Smalr.io Design Document

Goal:

Create an easy-to-use URL shortener that has security as well as utility in mind.

Functionality:

-shorten URL (core)

-allow custom URLs

-provide image previews of landing page

-provide malware detection for landing page

-analyze traffic and provide visual data as well as statistical data for users clicking through the link

Database Schema:

URL

Description: The main table that will be queried for every URL request. We only need to know the key and the destination URL for basic functionality. Columns should be small to hopefully make it faster. Varchar may not be ideal depending on if we let users modify destination URL after a shortened version is already created. Since varchar has length prefixed for each row, editing it could be a costly operation.

BIGINT ID PRIMARY KEY - irrelevant to the URL, mainly will be used in API calls I think

BIGINT key UNIQUE INDEX – main url

BOOL active; - instead of deleting a row – which is a pain in the ass we just set the active field to false then rebuild the database during maintenance mode

varchar(2000) url – defacto limit for most web browsers.. I’m not sure of the performance implications on having it a varchar vs char. Of course char would always waste of space but it could be faster when looking for a specific value.

USERS

INT id PRIMARY KEY

Varchar(32) user;

Char(40) pass; - sha1 hash

Varchar(255) email;

OWNER\_2\_URL

INT id PRIMARY KEY;

INT userid INDEX;

BIGINT urlids;

URL\_2\_OWNERS

INT id PRIMARY KEY

BIGINT urlid INDEX;

INT userid ;