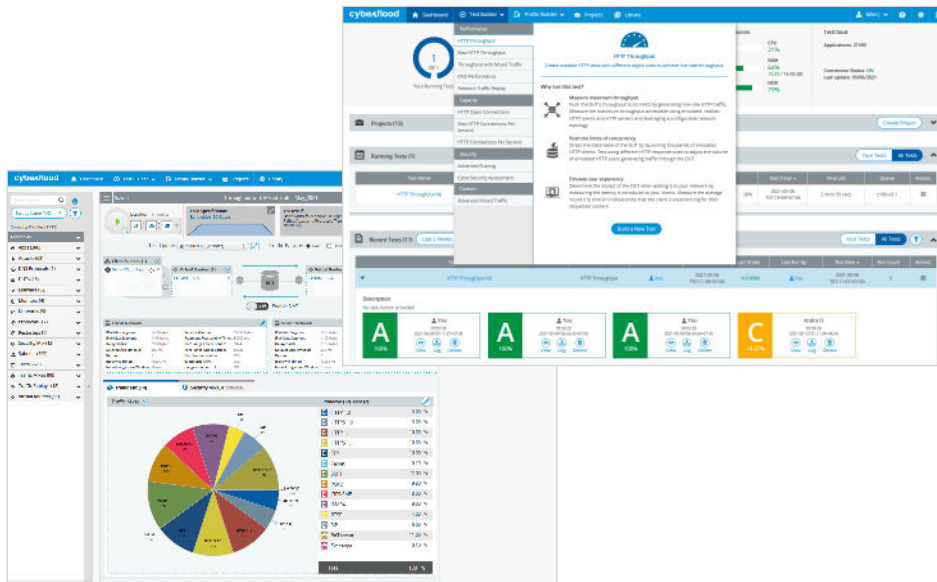


Spirent CF30 for CyberFlood

Application Performance Testing Solution



Understanding network performance is crucial for today's demanding business environments. Users today demand high-access and failsafe networks. Proactively testing content aware network devices is now more accessible than ever with the Spirent CF30 CyberFlood testing platform. Spirent's CF30 is sized right and feature rich to meet very demanding performance testing needs. The CF30 is a fully self-contained solution with a built-in web-based test controller to manage test cases and assets. Users can generate vast amounts of high-fidelity encrypted and mixed application traffic profiles at scale, enabling versatile use in enterprise, data center, and service provider network validation.



The CF30 for CyberFlood delivers an all-in-one, portable, cost-effective testing tool to optimize and harden any IT infrastructure.

The CF30 tests the performance of network devices and web application infrastructures to verify your Quality of Service (QoS) and Quality of Experience (QoE).

The CF30 uses the power of CyberFlood, giving you simplified use by consolidating multiple test functions into a single small form factor appliance.

Applications

- Create extreme loads of HTTPS traffic to verify encryption capacity and performance
- Generate application load traffic from a growing database of tens of thousands of user scenarios and application flows to verify application ID policies and performance
- Replay custom application and recorded web sessions at scale
- Use Advanced Mixed Traffic tests to create custom user actions, including IPSec and SSL VPN capacity and throughput
- Optional advanced security testing solutions are also available

CF30 Performance Examples*

HTTP Bandwidth (Bi-directional)	>75Gbps
HTTPS Bandwidth	>35Gbps
HTTP GETs/Sec	>1,000,000
HTTPS GETs/Sec	>100,000
HTTP Sustained Connections	>78,000,000

* Performance numbers are obtained using a single CF30 as a client and server. TLS Performance is with ECDHE-ECDSA cipher.

User Realism with CyberFlood

CyberFlood utilizes TestCloud™ for access to tens 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 Spirent TestCloud, while also providing the ability for users to import their own applications to recreate custom applications at scale.

Features & 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. The CF30 also offers a reduction in deployment and management complexity with its easy out-of-box setup.
- **Economical**—Access the power of CyberFlood with the right features, performance and capabilities in a cost-effective, low-profile package without compromising on performance. In addition, there is a reduction in cost of ownership due to smaller requirements for rack space, power and cooling.
- **Network Performance Testing**—Provides extensive Layer 4-7 testing for network performance, capacity, and connectivity.

Using tens of thousands of ready-to-run performance tests for a wide range of popular applications, including peer-to-peer (P2P), Business, Instant messaging (IM), and Social Media, users can test:

 - Policy Enforcement for QoS Application-aware systems, such as DPI engines, application firewalls, and mobile packet gateways
 - The effectiveness of DPI, IPS/IDS, ALG, UTM systems, evaluating their performance under real-world traffic conditions
 - Advanced NGFW and SD-WAN/SASE inspection capabilities and capacities using SSL/SNI support
 - IPSec & SSL VPN capacities including tunnel setup, maximum tunnels, and data rates over encrypted tunnel for remote access and site to site use cases.
- **Applications**—With CyberFlood, users can quickly and easily test with the latest and most popular applications (updated continuously) with unparalleled realism and scalability. Users can push their solutions to the limit while ensuring the infrastructure will stand up to real-world demands.
- **Power and Performance**—The right performance and scale: The CF30 provides the right performance profile to effectively exercise networks to find maximum user connectivity and application traffic throughput capabilities, with over 75Gbps of HTTP and 35Gbps of HTTPS traffic generation capabilities.
- **Cross Compatibility**—The CF30 offers test compatibility with other CyberFlood platforms, providing maximum flexibility for running CyberFlood tests across a multitude of available platforms for virtual, cloud and hardware-based environments.
- **Avalanche Software Support**—Run the full breadth of Avalanche software on the CF30, providing maximum flexibility and test coverage.
- **NetSecOPEN Tests Built-In**—NetSecOPEN is a networking industry group where networking vendors, tool vendors, labs and enterprises collaborate to create open and transparent testing standards for today's modern content-aware solutions.
- **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	
Available Hardware Configurations	
CF30 with 8x10G/8x1G	8x10G/1G SFP+ Includes 8x10G/1G MMF SFP+ transceivers
Software License Options	
Performance Testing Software	Includes HTTP/HTTPS Throughput, HTTP/HTTPS CPS, HTTP/HTTPS Concurrent Connections, DNS, Throughput with Mixed Traffic (default protocols), Advanced Mixed Traffic, and Network Traffic Replay test methodologies
TestCloud subscription	Allows options for always up-to-date downloadable content for application scenarios
CyberFlood Feature Details	
Web Based Interface	Easy to use multi-user web-based interface makes setting up and executing comprehensive tests fast, easy and consistent
Application Scenarios	Tens of thousands of current and popular application and user scenarios that can be easily used in custom mixed traffic tests
HTTPS/TLS Testing	Support for TLS v1.2, and TLS v1.3 with selectable certificate and cipher suites
HTTP 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 Bandwidth Tests	Find the maximum throughput achievable using emulated, realistic HTTP clients and HTTP servers and leveraging a configurable network topology
HTTP 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 and SSL VPN* from tunnel setup to data traffic handling
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
Mixed Traffic Tests	Measure the impact on application performance when using real-world built-in applications or extended applications 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
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
Dimensions	1RU – 1.7" H x 17.2" W x 15.7" D; Fits standard 19" rack
Weight	18 lbs. (8.16 kg)
Operating Environment	0°C – 40°C (32°F –104°F)
Non-Operating Environment	–40°C – 70°C (–40°F – 158°F)
Operating Relative Humidity	8% – 90% (non-condensing)
Non-operating Relative Humidity	5% – 95% (non-condensing)
Power Requirements	100-240 Vac, 50/60Hz – 600W

*Expanding set of SSL VPN dialects

Ordering Information

Description	Part Number
CF30 10G/1G Performance Kit 8XSFP+*	CF-KIT-002-CF30

Performance Kits include HTTP/HTTPS Throughput, HTTP/HTTPS CPS, HTTP/HTTPS Concurrent Connections, DNS, Throughput with Mixed Traffic (default protocols), Advanced Mixed Traffic, and Network Traffic Replay test methodologies.

*8 SFP+ 10G/1G MMF Transceivers are included.

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

 ALSO AVAILABLE

Optional Advanced Security Testing Capabilities

Requirements

The client used to access the virtual host/CyberFlood controller must meet the following minimum requirements to run CyberFlood:

- Any Windows, Mac or Linux PC running the latest browser versions
- Firefox browser
- Google Chrome browser

Spirent 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