contact VIAVI Sales for more information.

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