

ORACLE®

Performance evaluation of Asynchronous Replication, Group Replication and Galera

Part 2: Charts for evolution over time

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Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purpose only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied up in making purchasing decisions. The development, release and timing of any features or functionality described for Oracle's product remains at the sole discretion of Oracle.

Sysbench RW and Update Indexed throughput over time:

1. Durable settings
2. Non-durable settings

For details refer to:

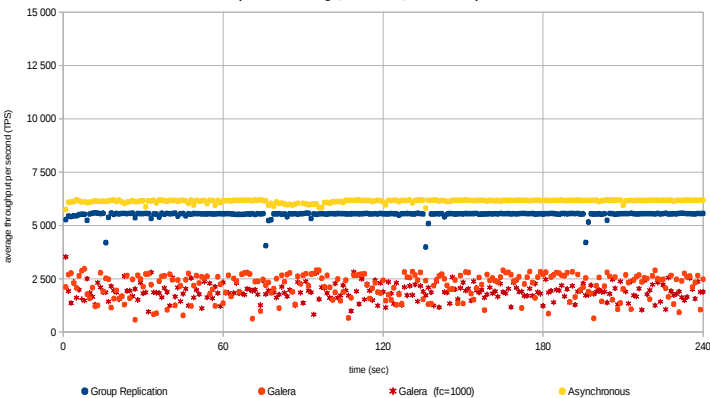
<http://mysqlhighavailability.com/performance-evaluation-mysql-5-7-group-replication/>

1. Durable settings

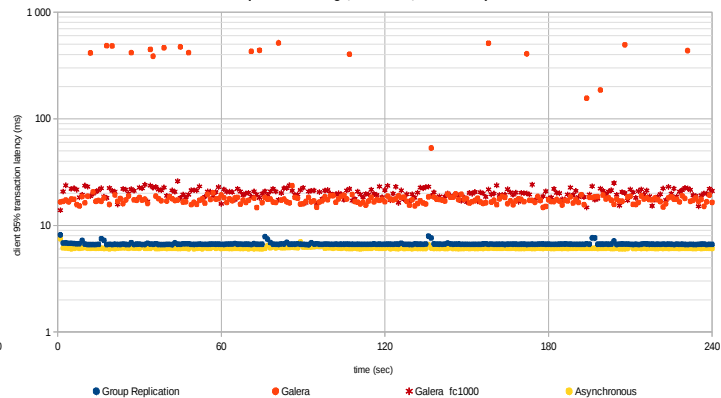
Group size: 3 members

1.1. Durable, 3 members, 32 threads

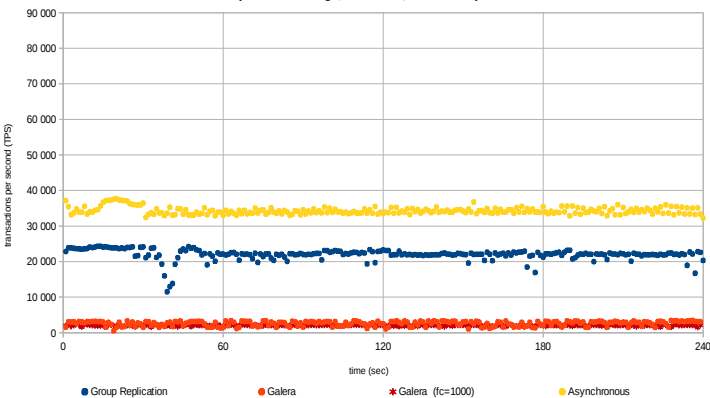
Peak Single-master Throughput over Time: Sysbench RW
(durable settings, 32 clients, 3 members)



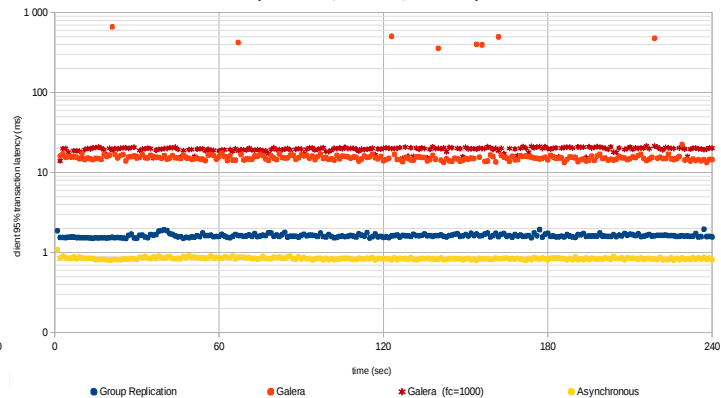
Single-master Latency over Time: Sysbench RW
(durable settings, 32 clients, 3 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(durable settings, 32 clients, 3 members)

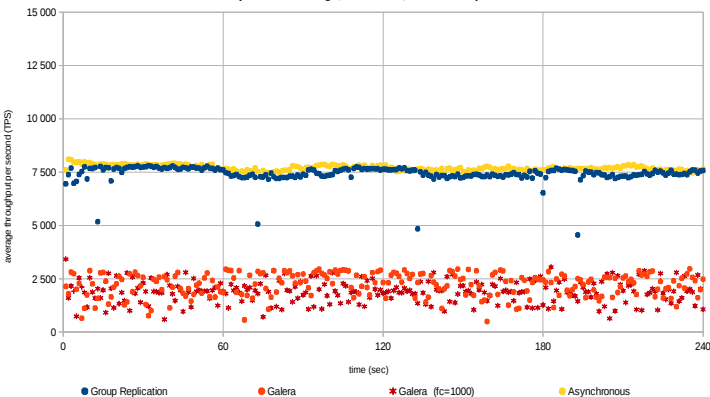


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 32 threads, 3 members)

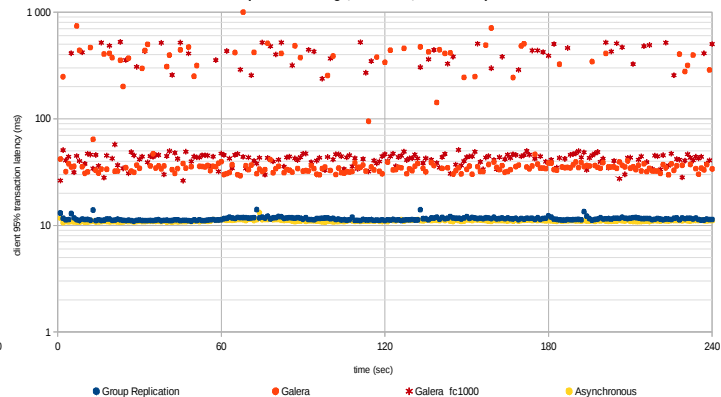


1.1. Durable, 3 members, 64 threads

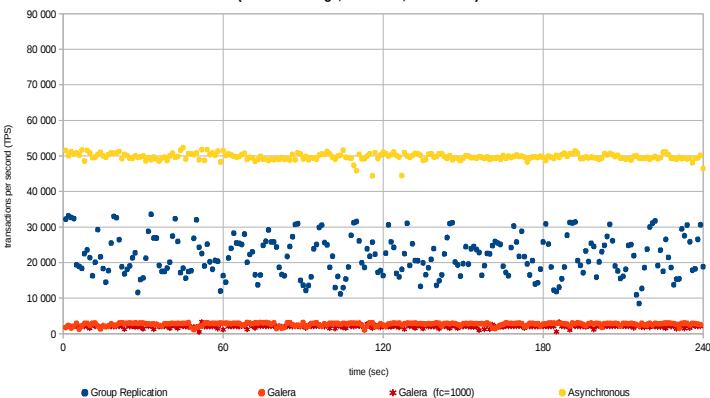
Peak Single-master Throughput over Time: Sysbench RW
(durable settings, 64 clients, 3 members)



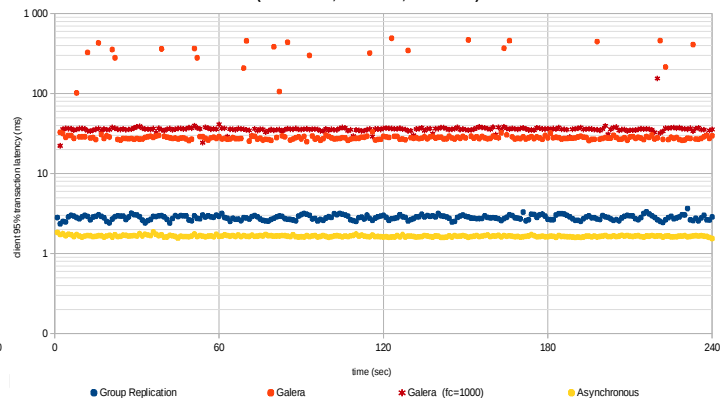
Single-master Latency over Time: Sysbench RW
(durable settings, 64 clients, 3 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(durable settings, 64 clients, 3 members)

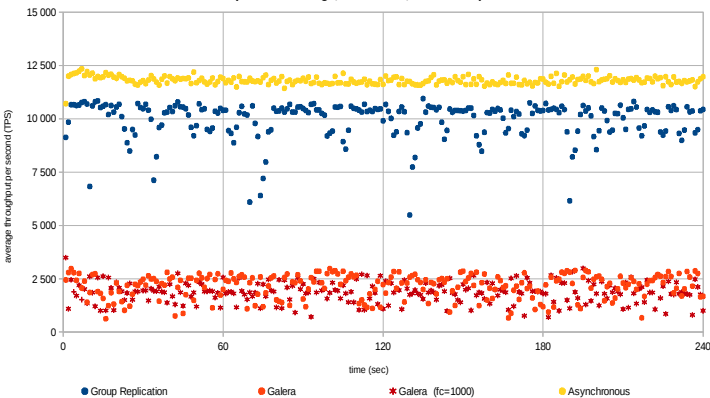


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 64 threads, 3 members)

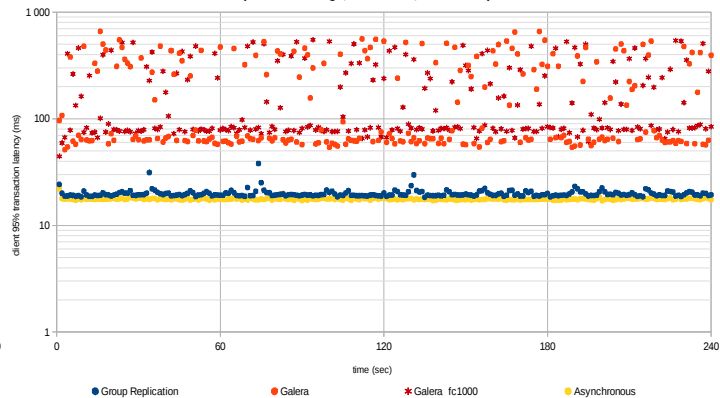


1.1. Durable, 3 members, 128 threads

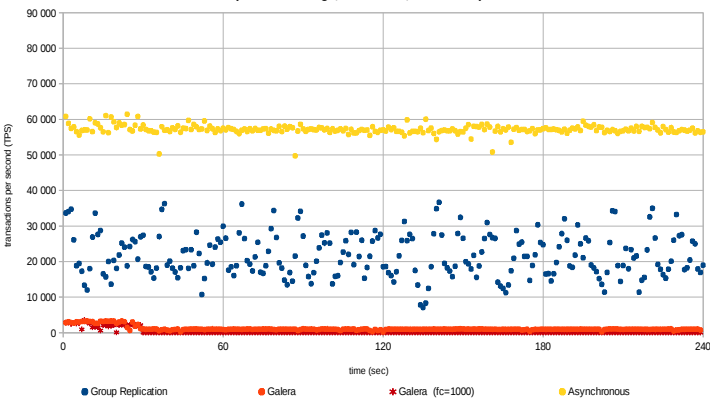
Peak Single-master Throughput over Time: Sysbench RW
(durable settings, 128 clients, 3 members)



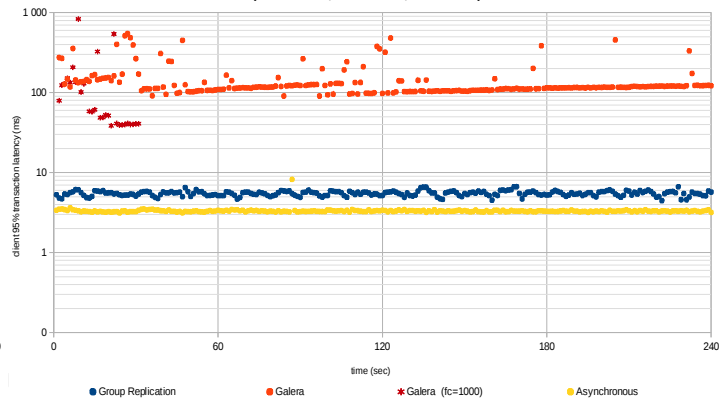
Single-master Latency over Time: Sysbench RW
(durable settings, 128 clients, 3 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(durable settings, 128 clients, 3 members)



Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 128 threads, 3 members)

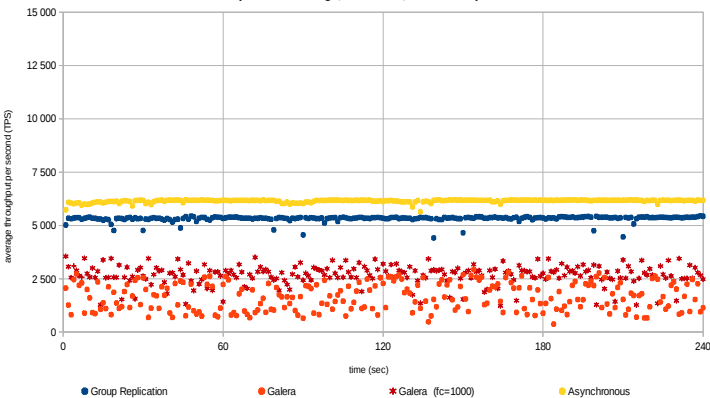


1. Durable settings

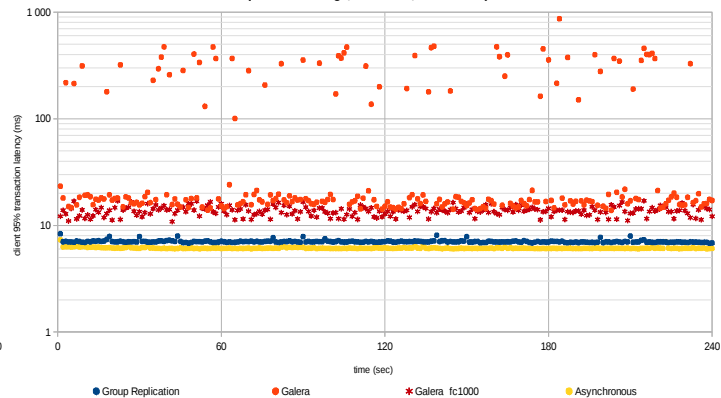
Group size: 5 members

1.2. Durable, 5 members, 32 threads

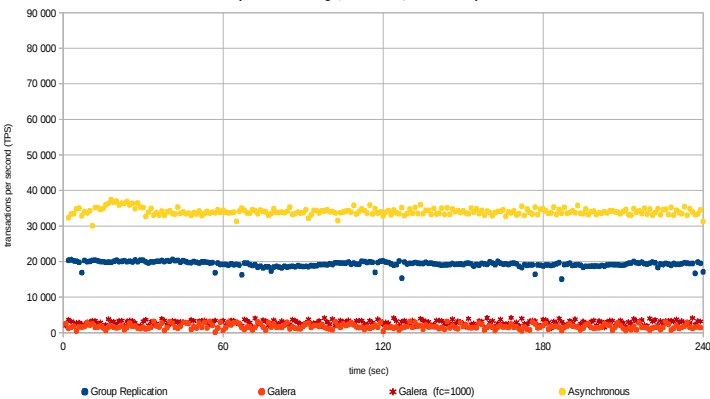
Peak Single-master Throughput over Time: Sysbench RW
(durable settings, 32 clients, 5 members)



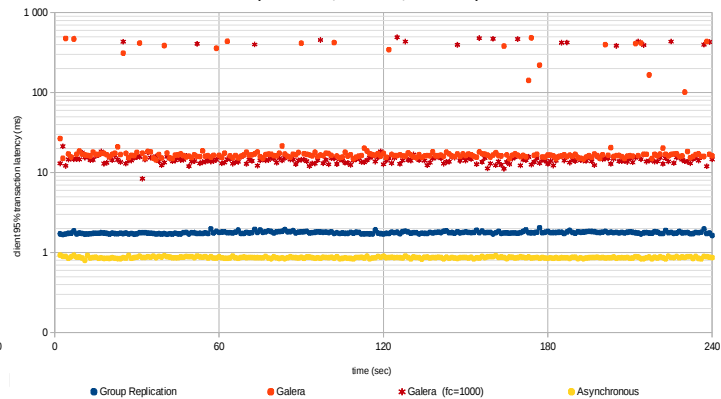
Single-master Latency over Time: Sysbench RW
(durable settings, 32 clients, 5 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(durable settings, 32 clients, 5 members)

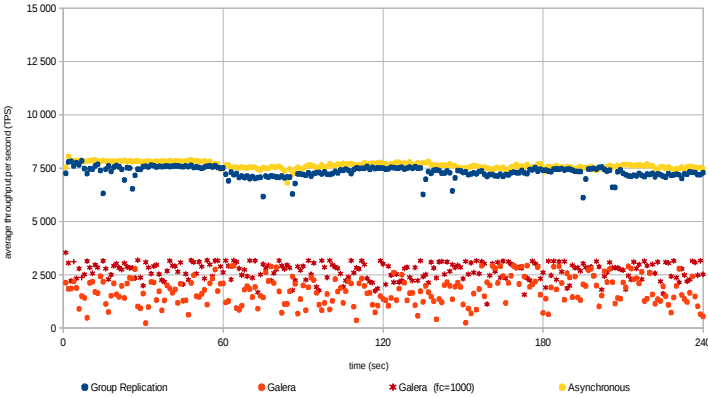


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 32 threads, 5 members)

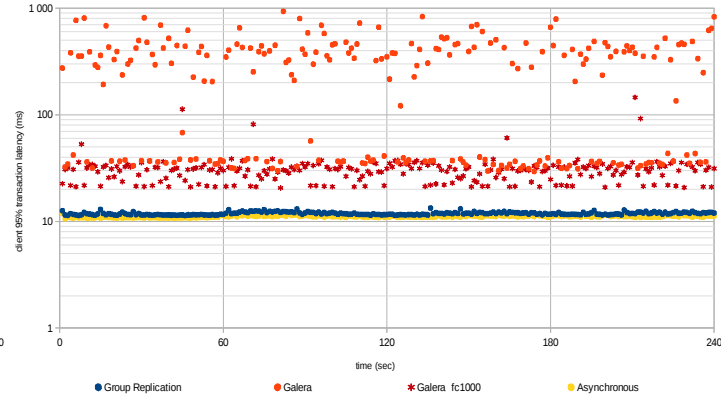


1.2. Durable, 5 members, 64 threads

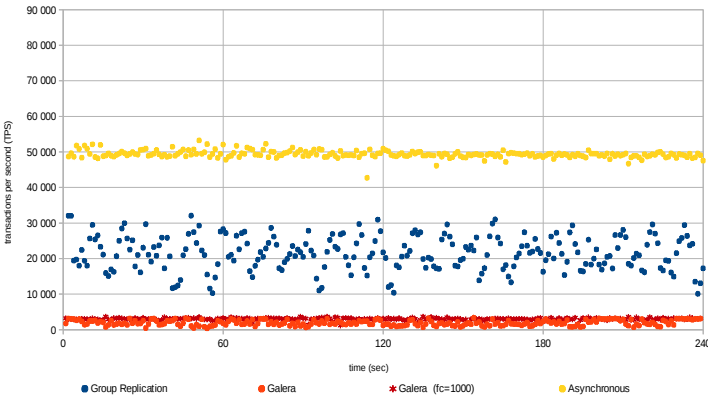
Peak Single-master Throughput over Time: Sysbench RW (durable settings, 64 clients, 5 members)



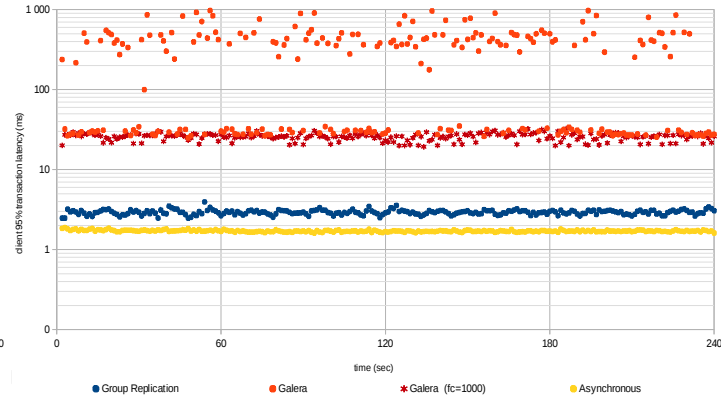
Single-master Latency over Time: Sysbench RW (durable settings, 64 clients, 5 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (durable settings, 64 clients, 5 members)

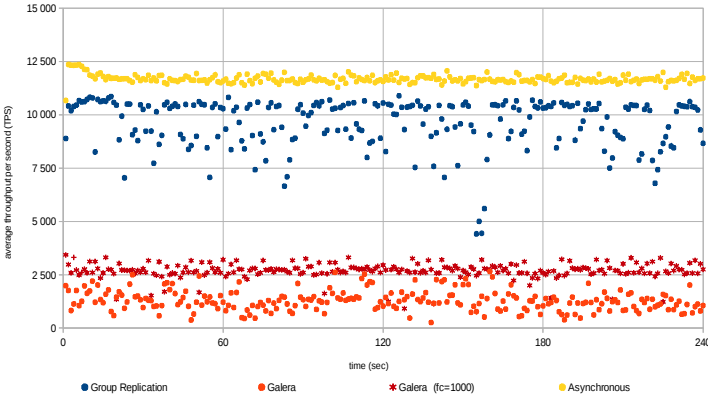


Single-master Latency over Time: Sysbench Update Indexed (non-durable, 64 threads, 5 members)

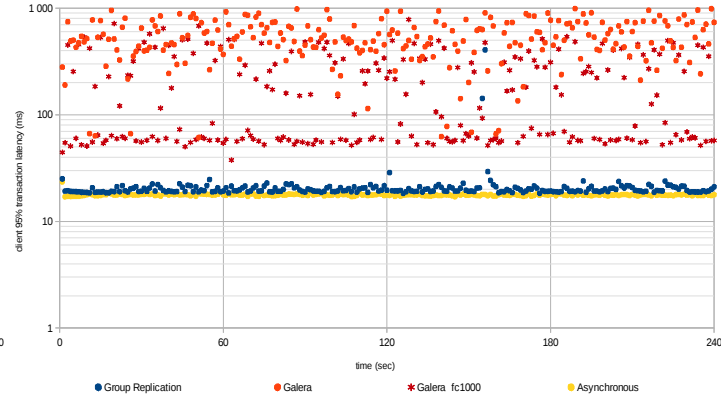


1.2. Durable, 5 members, 128 threads

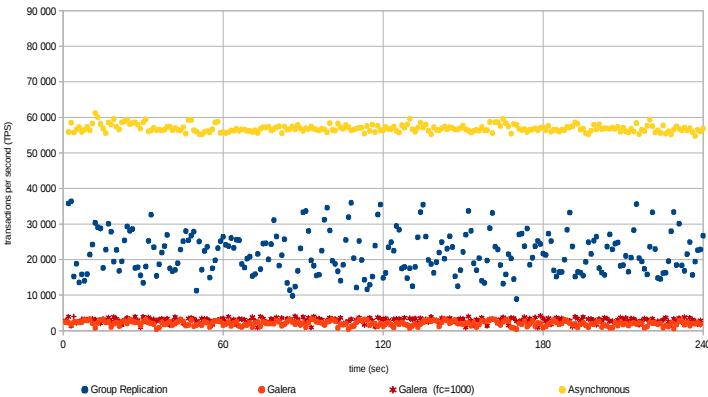
Peak Single-master Throughput over Time: Sysbench RW (durable settings, 128 clients, 5 members)



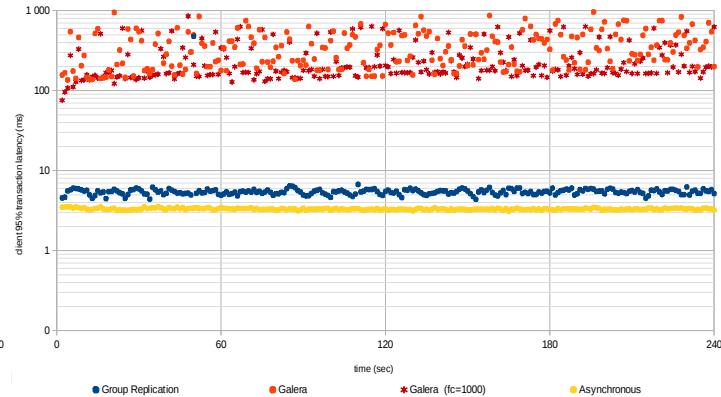
Single-master Latency over Time: Sysbench RW (durable settings, 128 clients, 5 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (durable settings, 128 clients, 5 members)



Single-master Latency over Time: Sysbench Update Indexed (non-durable, 128 threads, 5 members)

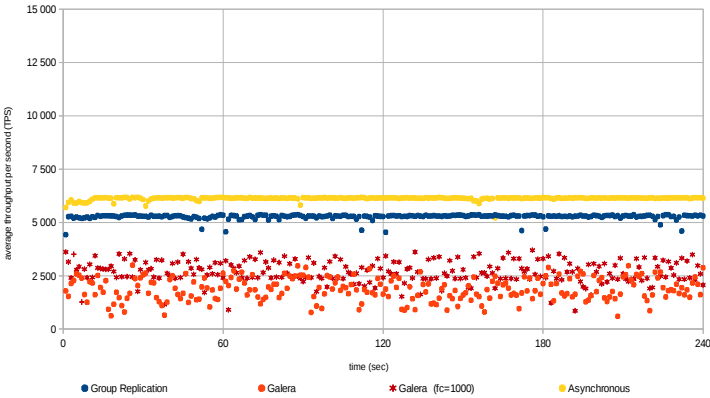


1. Durable settings

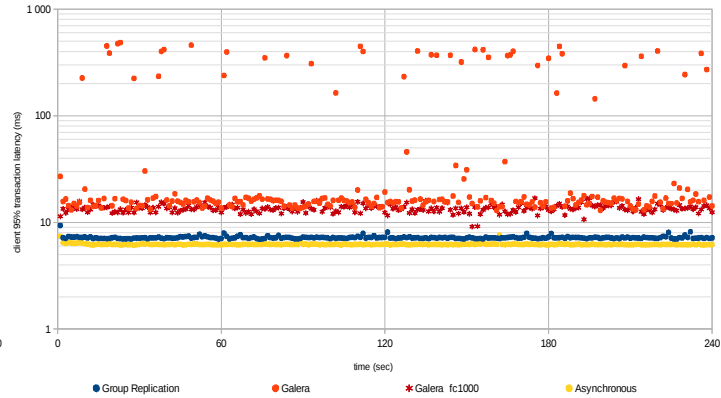
Group size: 7 members

1.3. Durable, 7 members, 32 threads

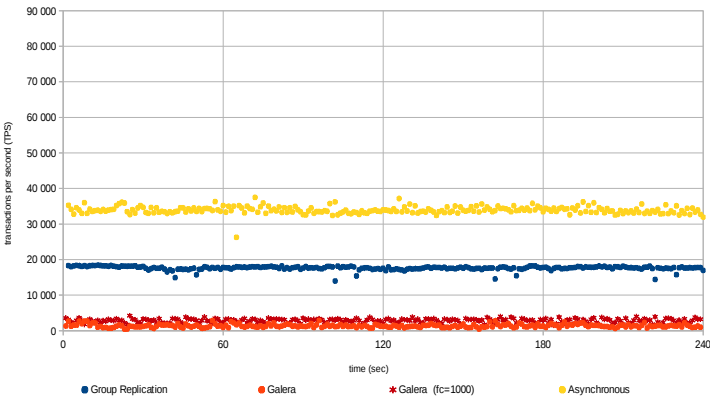
Peak Single-master Throughput over Time: Sysbench RW (durable settings, 32 clients, 7 members)



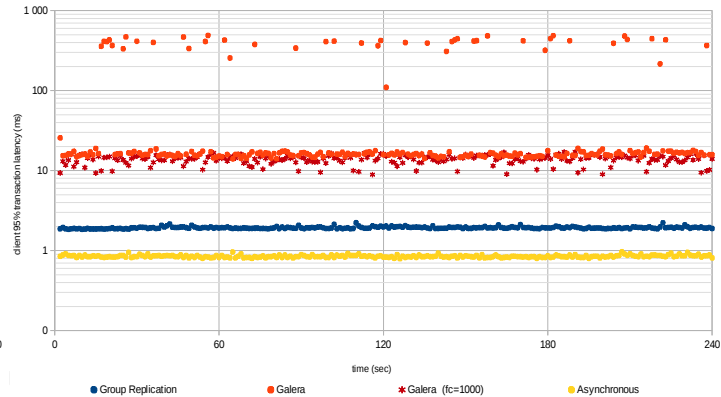
Single-master Latency over Time: Sysbench RW (durable settings, 32 clients, 7 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (durable settings, 32 clients, 7 members)

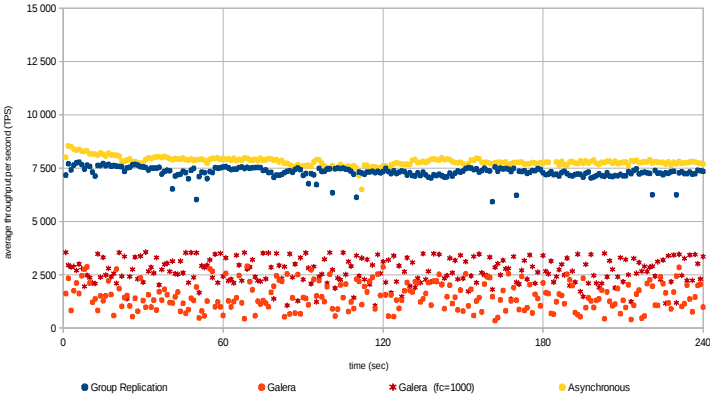


Single-master Latency over Time: Sysbench Update Indexed (non-durable, 32 threads, 7 members)

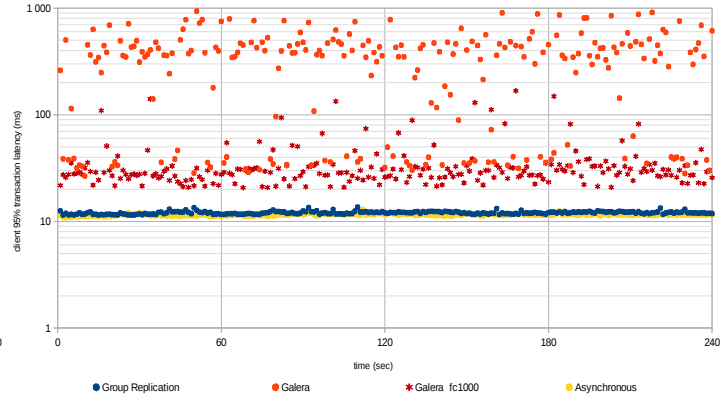


1.3. Durable, 7 members, 64 threads

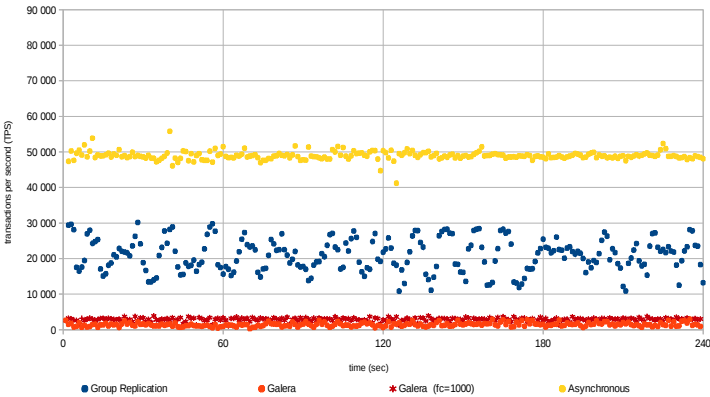
Peak Single-master Throughput over Time: Sysbench RW
(durable settings, 64 clients, 7 members)



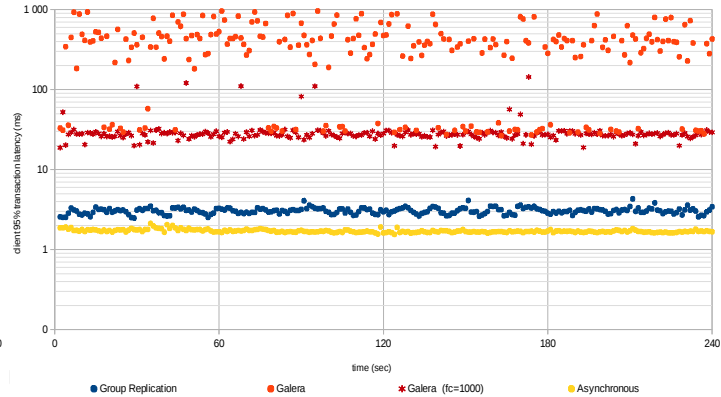
Single-master Latency over Time: Sysbench RW
(durable settings, 64 clients, 7 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(durable settings, 64 clients, 7 members)

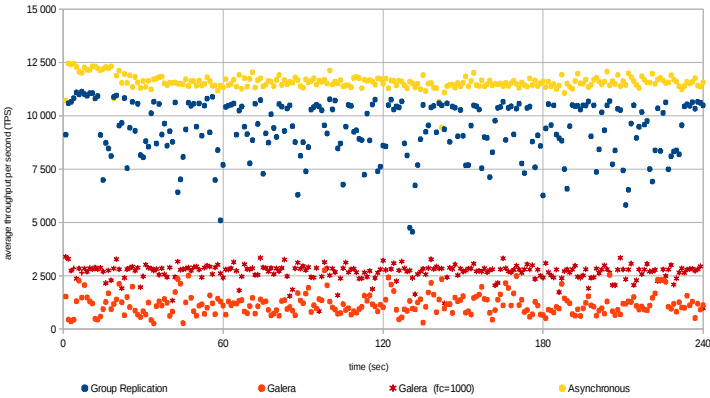


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 64 threads, 7 members)

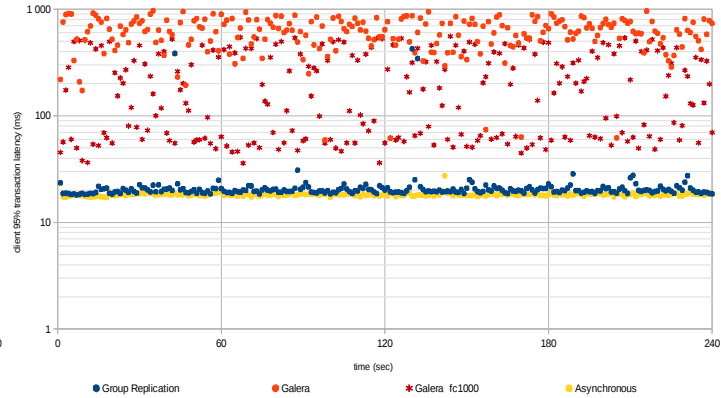


1.3. Durable, 7 members, 128 threads

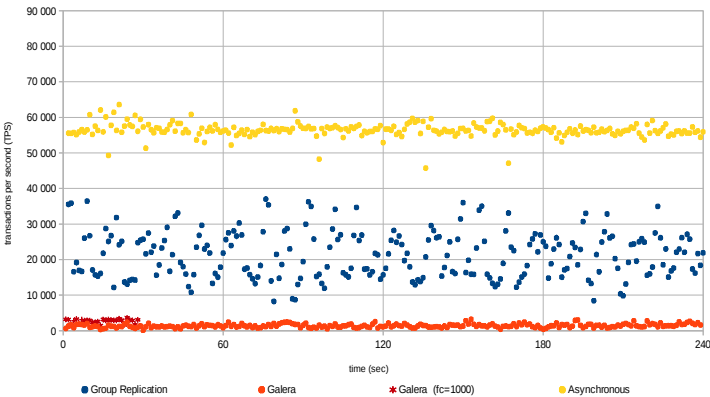
Peak Single-master Throughput over Time: Sysbench RW
(durable settings, 128 clients, 7 members)



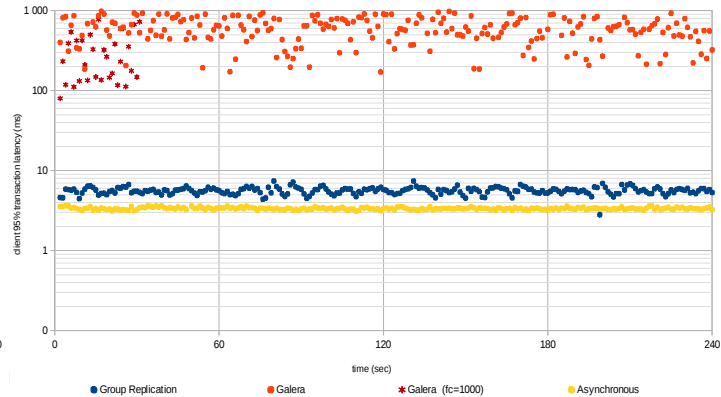
Single-master Latency over Time: Sysbench RW
(durable settings, 128 clients, 7 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(durable settings, 128 clients, 7 members)



Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 128 threads, 7 members)

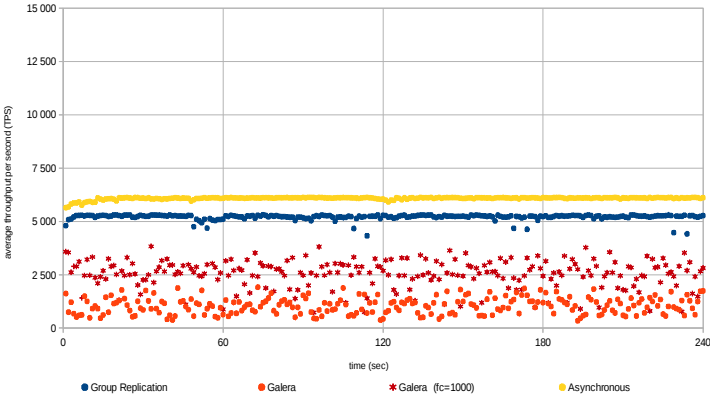


1. Durable settings

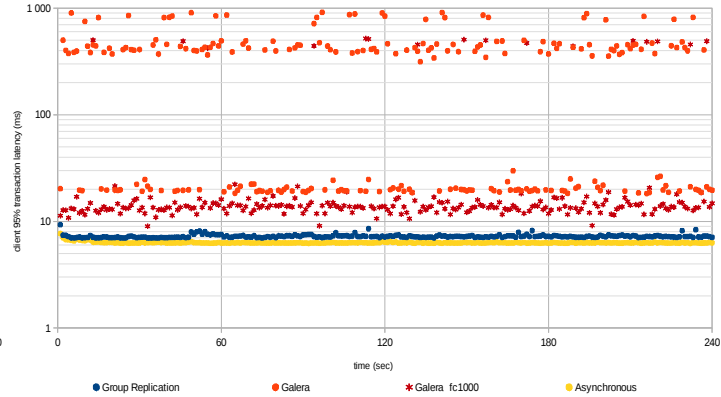
Group size: 9 members

1.4. Durable, 9 members, 32 threads

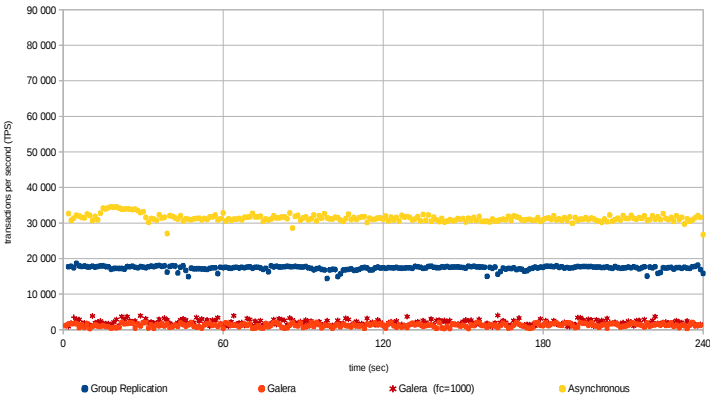
Peak Single-master Throughput over Time: Sysbench RW
(durable settings, 32 clients, 9 members)



Single-master Latency over Time: Sysbench RW
(durable settings, 32 clients, 9 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(durable settings, 32 clients, 9 members)

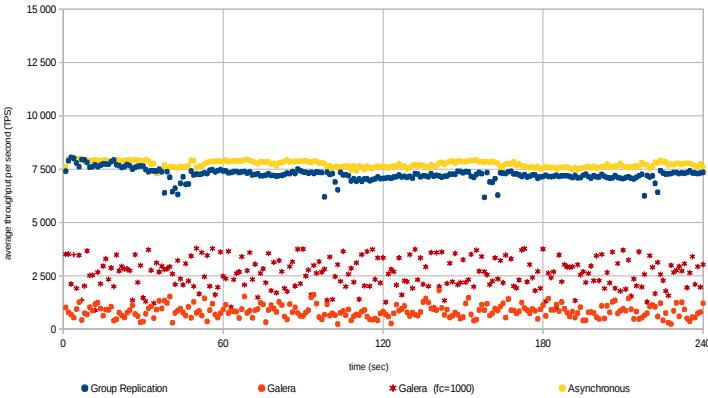


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 32 threads, 9 members)

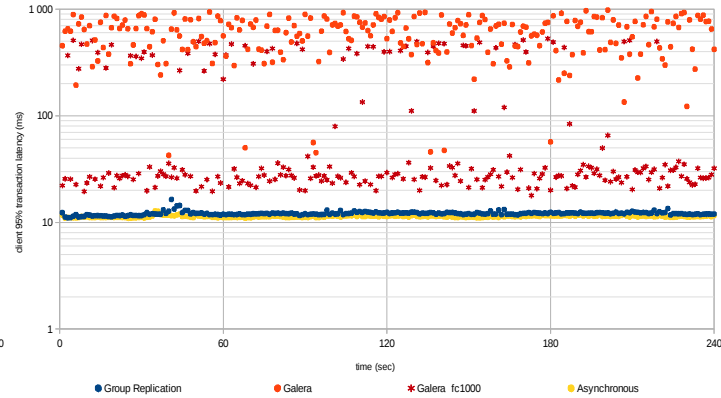


1.4. Durable, 9 members, 64 threads

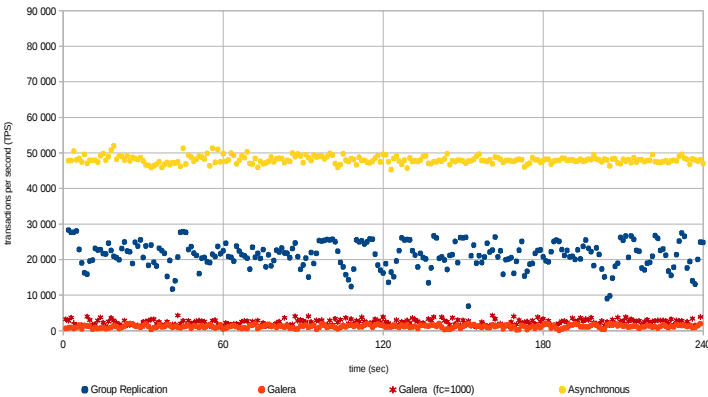
Peak Single-master Throughput over Time: Sysbench RW (durable settings, 64 clients, 9 members)



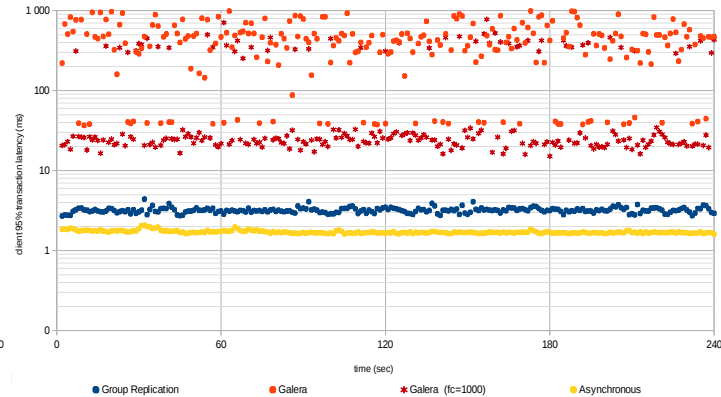
Single-master Latency over Time: Sysbench RW (durable settings, 64 clients, 9 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (durable settings, 64 clients, 9 members)

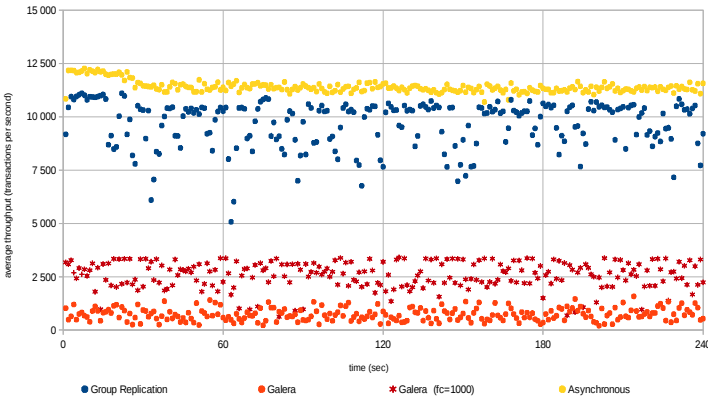


Single-master Latency over Time: Sysbench Update Indexed (non-durable, 64 threads, 9 members)

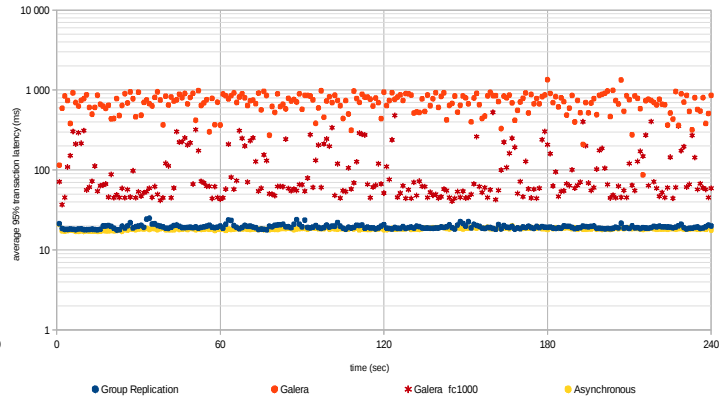


1.4. Durable, 9 members, 128 threads

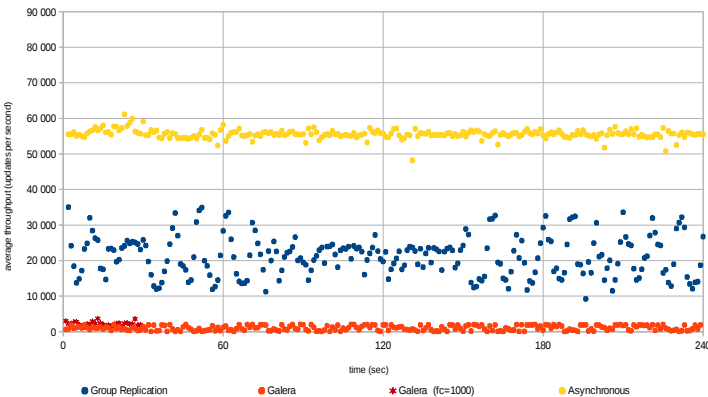
Peak Single-master Throughput over Time: Sysbench RW
(durable settings, 128 clients, 9 members)



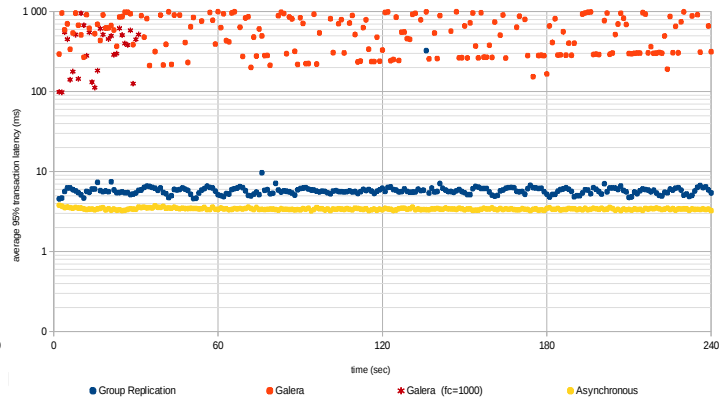
Single-master Latency over Time: Sysbench RW
(durable settings, 128 clients, 9 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(durable settings, 128 clients, 9 members)



Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 128 threads, 9 members)



Sysbench RW and Update Indexed throughput over time:

1. Durable settings
2. Non-durable settings

For details refer to:

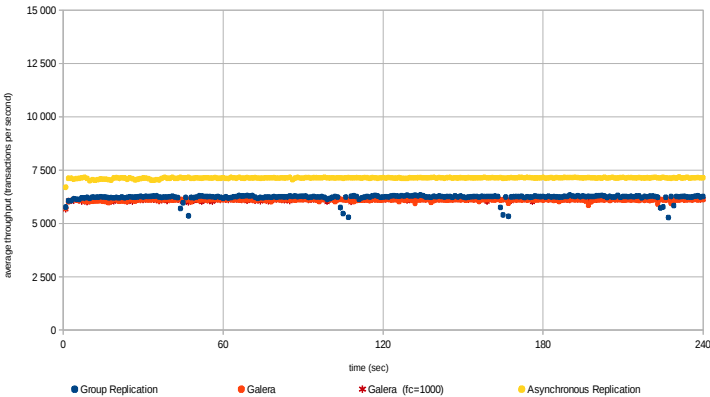
<http://mysqlhighavailability.com/performance-evaluation-mysql-5-7-group-replication/>

2. Non-durable settings

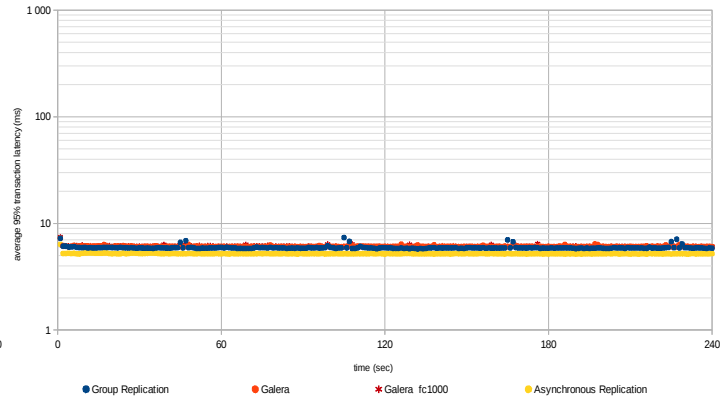
Group size: 3 members

2.1. Non-durable, 3 members, 32 clients

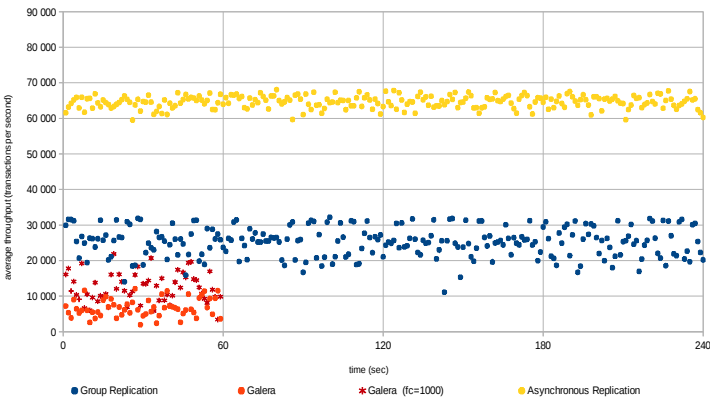
Peak Single-master Throughput over Time: Sysbench RW
(non-durable, 32 clients, 3 members)



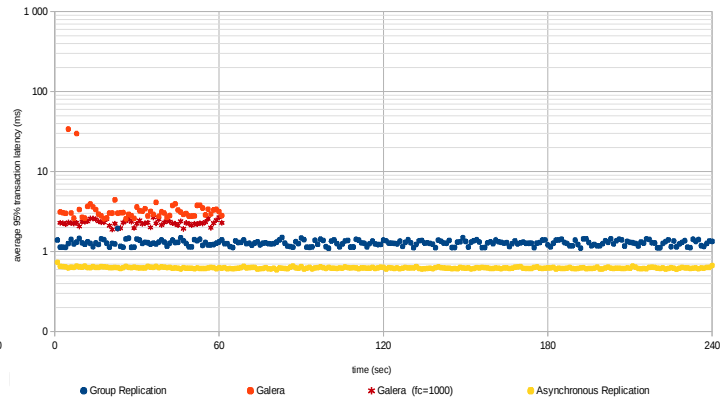
Single-master Latency over Time: Sysbench RW
(non-durable, 32 clients, 3 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(non-durable, 32 clients, 3 members)

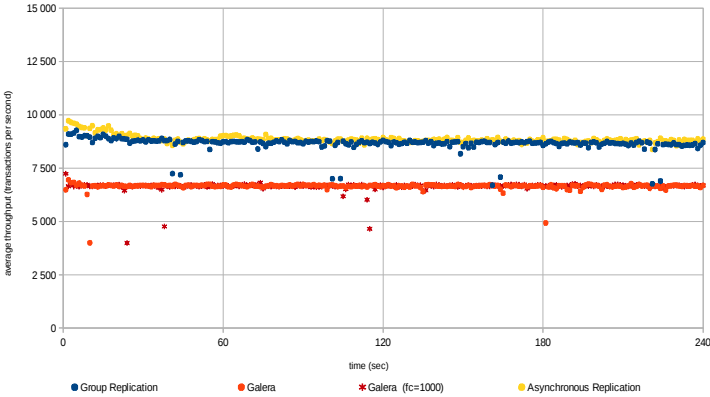


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 32 threads, 3 members)

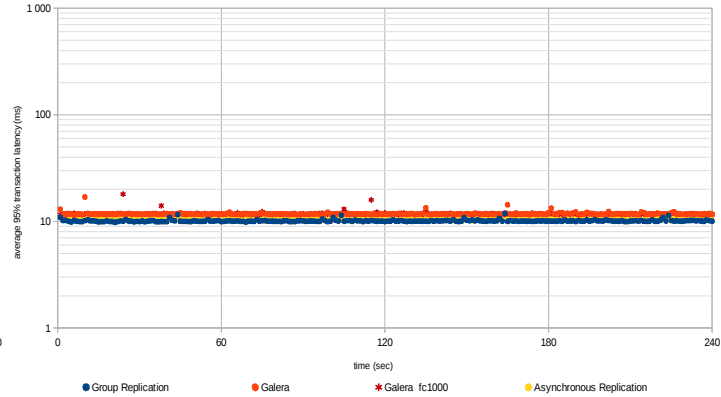


2.1. Non-durable, 3 members, 64 clients

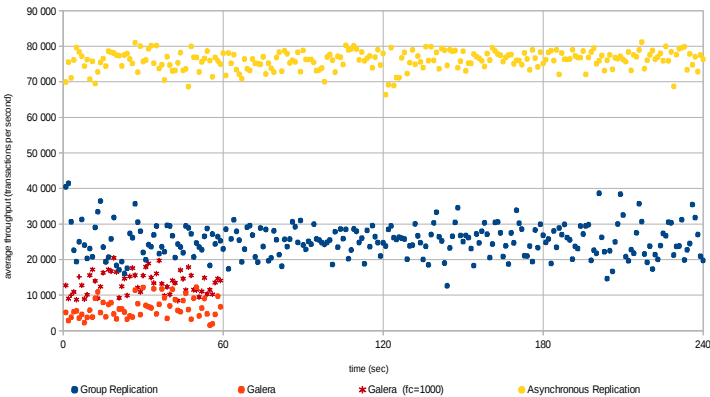
Peak Single-master Throughput over Time: Sysbench RW (non-durable, 64 clients, 3 members)



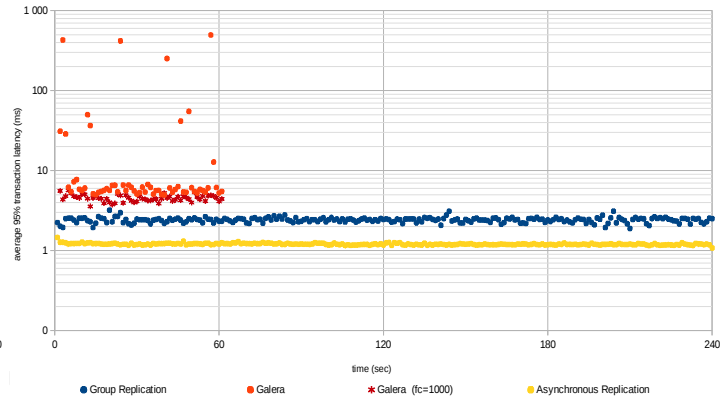
Single-master Latency over Time: Sysbench RW (non-durable, 64 clients, 3 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (non-durable, 64 clients, 3 members)

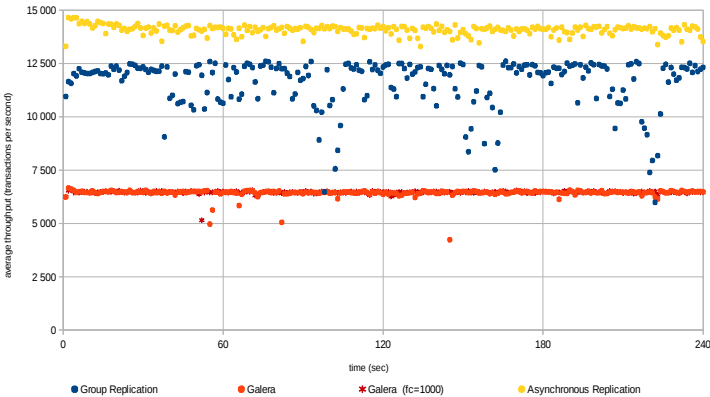


Single-master Latency over Time: Sysbench Update Indexed (non-durable, 64 threads, 3 members)

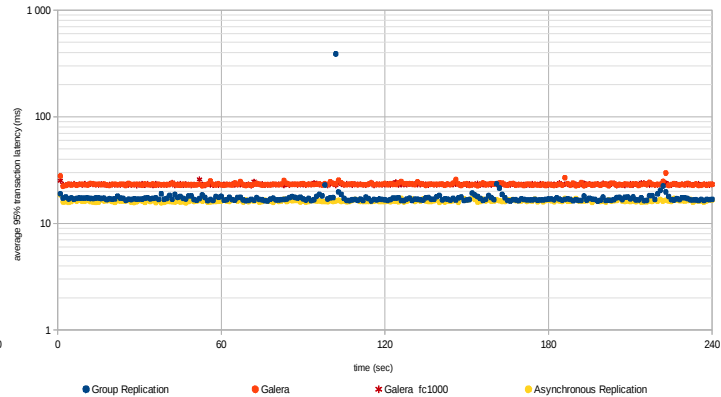


2.1. Non-durable, 3 members, 128 threads

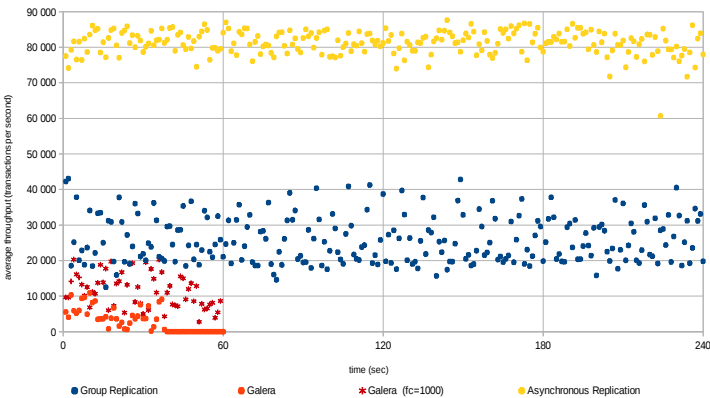
Peak Single-master Throughput over Time: Sysbench RW
(non-durable, 128 clients, 3 members)



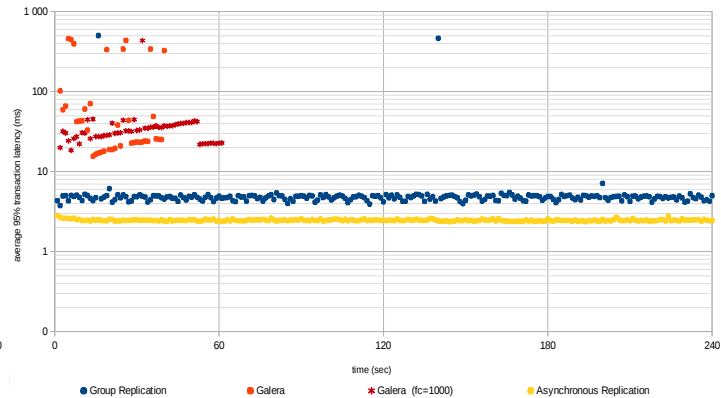
Single-master Latency over Time: Sysbench RW
(non-durable, 128 clients, 3 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(non-durable, 128 clients, 3 members)



Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 128 threads, 3 members)

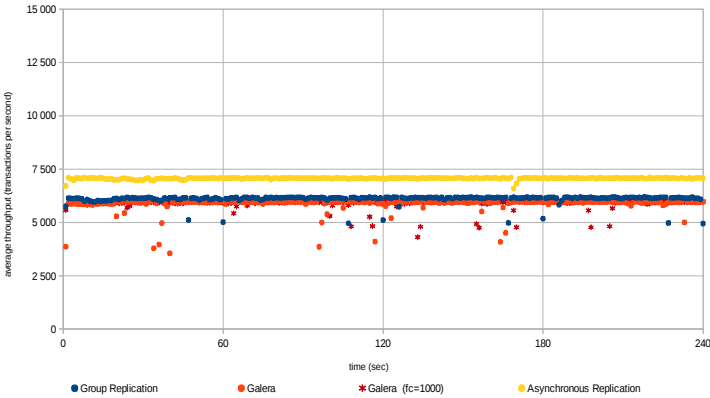


2. Non-durable settings

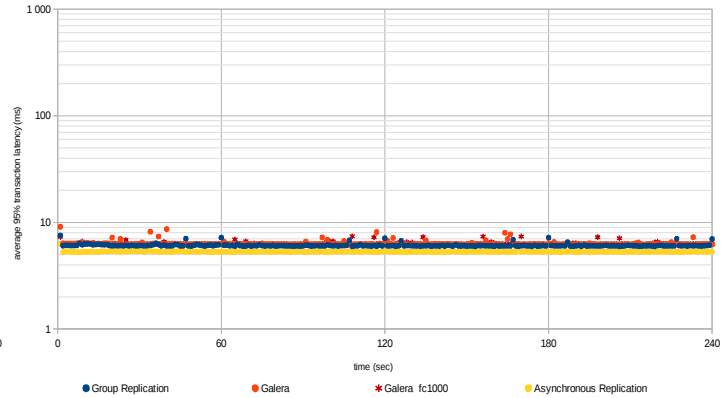
Group size: 5 members

2.2. Non-durable, 5 members, 32 threads

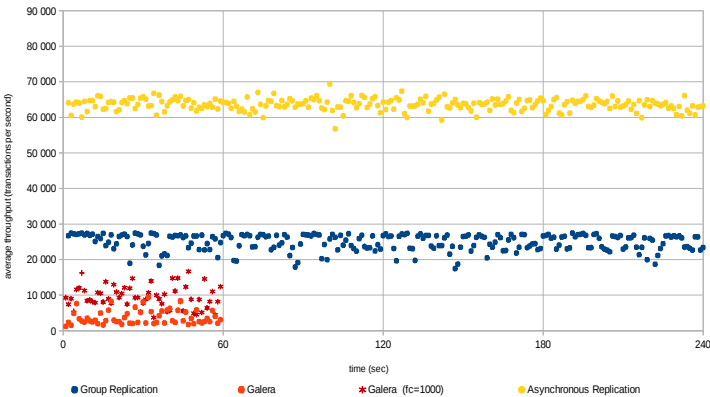
Peak Single-master Throughput over Time: Sysbench RW
(non-durable, 32 clients, 5 members)



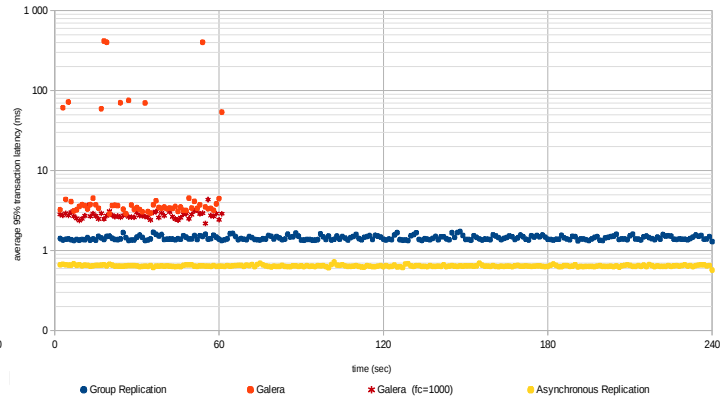
Single-master Latency over Time: Sysbench RW
(non-durable, 32 clients, 5 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(non-durable, 32 clients, 5 members)

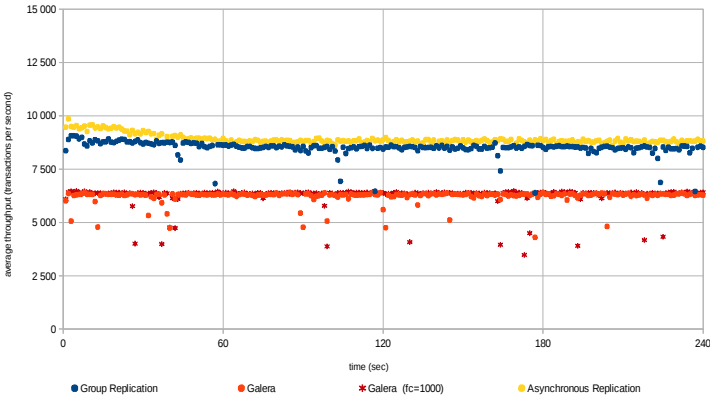


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 32 threads, 5 members)

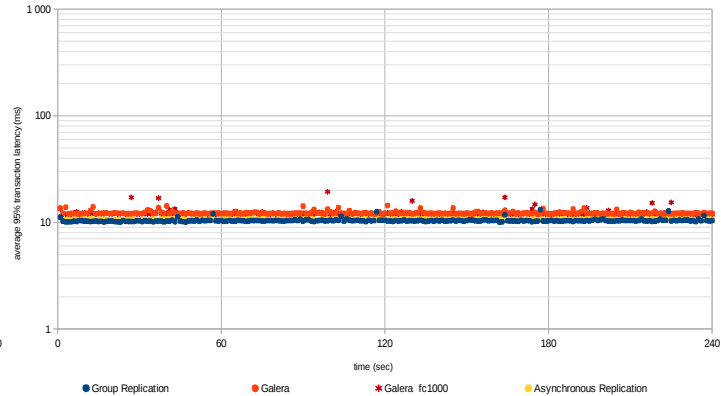


2.2. Non-durable, 5 members, 64 threads

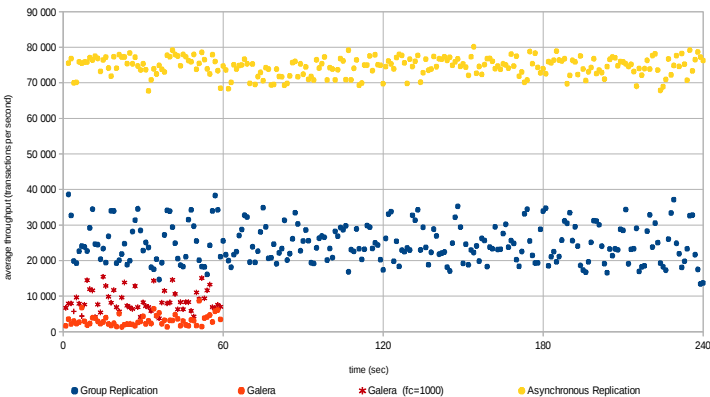
Peak Single-master Throughput over Time: Sysbench RW
(non-durable, 64 clients, 5 members)



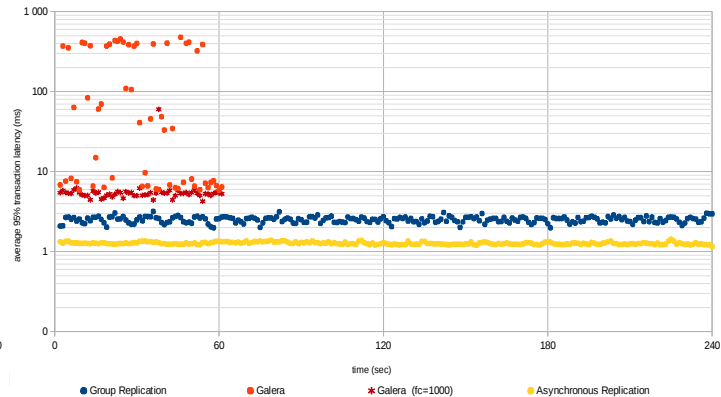
Single-master Latency over Time: Sysbench RW
(non-durable, 64 clients, 5 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(non-durable, 64 clients, 5 members)

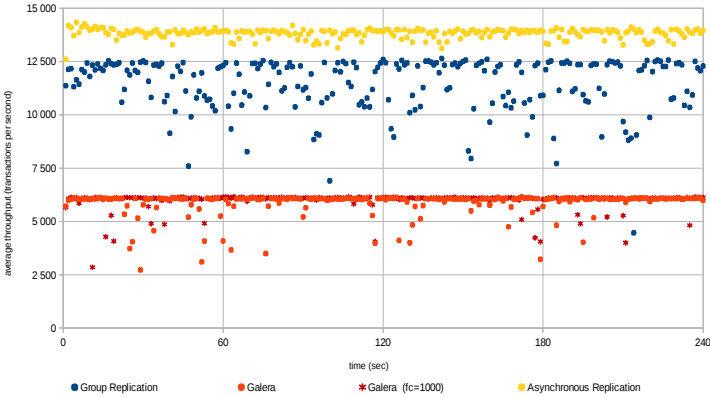


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 64 threads, 5 members)

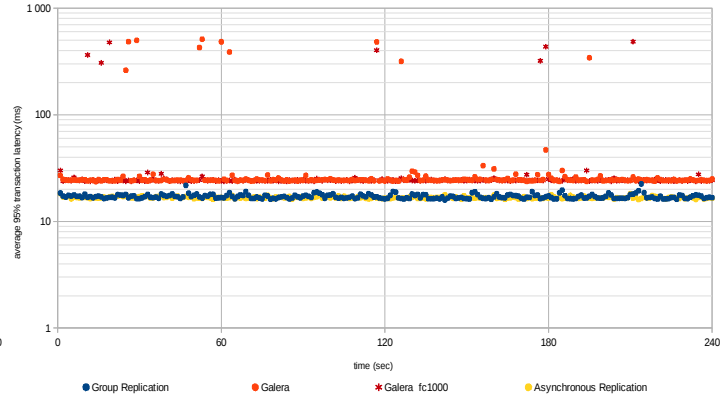


2.2. Non-durable, 5 members, 128 threads

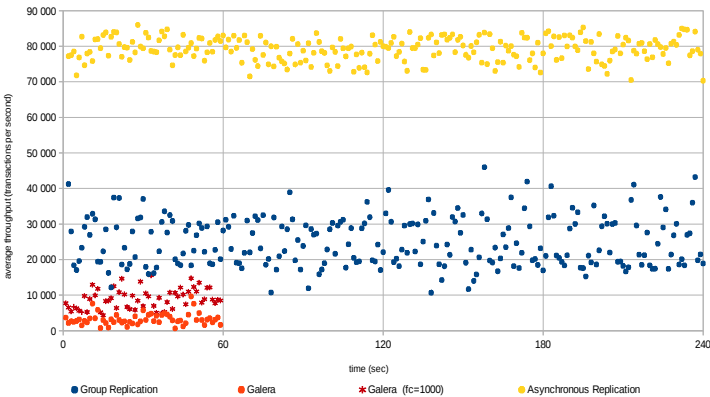
Peak Single-master Throughput over Time: Sysbench RW (non-durable, 128 clients, 5 members)



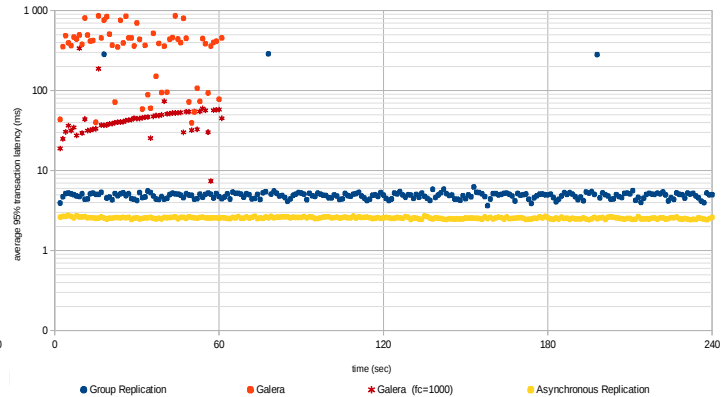
Single-master Latency over Time: Sysbench RW (non-durable, 128 clients, 5 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (non-durable, 128 clients, 5 members)



Single-master Latency over Time: Sysbench Update Indexed (non-durable, 128 threads, 5 members)

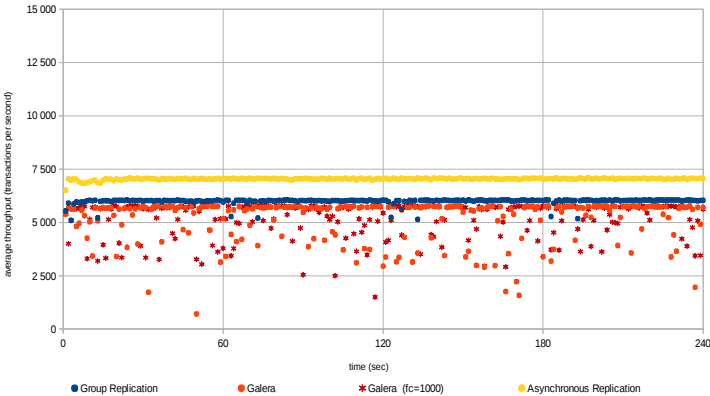


2. Non-durable settings

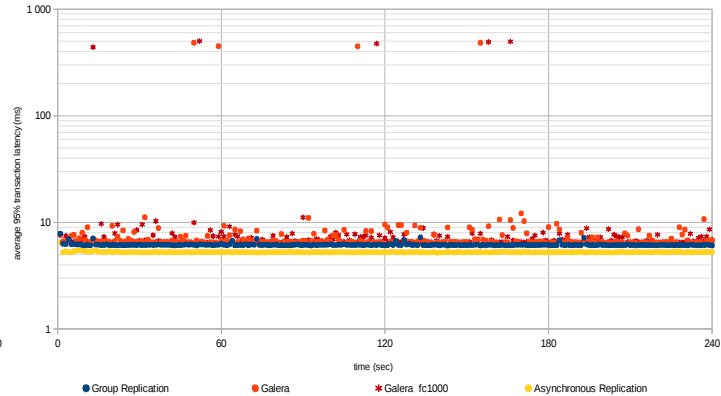
Group size: 7 members

2.3. Non-durable, 7 members, 32 threads

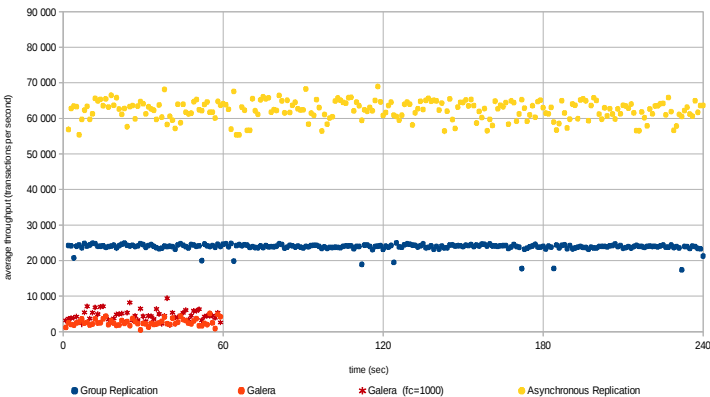
Peak Single-master Throughput over Time: Sysbench RW
(non-durable, 32 clients, 7 members)



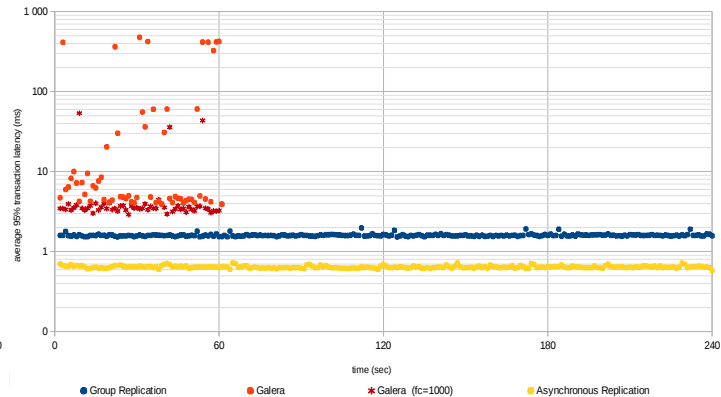
Single-master Latency over Time: Sysbench RW
(non-durable, 32 clients, 7 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(non-durable, 32 clients, 7 members)

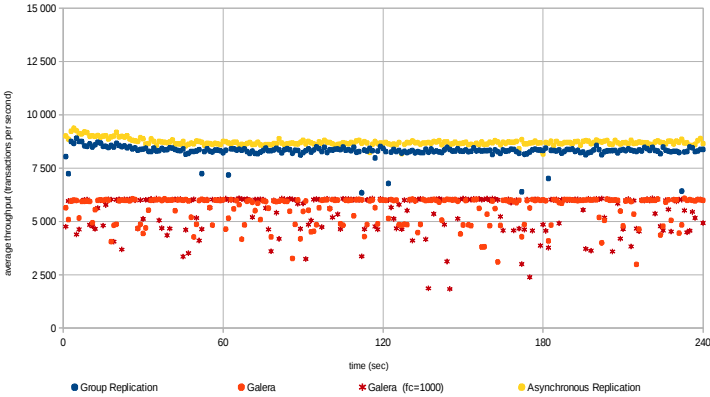


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 32 threads, 7 members)

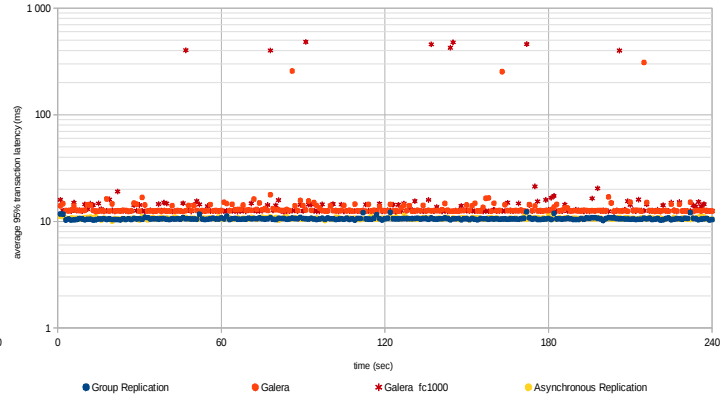


2.3. Non-durable, 7 members, 64 threads

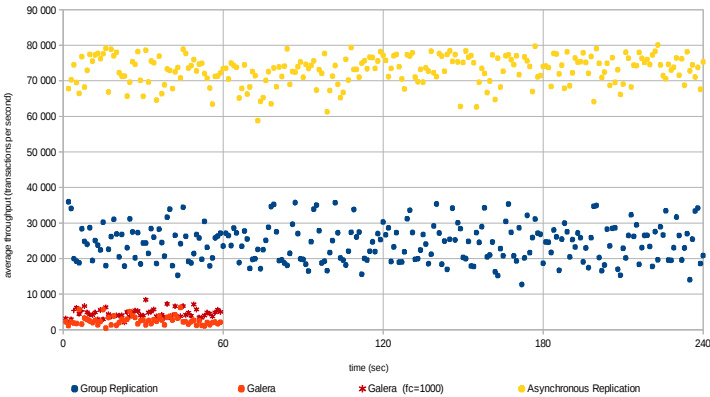
Peak Single-master Throughput over Time: Sysbench RW (non-durable, 64 clients, 7 members)



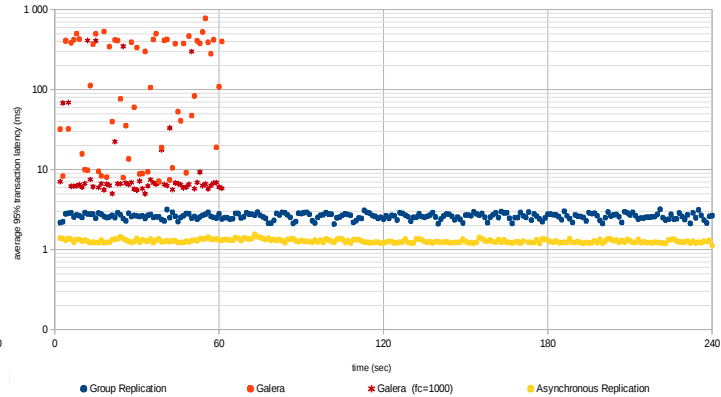
Single-master Latency over Time: Sysbench RW (non-durable, 64 clients, 7 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (non-durable, 64 clients, 7 members)

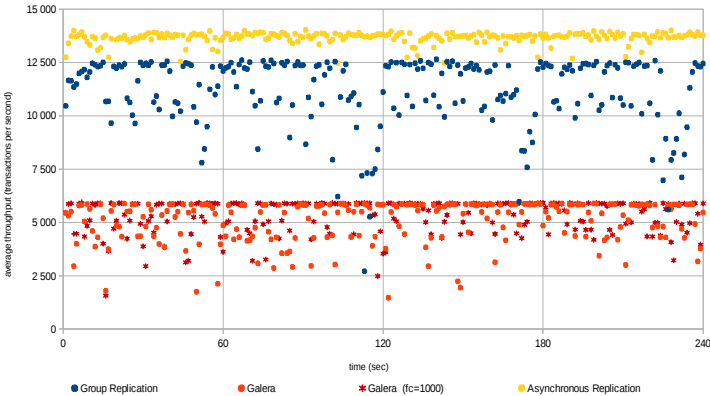


Single-master Latency over Time: Sysbench Update Indexed (non-durable, 64 threads, 7 members)

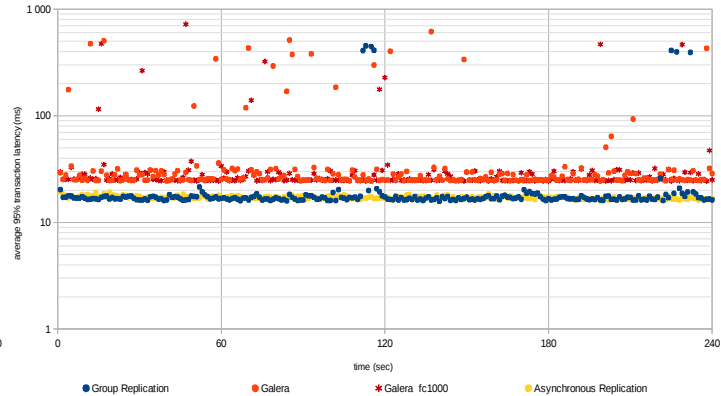


2.3. Non-durable, 7 members, 128 threads

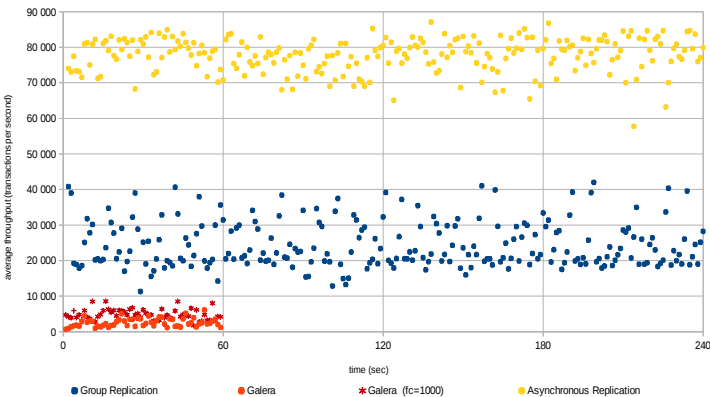
Peak Single-master Throughput over Time: Sysbench RW
(non-durable, 128 clients, 7 members)



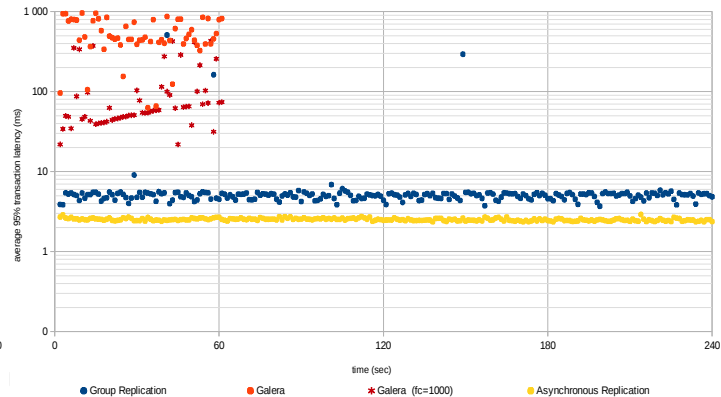
Single-master Latency over Time: Sysbench RW
(non-durable, 128 clients, 7 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(non-durable, 128 clients, 7 members)



Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 128 threads, 7 members)

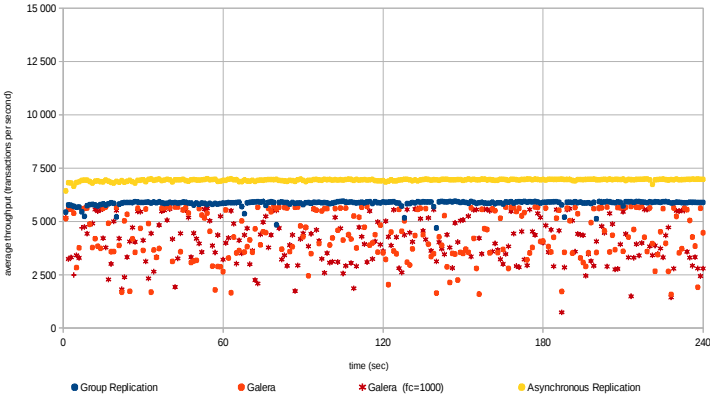


2. Non-durable settings

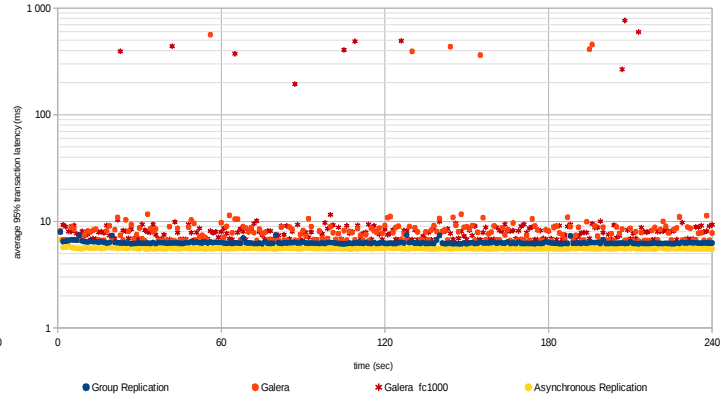
Group size: 9 members

2.4. Non-durable, 9 members, 32 threads

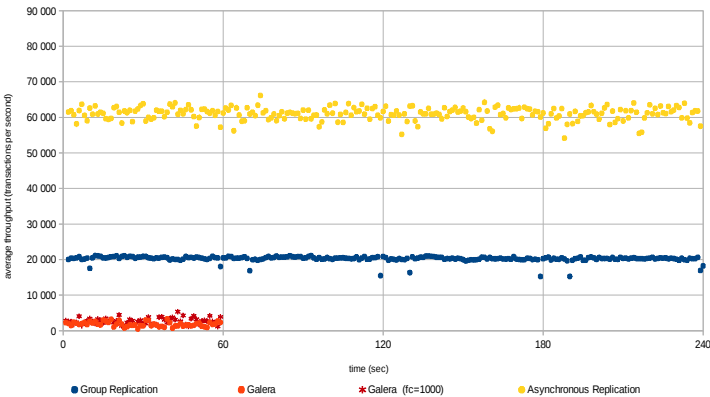
Peak Single-master Throughput over Time: Sysbench RW (non-durable, 32 clients, 9 members)



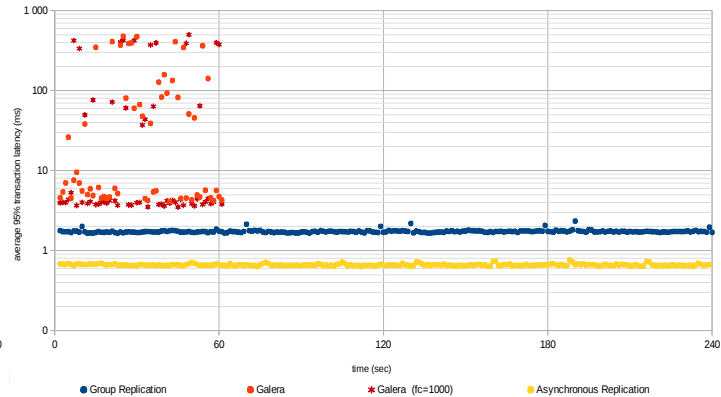
Single-master Latency over Time: Sysbench RW (non-durable, 32 clients, 9 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (non-durable, 32 clients, 9 members)

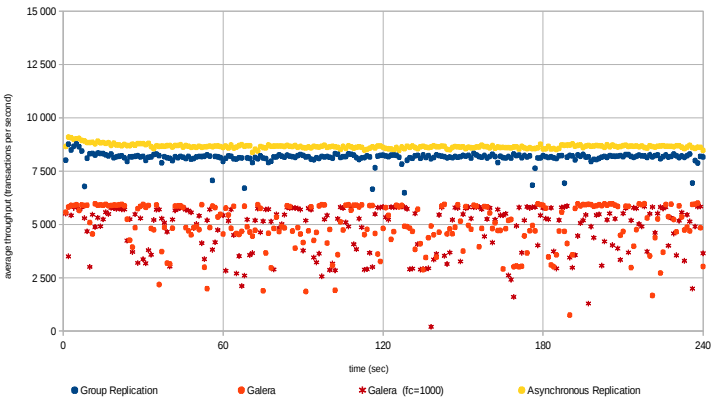


Single-master Latency over Time: Sysbench Update Indexed (non-durable, 32 threads, 9 members)

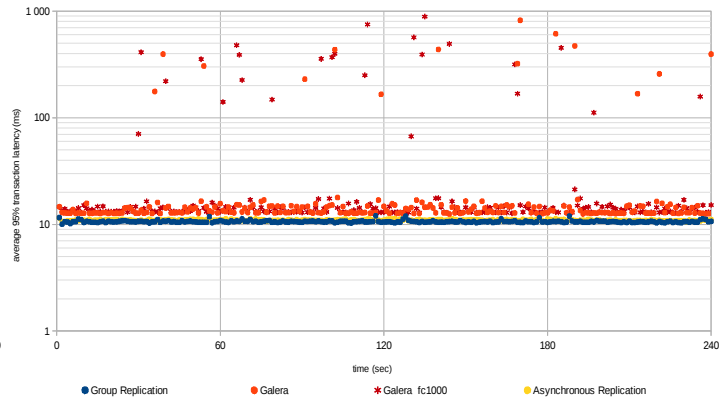


2.4. Non-durable, 9 members, 64 threads

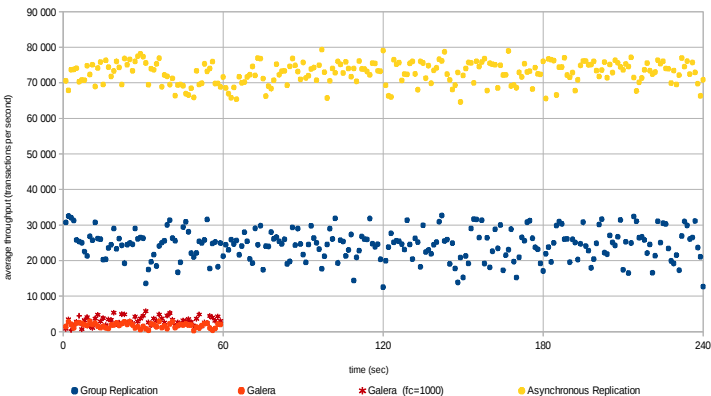
Peak Single-master Throughput over Time: Sysbench RW
(non-durable, 64 clients, 9 members)



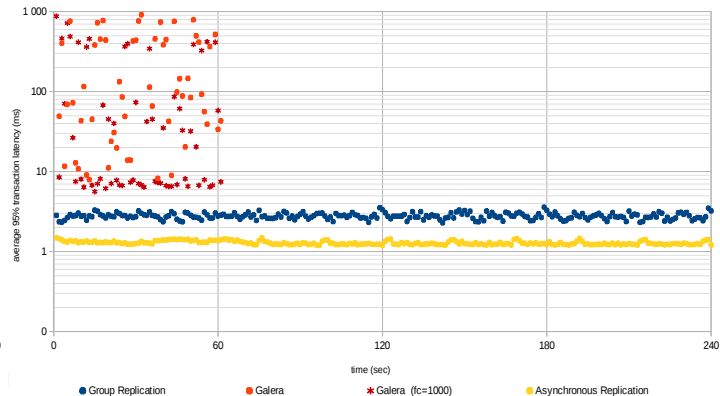
Single-master Latency over Time: Sysbench RW
(non-durable, 64 clients, 9 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed
(non-durable, 64 clients, 9 members)

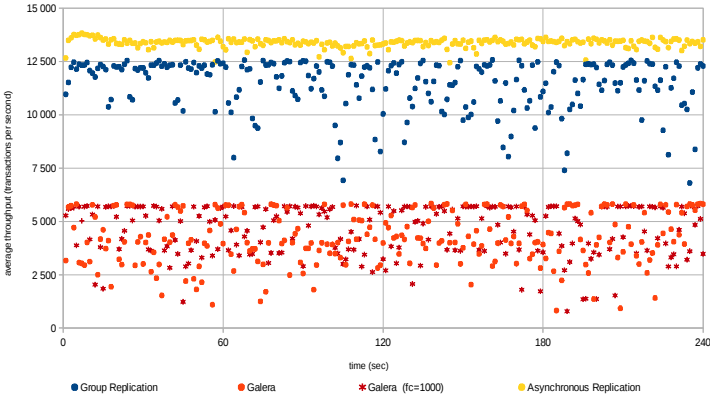


Single-master Latency over Time: Sysbench Update Indexed
(non-durable, 64 threads, 9 members)

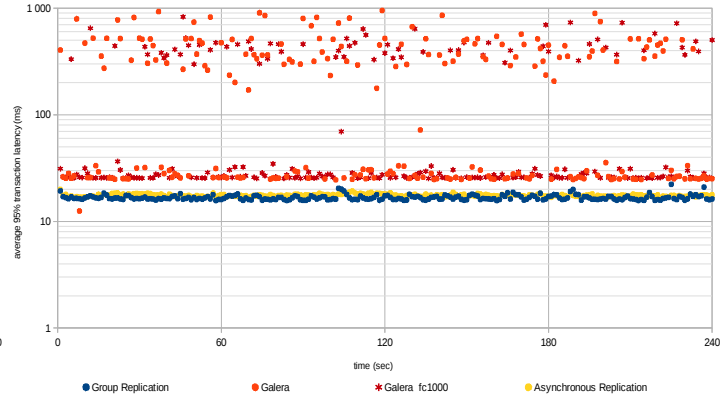


2.4. Non-durable, 9 members, 128 threads

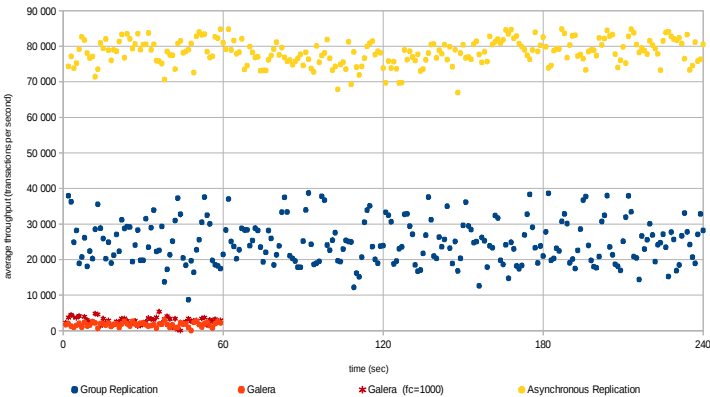
Peak Single-master Throughput over Time: Sysbench RW (non-durable, 128 clients, 9 members)



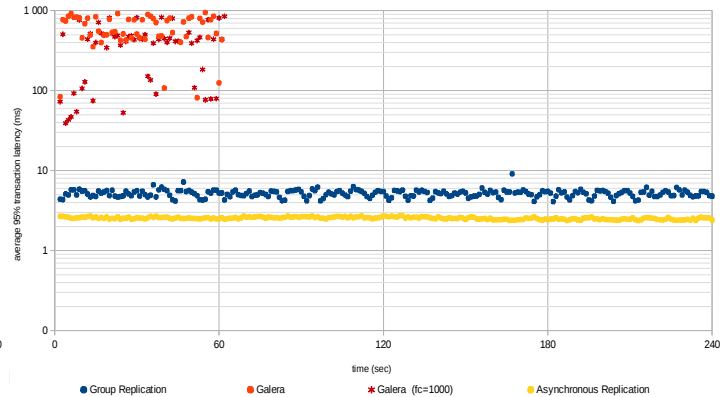
Single-master Latency over Time: Sysbench RW (non-durable, 128 clients, 9 members)



Peak Single-master Throughput over Time: Sysbench Update Indexed (non-durable, 128 clients, 9 members)



Single-master Latency over Time: Sysbench Update Indexed (non-durable, 128 threads, 9 members)



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