5 Scalability Poisons and 3 Cloud Scalability Antidotes

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General Chicken in Strategy

Sean Hull with two helpful posts:

5 Things That are Toxic to Scalability:

1. **Object Relational Mappers.** Create complex queries that hard to optimize and tweak.
2. **Synchronous, Serial, Coupled or Locking Processes.** Locks are like stop signs, traffic circles keep the traffic flowing. Row level locking is better than table level locking. Use async replication. Use eventual consistency for clusters.
3. **One Copy of Your Database.** A single database server is a choke point. Create parallel databases and let a driver select between them.
4. **Having No Metrics.** Visualize what's happening to your system using one of the many monitoring packages.
5. **Lack of Feature Flags.** Be able to turn off features via a flag so when a spike hits features can be turned off to reduce load.

3 Ways to Boost Cloud Scalability:

1. **Use Auto-scaling.** Spin-up new instances when a threshold is passed and back down again when traffic drops.
2. **Horizontally Scale the Database Tier.** MySQL in a master-master active passive cluster configuration. As load grows roll in read-only slaves. As an alternative use Amazon's RDS. Scale up to a larger EC2 instance is the load on a single master is a problem.

3. **Use Striped EBS Volumes.** For better EBS performance use Linux's software raid technology. EBS already has redundancy built in so you can stripe across a number of EBS volumes. 4 are recommended.

This is just a brief summary. Please read the original articles for the full details.

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