Twitter Lab Tester API

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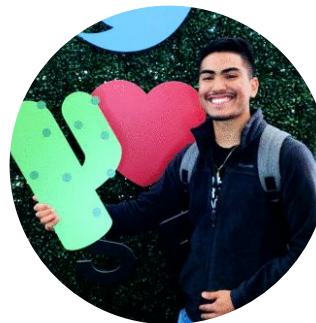**Twitter Systems Engineering**

Introduction

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1 **Problem**
2 **Solution**
3 **Technology & Design**
4 **Demo**
5 **Challenges**
6 **Improvements**

Problem

- **Currently there is no standardized method to qualify hardware systems.**
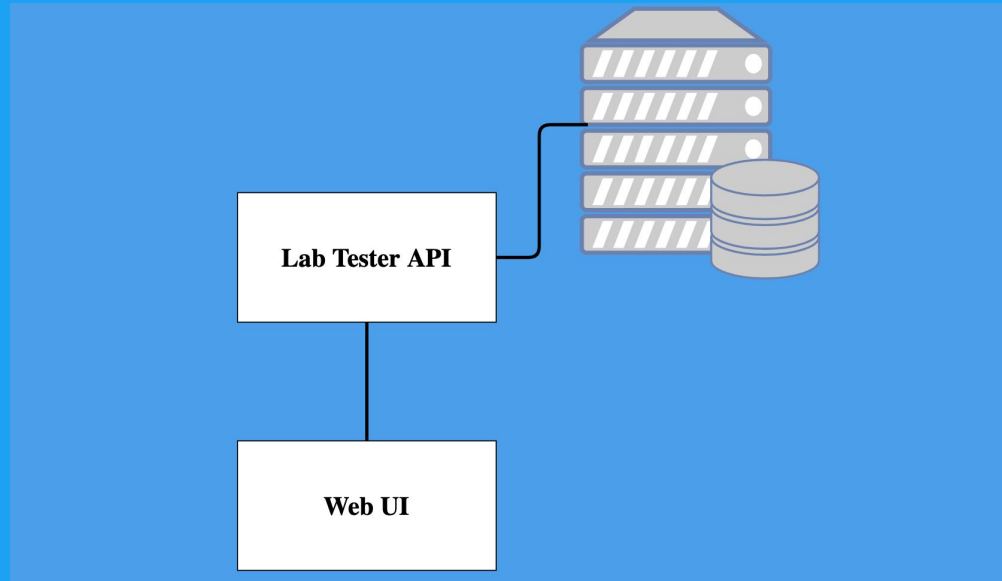
Solution

- **Automate the hardware system testing using an API.**
  - Uniform testing
  - Store all test logs
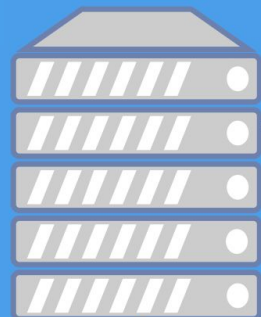 - Easy to query historic data
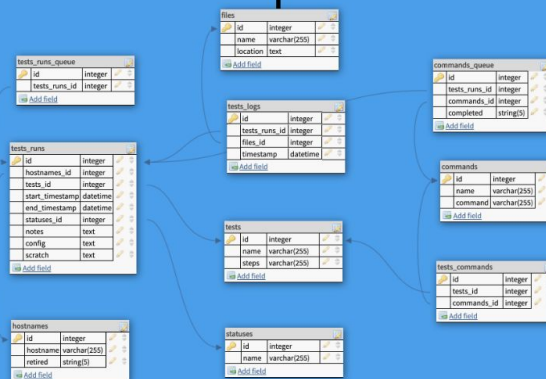 - Simple interface

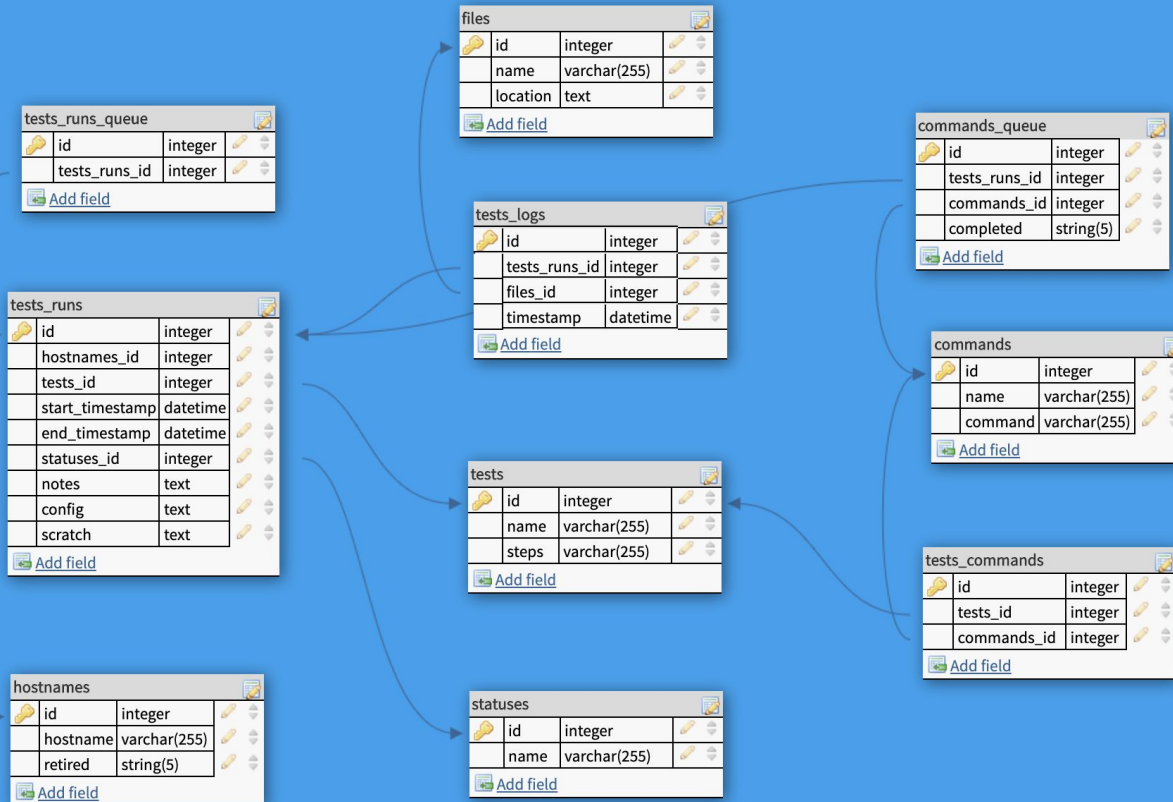# Design

Design

File Storage

Database Schema

Design

Technology

- Python 3.x
- Virtualenv
- Flask
- MySQL
- Postman

Demo

- **/systems**
- **/tests**
- **/testsruns**

Docs:
go/labtesterAPI

Challenges

- **A lot**

Challenges

- **Validating data**
- **Extensible API**
- **Datatype trade-offs in database (INT vs ENUM)**
- **A single generic query**

Challenges

localhost:5000/api/**testsruns**/3/logs

```
├── LICENSE
├── README.md
├── api
│   ├── __init__.py
│   ├── db
│   │   ├── __init__.py
│   │   ├── schema
│   │   │   └── schema.sql
│   │   └── utils.py
│   ├── resources
│   │   ├── __init__.py
│   │   ├── systems
│   │   │   ├── __init__.py
│   │   │   └── status
│   │   │       ├── __init__.py
│   │   │       └── hostname
│   │   │           ├── __init__.py
│   │   │           └── history
│   │   │               └── __init__.py
│   │   ├── tests
│   │   │   ├── __init__.py
│   │   │   └── details
│   │   │       └── __init__.py
│   │   └── testsruns
│   │       ├── __init__.py
│   │       ├── id
│   │       │   ├── __init__.py
│   │       │   └── logs
│   │       │       ├── __init__.py
│   │       │       └── id
│   │       │           └── __init__.py
│   │       ├── update
│   │       │   └── __init__.py
│   │       └── start
│   │           └── __init__.py
│   └── route.py
├── requirements.txt
└── run.py
```

Improvements

- Use manhattan/blobstore
- API docs using Swagger UI
- Computation time spent validating data
- Filter endpoint data on null data
- Closer look into security

Sacramento

Thank you