| Goals/Conditions | Preset Code | | | | | | | | |
|---|--------------------|----------|----------|--------------------------|-------------|-------------|--------------------------|----------|----------|
| | No connection Pool | | | Internal Connection Pool | | | External Connection Pool | | |
| | Α | В | С | D | E | F | G | Н | |
| "Hello World" | | | √ | | | √ | | | |
| The trong | | | · | | | • | | | |
| Database load | | | | | | | | | |
| Infrequent database access | ✓ | ✓ | ✓ | | | | | | |
| Constant high load to database | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| (with possible daily peaks and dips) | | | | | | | | | |
| Processing options | | | | | | | | | |
| Light scheduled tasks | ✓ | √ | √ | | | | | | |
| Light scheduled tasks to generate aggregated reports | | ✓ | ✓ | | | | | | |
| Single-thread data transformation processes | ✓ | ✓ | ✓ | | | | | | |
| Multithreaded task processing | | | | ✓ | ✓ | ✓ | ✓ | √ | ✓ |
| Database assess | | | | | | | | | |
| Database access Write access to database | √ | | | √ | √ | √ | √ | √ | |
| Read-only access to database | <u>√</u> | √ | √ | √ | | <u>√</u> | | | |
| Mostly for read-only access to database | | 1 | | √ | 1 | | | | <i>J</i> |
| Wiostly for read-only access to database | | | | V | | | | | |
| Connection URL | | | | | | | | | |
| Use writer cluster endpoint | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Use reader cluster endpoint | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Use instance endpoint or IP address | ✓ | ✓ | √ | ✓ | ✓ | ✓ | | | |
| Load balancing | | | | | | | | | |
| Split load between write and read operations | | | | √ | | √ | | | |
| Load balancing for replicas | | | | <u>√</u> | | | | | |
| Various load balancing strategies for read-only connections | | | | 1 | <u> </u> | <u> </u> | | | |
| "Single connection for both reads and writes" | | | | <u>√</u> | <u> </u> | <u> </u> | | | |
| | | | | | • | • | | | |
| DB Cluster Failover | | | | | | | | | |
| Fast (native) db cluster failover support by the driver | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| App needs to implement a simplest retry strategy to handle cluster | ✓ | ✓ | ✓ | | | | | | |
| failover and network outages | | | | | | | | | |
| Query types | | | | | | | | | |
| Fast and predictable SQL (small execution time deviation, within msec | ✓ | | | √ | | | √ | | |
| to sec range), execution time 0-5s | | | | | | | | | |
| Long-running and less predictable SQL (large execution time deviation, | | √ | √ | | √ | √ | | √ | √ |
| from seconds to minutes and hours) | | | | | | | | | |
| Formula and the analysis of | | | | | | | | | |
| Error handling strategy App should re-do entire business transaction by dropping db | √ | ./ | | 1 | √ | | ./ | | ./ |
| connection and opening a new one | • | • | • | • | • | • | • | • | • |
| App can recover from db connection errors and continue with the | | | | 1 | ./ | √ | | | |
| same connection | | | | v | • | • | | | |
| | | | | | | | | | |
| Runtime environment | | | | 1 | | | J | | |
| Runtime environment DOESN'T allows easy configuration of | ✓ | | • | • | | V | V | | V |
| tcpKeepAlive as needed (Windows, light cloud pods, specific firewalls | | | | | | | | | |
| blocking tcpKeepAlive packets) Runtime environment allows easy configuration of tcpKeepAlive as | | √ | | , | / | | , | √ | |
| needed (like Linux) | v | • | | • | • | | • | • | |
| | | | | | | | | | |
| Required manual configuration | | | | | | | | | |
| Runtime environment should be configured for tcpKeepAlive settings. | | ✓ | | | ✓ | | | √ | |
| (The driver can only activate or deactivate it.) | | | | | | | | | |
| App should configure connection pool by itself | | | | | | | ✓ | ✓ | ✓ |