

Release Testing

This document will list the set of tests executed prior to the release of a version of FoundationDB.

Types of Release Testing

Correctness Testing (using **fdb-joshua**)

- Regular
- Binding Tester
- Valgrind Enabled
- Sanitizers Enabled

Performance Testing Matrix (using YCSB tests from **fdb-kubernetes-tests**)

- Storage Engines
 - SQLite
 - RocksDB
 - Redwood
- Disk Types
 - **AWS EBS gp3**
 - **AWS EC2 Instance Store**
- Scalability Tests (**NOTE:** “Node” definition is TBD)
 - 10 Nodes
 - 20 Nodes
 - 30 Nodes
 - etc.

Other Cluster Testing

- High Availability configurations
- Chaos testing
- Backup/Restore Tests
 - Backup/Restore performance
 - Backup/Restore integrity

Performance Test Metrics

- Data Load rate
- Data Read rate
- Transactional throughput (YCSB workloads A-F plus some custom/hybrid workloads)
- Latency Measurements
 - Mean Latency

- Tail Latency
- Disk Usage Efficiency (Logical TB vs. Physical TB)
- CPU Utilization (under load)
- Memory Utilization (under load)

Release/Test Report Format

- Format will attempt to be consistent
- Format will attempt to allow for comparability between releases
- Format is subject to change as testing capability, or system performance characteristics change
- Test reports must be available to OSS community at time of release