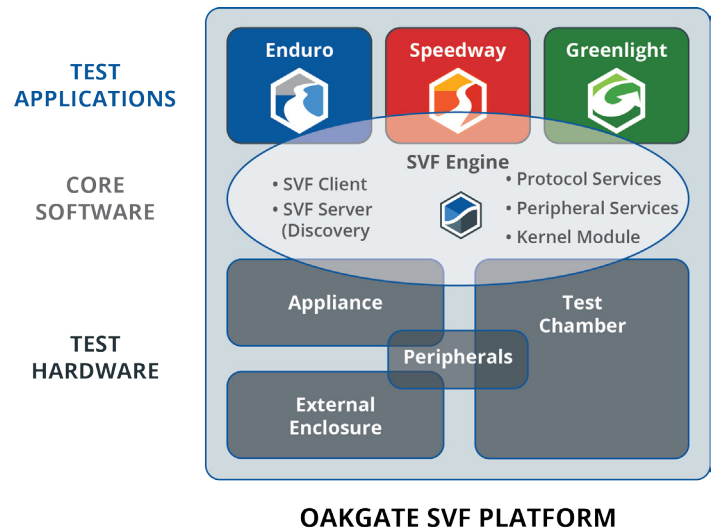


# STORAGE VALIDATION FRAMEWORK ENGINE

Core Storage Testing Software Driving OakGate Appliances

The industry's most advanced storage-testing software, OakGate's Storage Validation Framework (SVF) engine, is the core software driving the OakGate appliances and running the OakGate test applications. The SVF engine offers a comprehensive set of features and capabilities that are based on OakGate's unique experience in working closely with a broad range of customers and understanding their requirements. Now in its third generation, the SVF engine has been hardened over several years in intense test environments at major storage customer sites worldwide.



## PROTOCOL READY

Designed expressly for flash-based storage and SSDs, OakGate's SVF engine supports all popular storage interfaces including PCIe/NVMe, SAS, SATA, and Fibre Channel.

## TRAFFIC GENERATION

Generate high-performance, randomized traffic profiles with ease and test scenarios that would be extremely difficult to create manually or with any other test tool.

- High performance
- Flexible for complete control of workloads
- Fixed or randomized I/O patterns
- Small-to-large queue depths
- JEDEC enterprise and client workloads

## ERROR INJECTION

Inject protocol-specific error conditions and verify that your device behaves as expected even under the worst conditions.

- Low-level errors provided by OakGate drivers
- Injections can occur during heavy I/O workloads

## PROTOCOL ANALYZER

Effectively debug and analyze from early prototype bring-up through long-term I/O testing using the protocol analyzer.

- Traffic and error presentation
- Real-time traffic statistics
- Real-time error statistics
- Frame decodes
- Quick search and navigation

## ADDITIONAL SVF ENGINE FEATURES

### POWER AND EXPANSION

OakGate’s SVF engine is designed to provide a seamless path to in-chassis power cycling and measurement, high-density lab infrastructure through external enclosures, as well as production testing.

### AUTOMATED REPORTING

Stop manually creating test reports and save time by utilizing the automatically generated reports created by our automation tool.

- Summary report generation
- Complete HTML test reports
- Histograms
- Error logs
- Pass/Fail report

### PERFORMANCE BENCHMARKING

Deliver consistent benchmarking results, measure the true performance of the device under test, and generate a suite of performance analytics.

- Average IOPS, bandwidth, latency, power
- Performance vs. Time
- Entropy data patterns workloads

### PROTOCOL CONFORMANCE

Execute built-in conformance tests that evaluate a device against its protocol, or create your own for maximum flexibility and control.

- Hundreds of built-in protocol tests
- Software Development Kit (SDK) for customer-created tests



### POINT AND CLICK AUTOMATION

Create full automation suites without writing a single line of code using our integrated test automation tool.

- Code-free test suite creation
- Large test suites
- Product validation suites
- “Canned” test sequences
- Full SNIA benchmarks
- Customizable for user benchmarks

### PLATFORM APIS

Integrate OakGate resources into your existing automation framework by utilizing our RESTful web services, command line interface (CLI), or C-based application programming interface (API).

- REST APIs
- Command Line Interface
- C/C++ SDK
- Rich function library

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