MaxScale

The Pluggable Router

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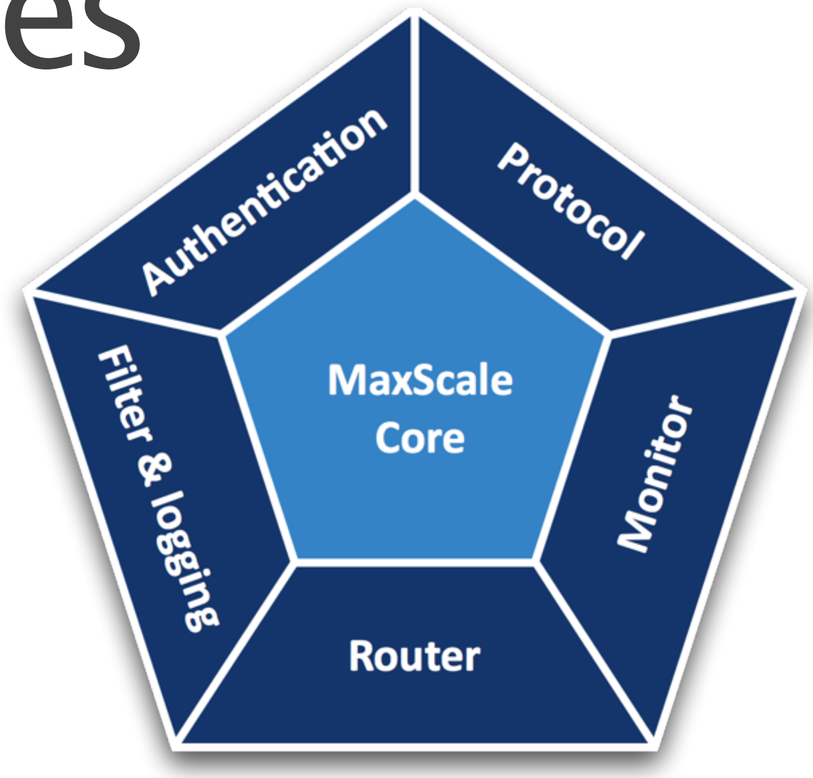
MaxScale Objectives

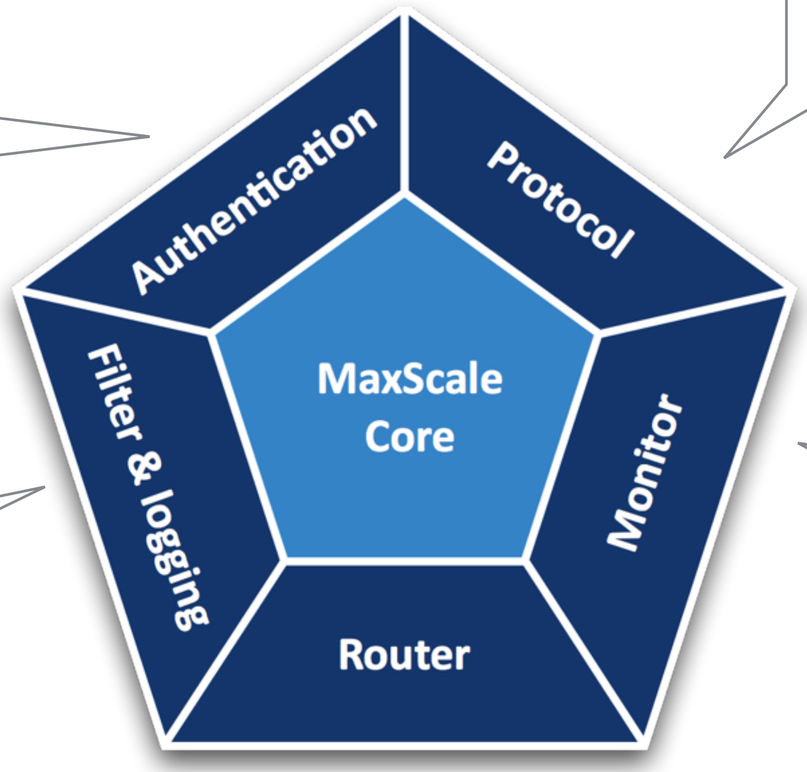


- Highly scalable
- Transparent to the application
- Highly available
- Extendible
- Flexible
- Modules specify what MaxScale is : router / firewall / data extract tool /…
- Open source, GPL2 software since 8th of Jan. 2014

How? In a nutshell

Client authenticates once – with MaxScale

Allows multiple protocols for clients and servers



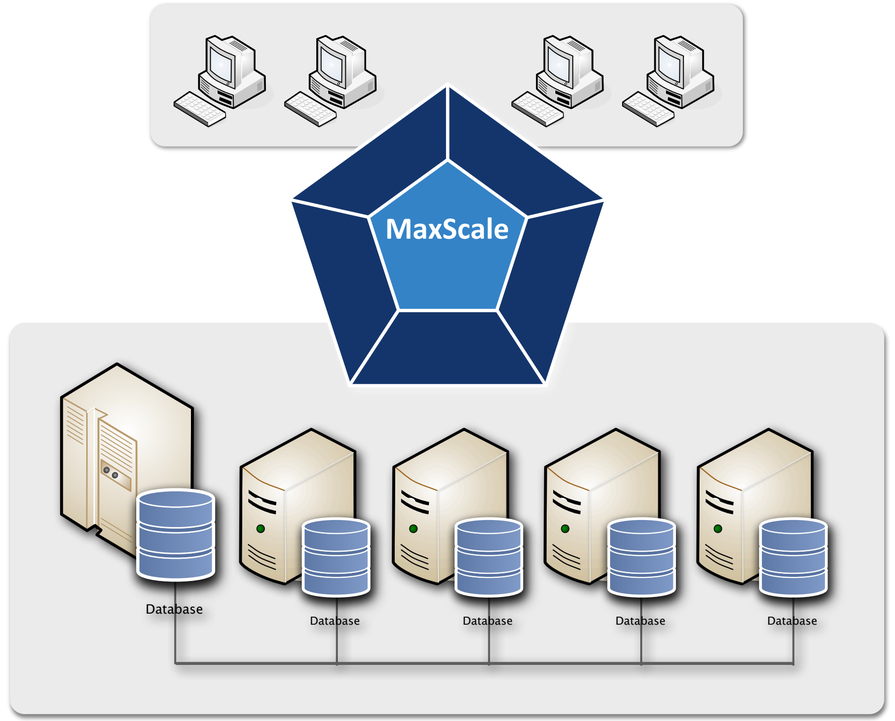
Alter, block or log client requests and results

Configuration and state aware monitors

Content-aware or unaware routers

Core of MaxScale is multi-threaded, event-driven network IO processor

Typical Scenarios



- MySQL Replication with
  - Read connection load balancing
  - Read/Write statement splitting
- Galera Cluster
  - Connection load balancing and conflict avoidance

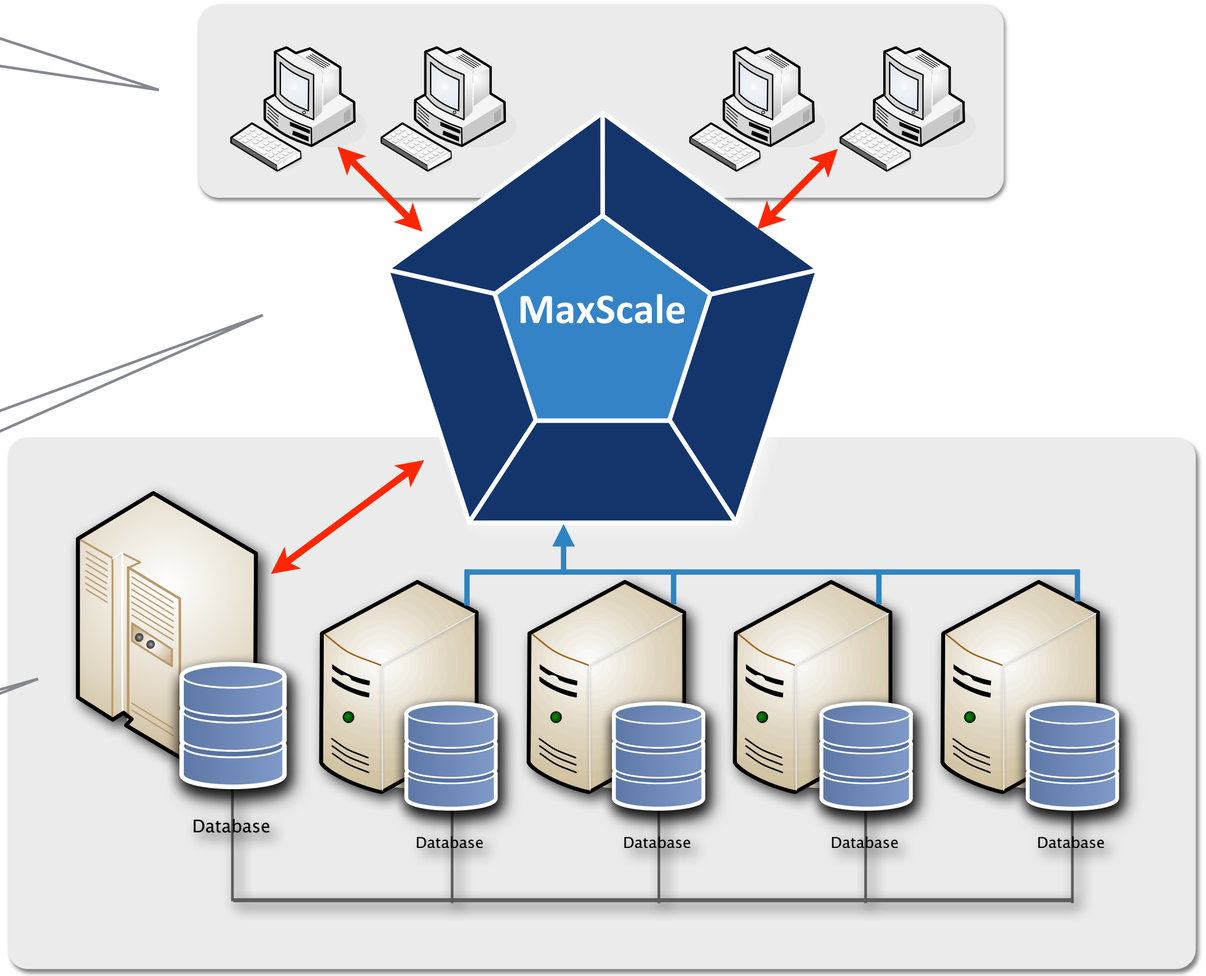
MySQL Replication with R/W split

Each application uses only 1 connection

For applications that have been designed to work with a single server and require read scalability

MaxScale monitors the state of each node and selects only available nodes

MaxScale creates 2 connections, one for R/W on the Master node and one R/O load balanced on the Slave nodes



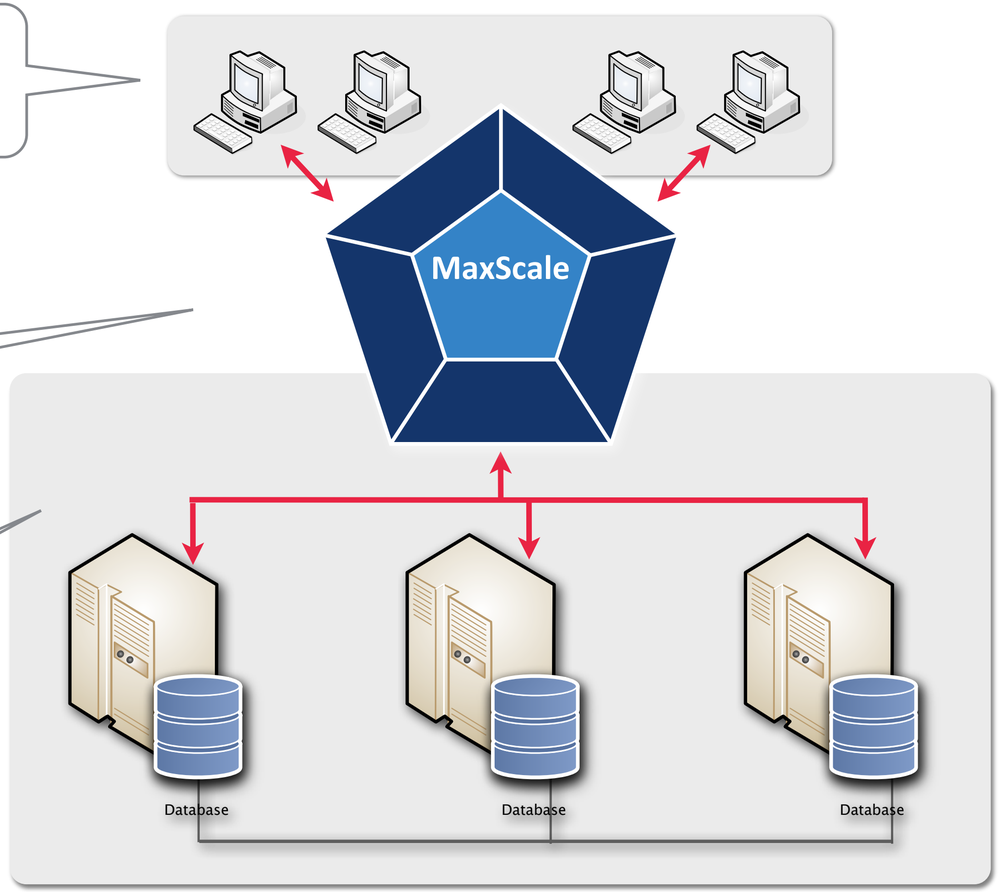
Galera Cluster using Connection Load Balancing

For applications that can use the“all-master” capabilities of Galera

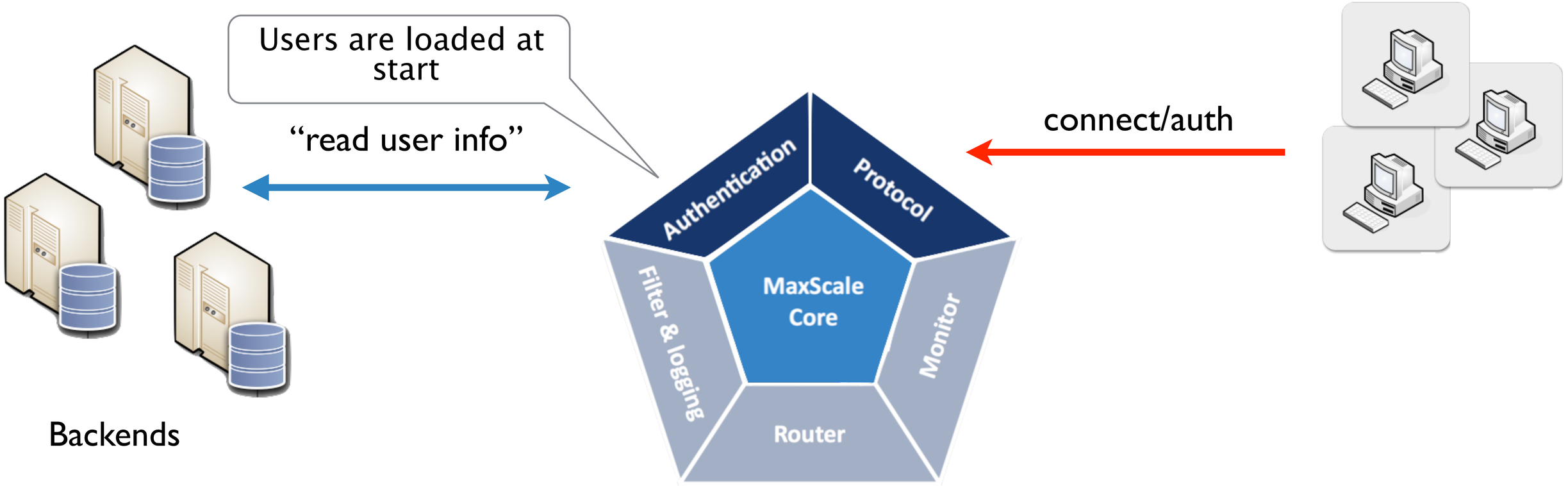
Each application uses only 1 connection

MaxScale monitors the state of each Galera Cluster node and selects only synced nodes

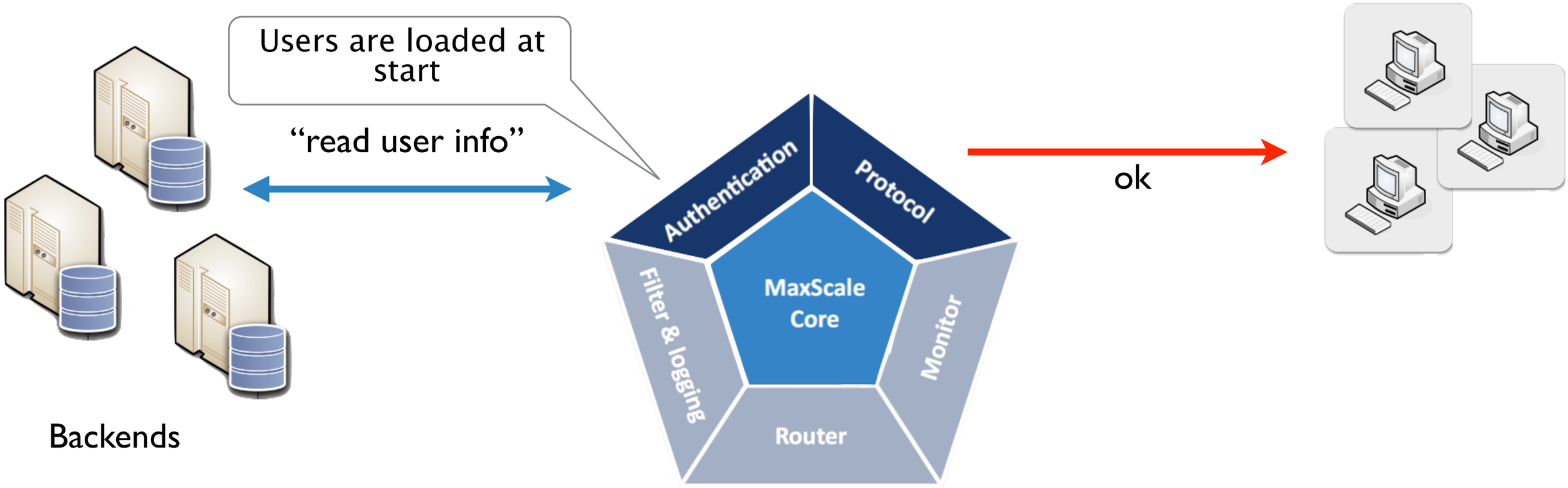
MaxScale load balances the client connections and whenever possible writes to one node avoiding conflicts



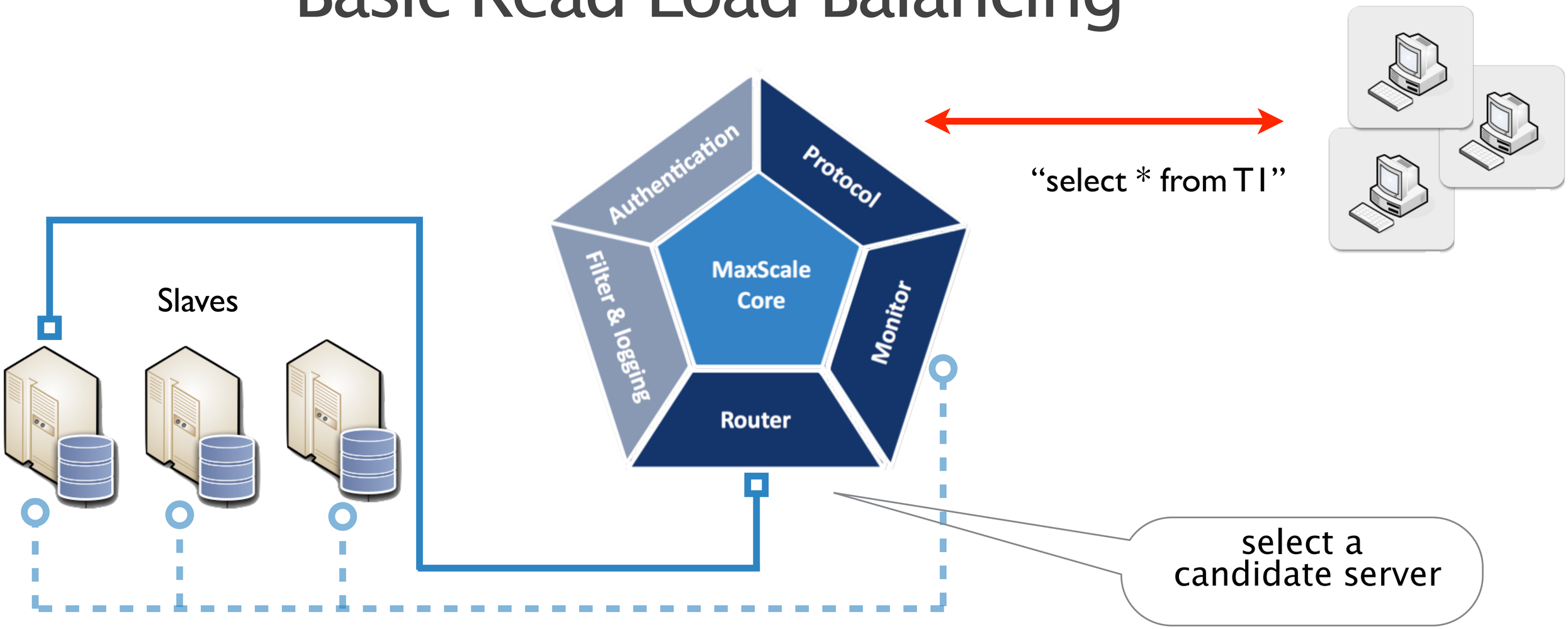
Inside MaxScale
MySQL Local Authentication



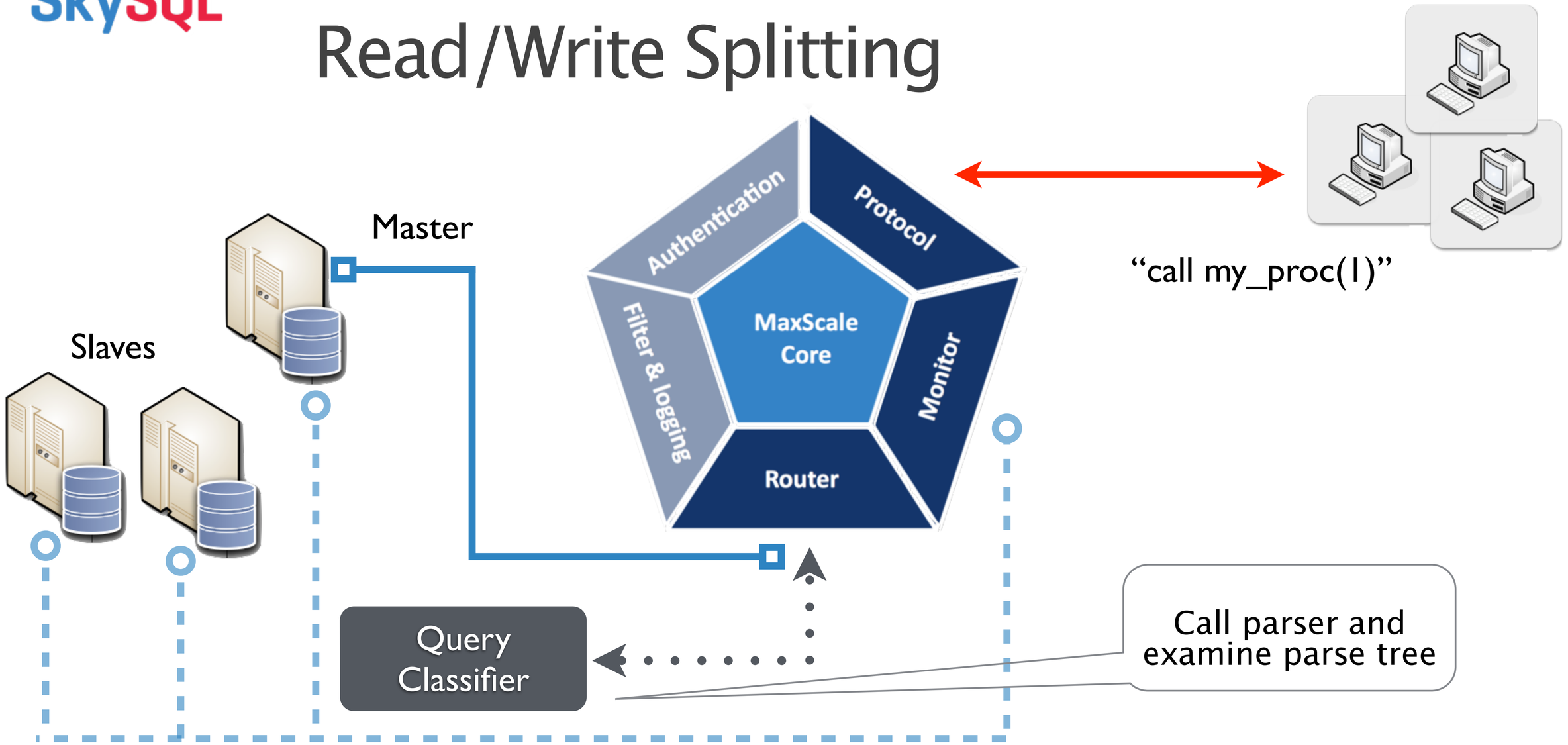
Inside MaxScale
MySQL Local Authentication



Inside MaxScale
Basic Read Load Balancing



Inside MaxScale
Read/Write Splitting



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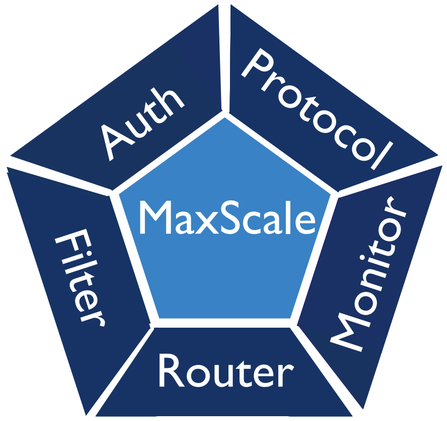

- May be connected to form arbitrary chains
- Allows inspection, modification and rejection of requests and results
  - blacklist
  - data mining / log

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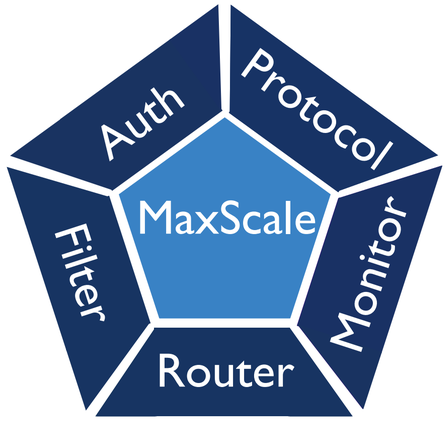

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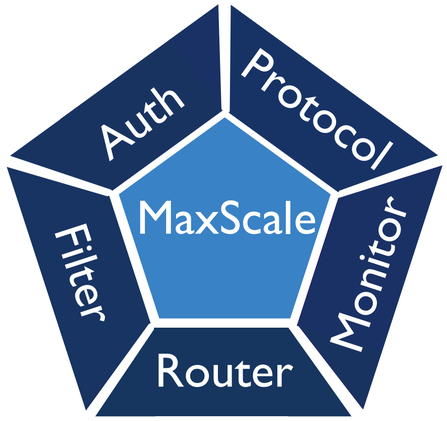

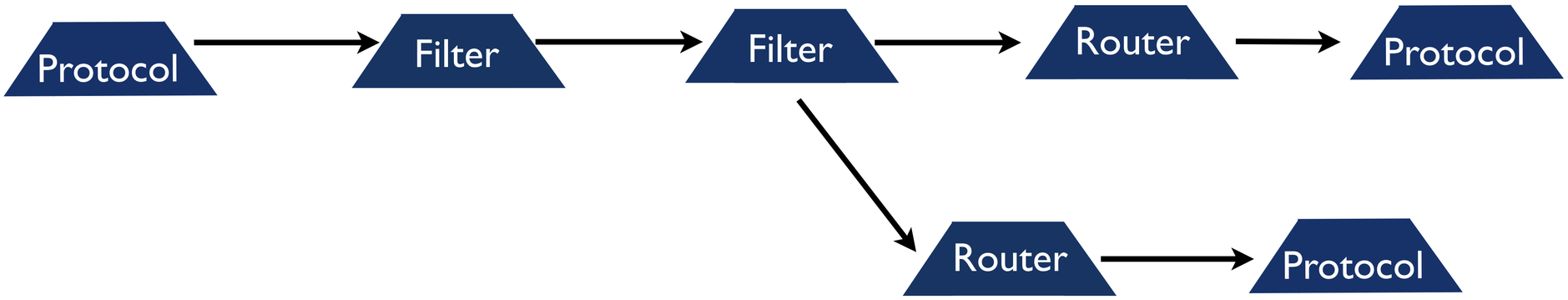

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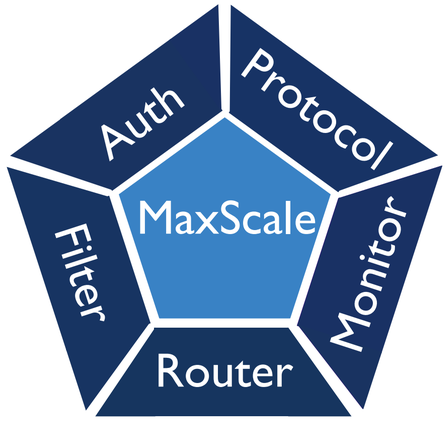

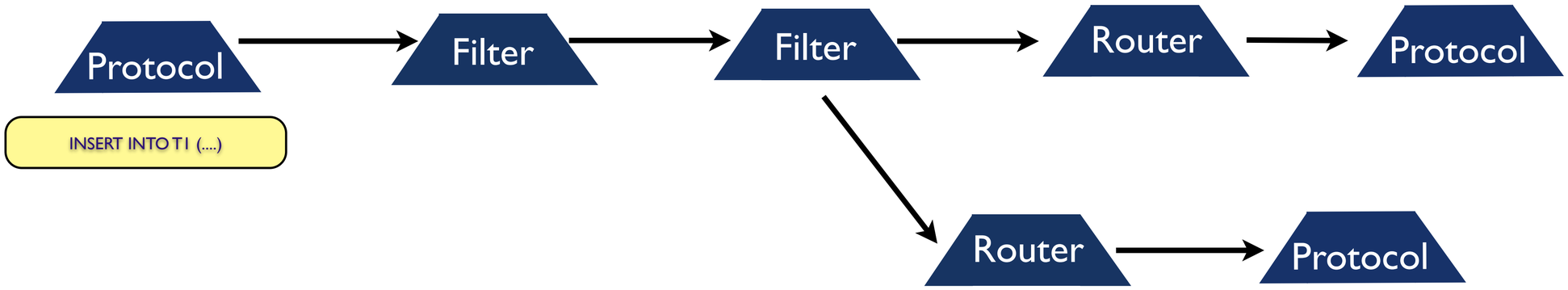

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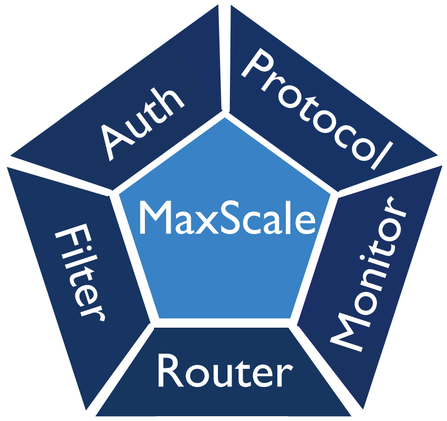

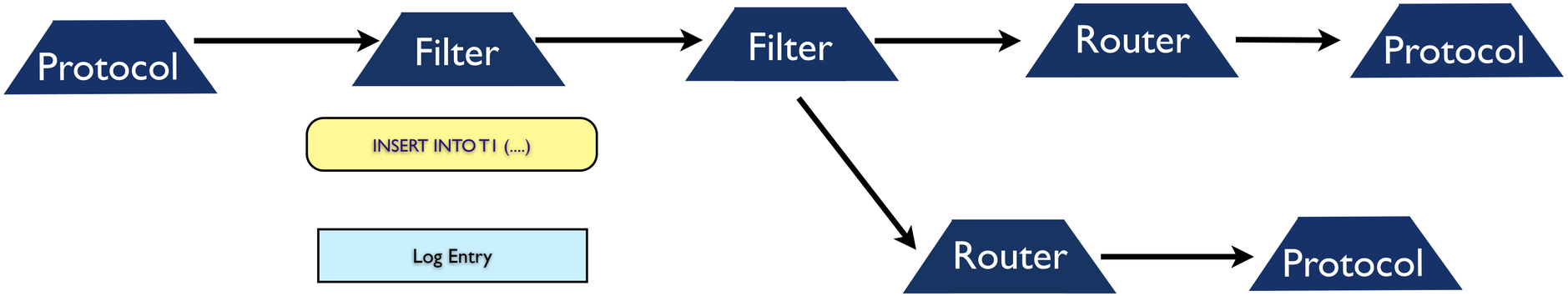

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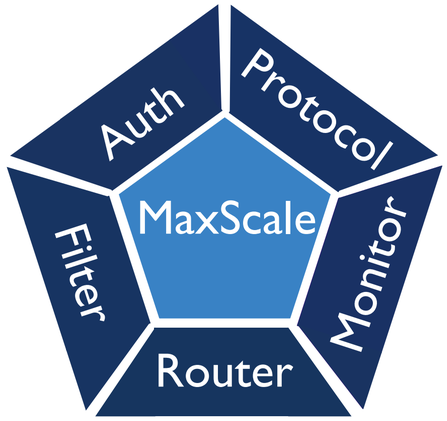

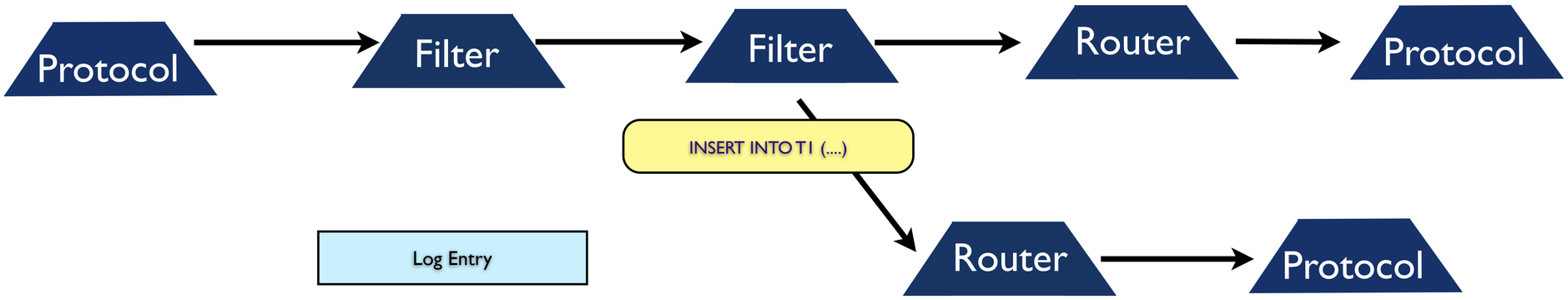

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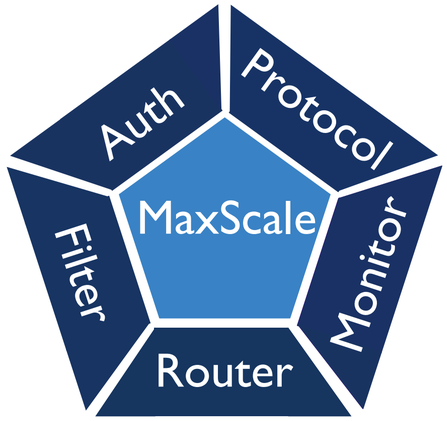

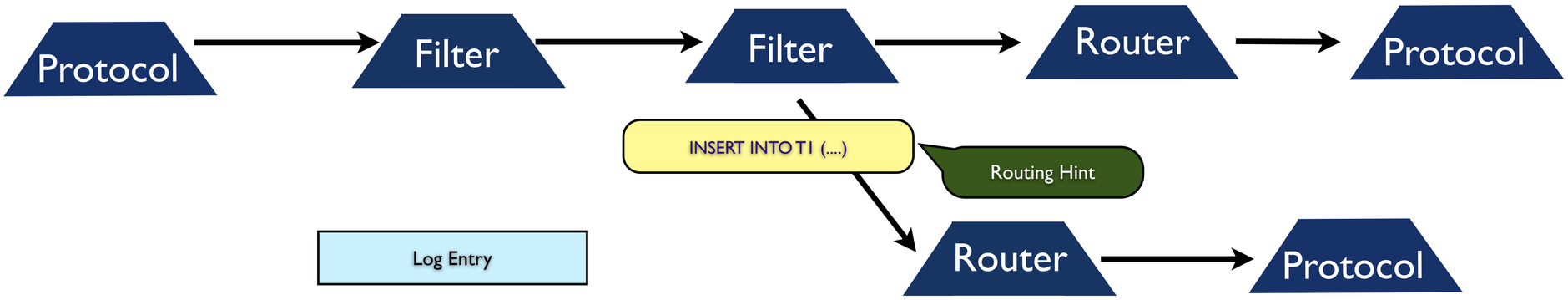

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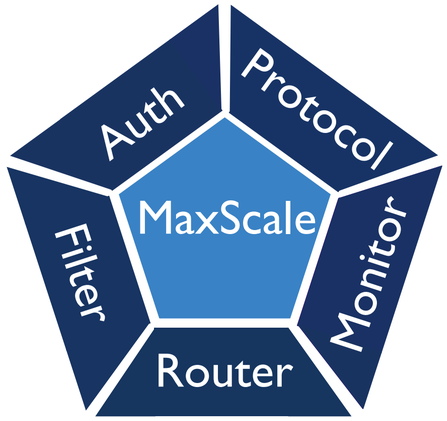

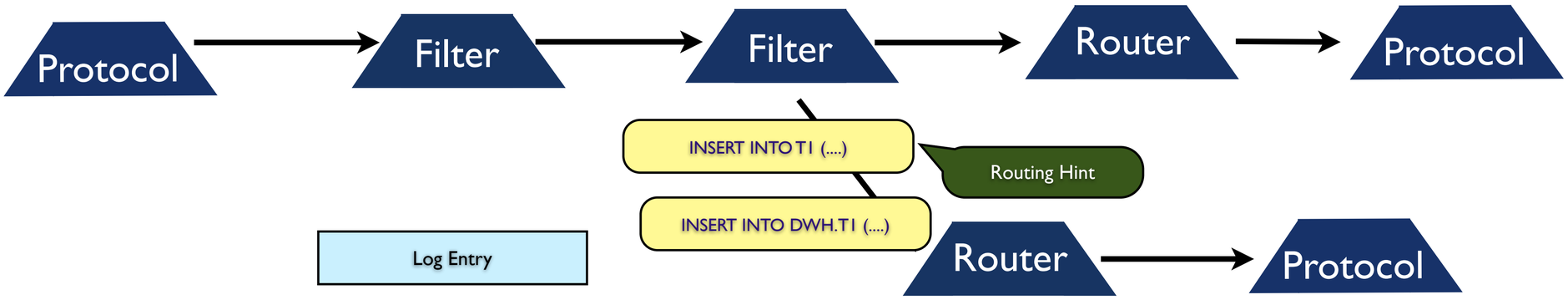

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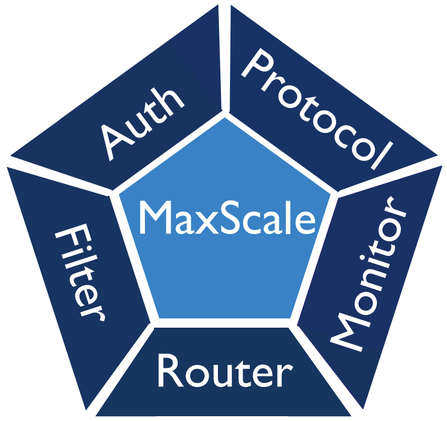

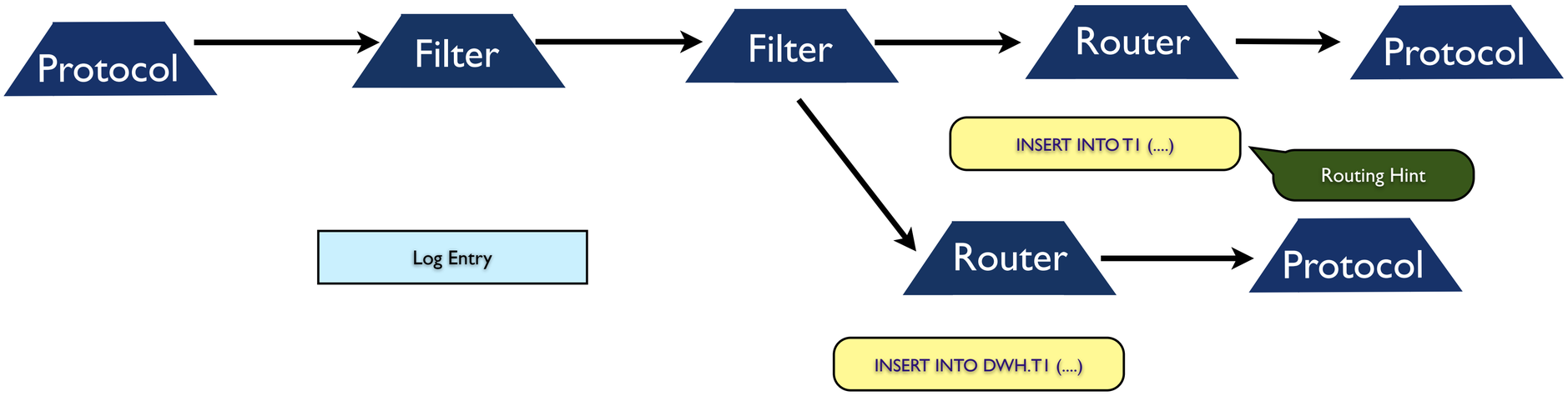

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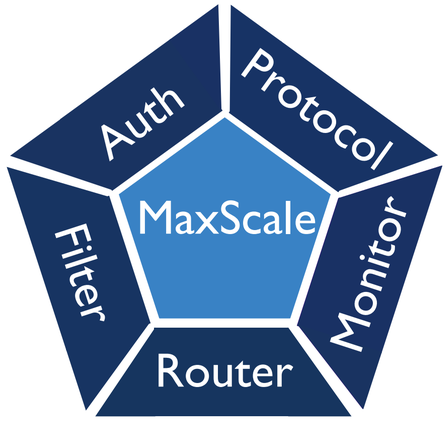
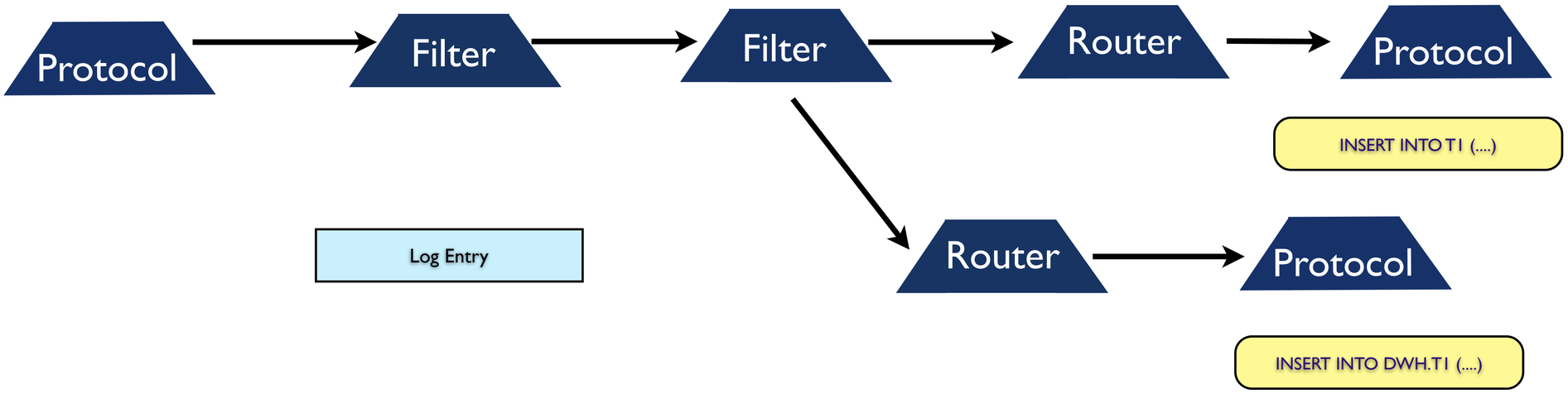
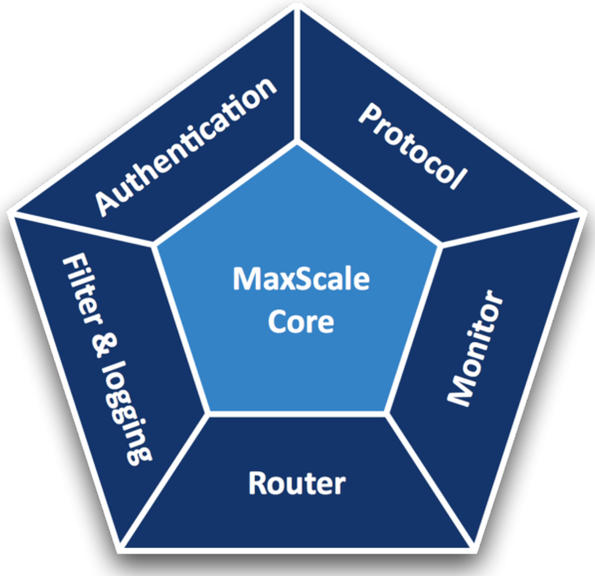




Get involved



- Check on GitHub https://github.com/skysql/MaxScale
- MariaDB Source https://downloads.mariadb.org/
- Bugs report http://bugs.skysql.com/buglist.cgi?product=Maxscale
- Google groups https://groups.google.com/forum/#!forum/maxscale
- Binary Tarball http://downloads.skysql.com/files/SkySQL/MaxScale
- SkySQL website http://www.skysql.com

Thank you !