Enhancing Application Performance through GORM Optimizations

Abstract

GORM (Grails Object Relational Mapping) is an Object Relational Mapping Framework for the Grails web framework. Object Relational Mapping (ORM) frameworks reduce the problems arising out of the object-relational impedance mismatch between the object oriented design model and the relational database design. Unlike other ORM frameworks which require application programmers to configure a lot of XML files, GORM sits transparently between the application logic and the database relieving the programmer from maintaining any sort of configuration files. The default ORM provided by Grails through GORM introduces performance issues in a web application especially when it experiences large loads. This paper identifies problems faced when applying default GORM to application which includes the N+1 select problem, issues with handling one-to-many relationships, bulk insertions as well as problems related to bulk mail transfer and keeping the query cache unused. The paper also suggests optimization techniques which could be applied to each of the problems in order to improve the overall performance of a web application using GORM as its ORM solution.
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Index Terms

Computer Science

Databases

Keywords

ORM  Grails  GORM  CRUD  Hibernate