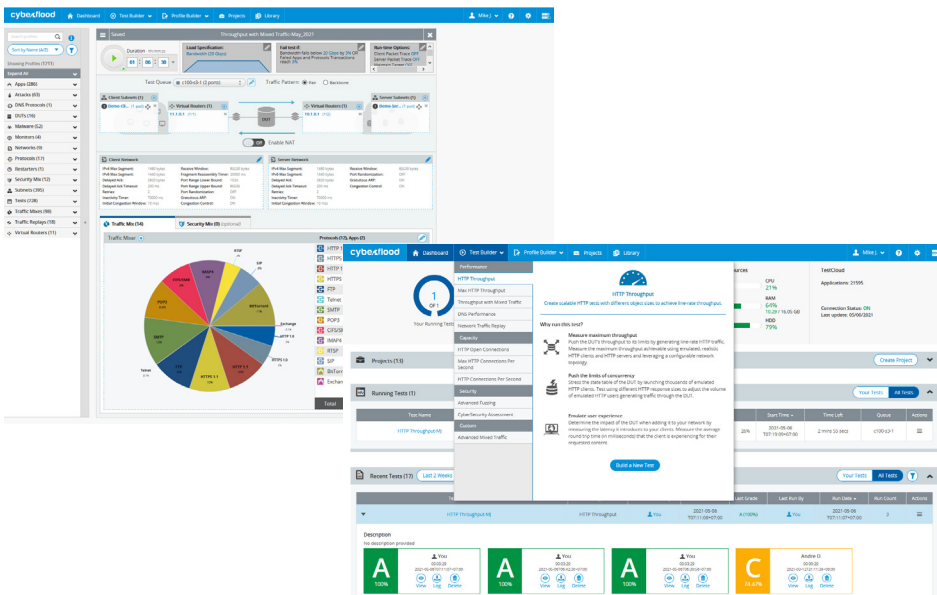


Spirent CF20 for CyberFlood

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 CF20 CyberFlood testing platform. Spirent's CF20 is sized right and feature rich to meet very demanding performance testing needs. Its multi-speed allows for a wide array of use cases and covers the majority of network interfaces in use today, with options from 1G to 100G for use in enterprises, data centers and service providers. The CF20 is a fully self-contained solution with a built-in web-based test controller to manage test cases and assets, and it comes standard with advanced crypto-acceleration to create vast amounts of high-depth HTTPS traffic at scale.



The CF20 for CyberFlood solution provides advanced test options for 1G, 10G, 40G and 100G interfaces. The CF20 tests the performance of network devices and web application infrastructures to verify your, Quality of Service (QoS) and Quality of Experience (QoE). The CF20 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

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 CF20 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 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 inspection capabilities and capacities using SSL/SNI support
 - Validate IPSec 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 CF20 provides the right performance profile to effectively exercise networks to find maximum user connectivity and application traffic throughput capabilities, with over 60Gbps of HTTP traffic generation capabilities.
- **Built-in Cryptographic Acceleration**—The CF20 comes with standard built-in cryptographic acceleration technology to increase the scale of testing encrypted traffic rates and bandwidth, including testing with up-to-date cipher types.
- **Cross Compatibility**—The CF20 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 CF20, 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

CF20 with 2xQSFP28	8x10G Fan out 2x40G 2x100G	Cryptographic Acceleration Test Module QSFP28 transceivers not included
CF20 with 8x10G/8x1G	8x10G/1G SFP+ Cryptographic Acceleration Module Includes 8x10G/1G MMF SFP+ transceivers	
CF20 with 4x10G/4x1G	4x10G/1G SFP+ Includes 4x10G/1G MMF SFP+ transceivers Does not include Crypto Acceleration Module	

The CF20 with 2xQSFP28 interfaces is 25G and 50G capable with future license options

The CF20 is capable of over 60Gbps of HTTP traffic generation capability on the QSFP28 model

Software License Options

Performance Testing Software	Comes with HTTP/HTTPS scale bandwidth, connectivity and rate testing, advanced mixed traffic testing custom traffic replay and DNS
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 SSLv3, TLS v1.0, 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	(1U) 1.7" H x 16.8" W x 17.0" D; Fits standard 19" rack
Weight	17 lbs. (7.7 kg)
Operating Environment	5°C–35°C
Non-Operating Environment	0°C–50°C
Relative Humidity	10%–90% (non-condensing)
Power Requirements	115–230V, 50/60 Hz – 750W
Regulatory Approvals	FCC Part 15 Class A CE Mark Class A EN 55032:2012; EN 55024:2010; EN 61000-3-3:2013; EN 61000-3-2:2014

*Expanding set of SSL VPN dialects

Ordering Information

Description	Part Number
CF20 10G/1G Performance Kit 8XSFP+	CF-KIT-011-CF20
CF20 100G/40G/10G Performance Kit 2XQSFP28*	CF-KIT-013-CF20
CF20 10G/1G Performance Kit 4XSFP+	CF-KIT-015-CF20
CF20 CyberFlood Advanced Mixed Traffic Assessment	CF-SW-ADV-CF20

Performance Kits Include: DNS Test Methodology, Throughput Mixed Traffic (Default Protocols), HTTP Open Conns Testing, Max Http Throughput Testing Methodology, Traffic Replay

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

*QSFP28 Transceivers are not included.

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 (June 2017 or greater)
- 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

About Spirent Communications

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks. We help bring clarity to increasingly complex technological and business challenges. Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled. For more information visit: www.spirent.com

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