Relational and Non-Relational Databases

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Relational

vs

NoSQL

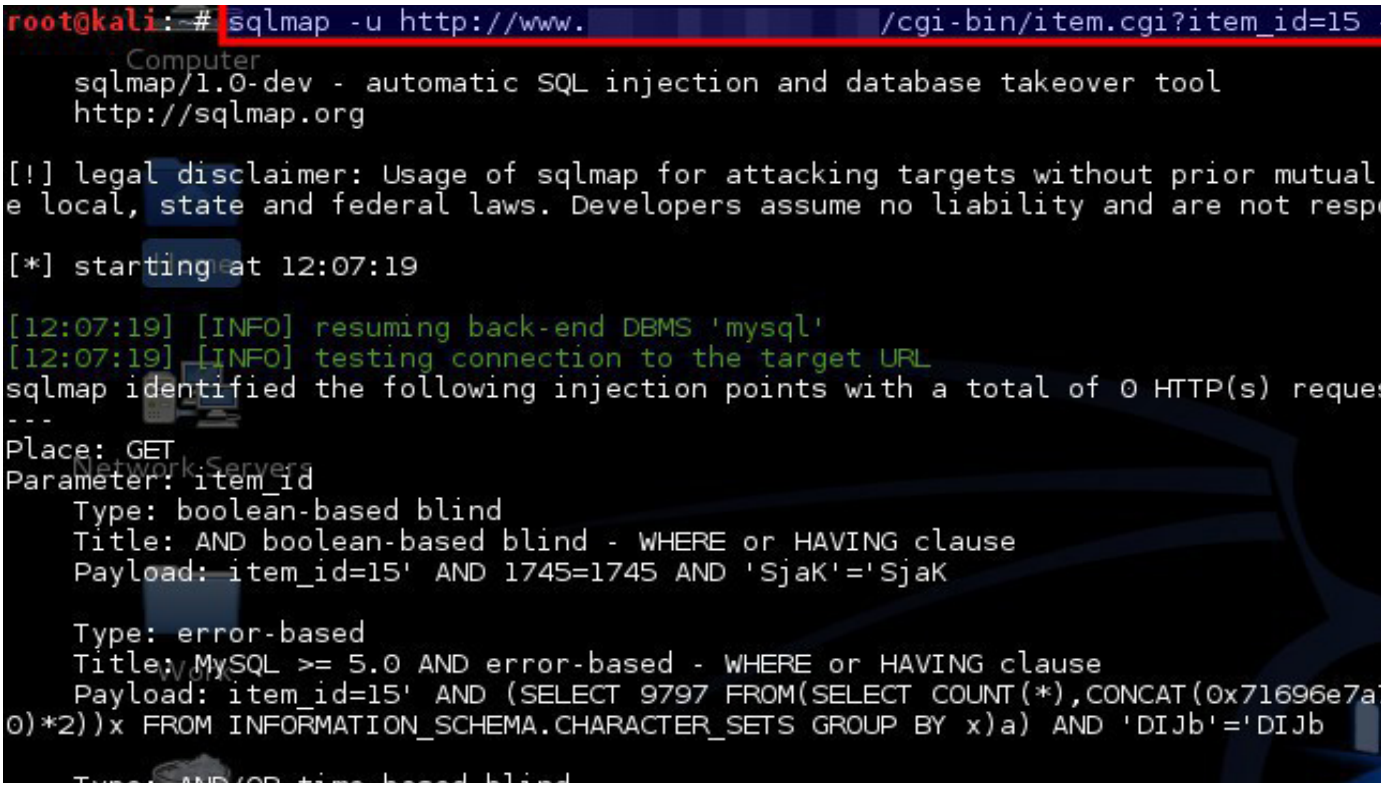
RELATIONAL DATABASES

SECTION

MYSQL AND ORACLE

MySQL and Oracle are two of the leading relational database systems on the market today. Unlike Oracle, MySQL has a community edition that is free that utilizes almost the same abilities that Oracle systems have.

Most enterprise companies utilize Oracle due to the Cloud usages and the autonomous behaviors. The biggest problem with Oracle is that it is expensive however. MySQL is easy to use, free, has a very modern look, and is easy to navigate. The biggest problem with MySQL is that it is open source, the fact that it can be hacked much easier then Oracle is the reason why many Enterprise companies are using Oracle over MySQL.



SOCIAL MEDIA FEATURES

SECTION

TWITTER

The three twitter features I chose were posting a tweet, updating your twitter picture, and retweeting a post.

Posting a tweet sends the tweet to the database under your account. Users who follow said user pull that tweet from the database when they access their twitter feeds.

Updating your twitter picture sends the picture image url to the database.

Retweeting a post utilizes a push and pull to the database, it pushes the items to the database as tweets you write, and pulls the original tweet posted from the database.

Pros:

- User functionality
- Personalization

Cons:

- Lots of Database pulls and pushes.
- API usage for personalization could put less strain on NOSQL databases.

SECTION

FACEBOOK

One specific feature that could be in a relational database could be setting a users profile picture.

The reason I am pretty sure that this is in a relational database and not a NOSQL database is that relational databases are great for utilizing users. If you have a user table in a database, that would be a vertical database not a horizontal database.

The pros are that Facebook can utilize their own BaaS or use a company for BaaS for user profiles taking the stres off of them for that.

The cons are that there would be that they have less to take care of and less that they can control there for a big AAA company that needs to have full control of everything.

NOSQL

SECTION

DIFFERENT TYPES

The 5 different NOSQL databases that I chose are the following: MongoDB, DocumentDB, Cassandra, coachbase, and apacheHbase.

MongoDB is consistant and flexible but has a higher data size, and less flexibility with querying. DocumentDB is an industry leading SLA, that utilizes multi-APIs and is consistent. The cons are that they cannot enforece or guarentee data consistency though. Cassandra is redundant, durable, and decentralized. However the cons are that they have no aggregations, JVM based, and are unpredictable with their preformance. Coachbase is a mobile platform, fast and secure, and uses cloud. It does use check and set though (CAS). ApacheHBase is used a lot for video games because it holds data well and querys are quick, however it isn't as known nowadays.

WEATHER APP

SECTION

TWO NOSQL SOLUTIONS

NoSQL would be great for a weather app because there are a finite amount of cities in the world so there wouldn't be a great need for vertical databases however horizontal databases would be great. It allows the users for quicker access to data and less time between pulls because their would be less data needed at once. You would need to pull a lot of times to get up to date data however you could mass push the data to everyone in a region so that you could minimize your pulls at one time.

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