Content Distribution Network with Web Application Firewall Sprint #3

(CDN with WAF)

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Berk Gur
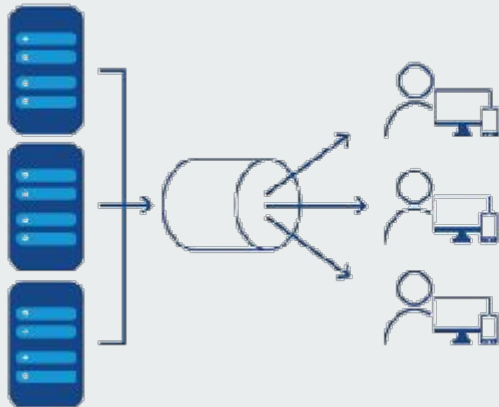Hao "Edward" Xu
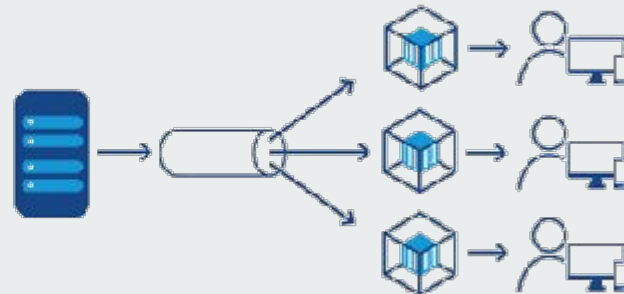Samit "Jade" Dhangwattanotai
Xuanhao Mi

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What is a CDN? (Content Distribution Network)

Key goals of our project:

- **Web Server:** Build content distribution network which helps improve efficiency of web access by the use of cache servers.
- **CDN**: distribute service among large number of servers. reducing bandwidth costs
  - **DNS Server**
  - **Data Store**
  - **Varnish Cache Servers:** web application accelerator also known as a caching HTTP reverse proxy.

What differentiate us from existing CDNs?

- Much Lower Cost
- OWASP VFW (open web security project - varnish firewall)
  - Akamai's scale is much larger and so its cost is much higher - and it is targeted more at larger customers
  - small customers need to be cost conscious and so this solution will be cheaper as an entry point
  - this solution would also want to add other features over time - and could do so quicker since it would be a small group of people

Project Architecture
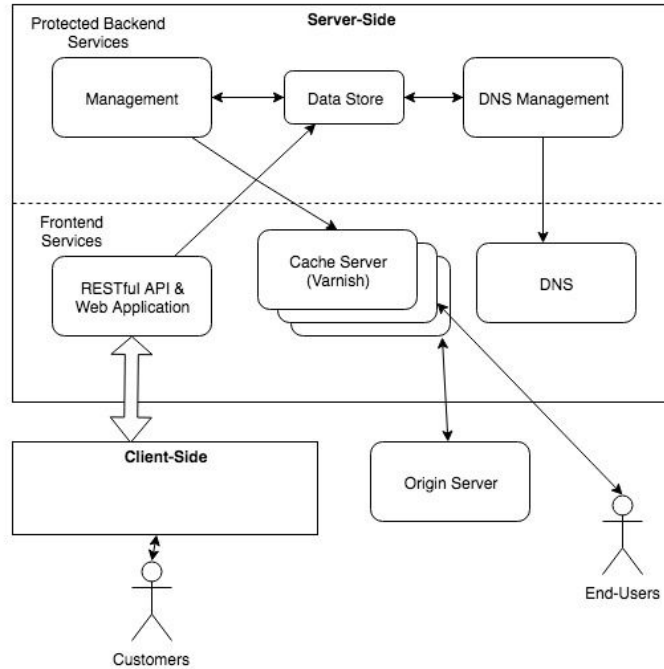
Progress in sprint 3

1. Setup DNS server.
   a. DNS server Implemented in python
2. Tested DNS server's requests
   a. Simulate user's request commands
3. Implemented Web server client's requirements
   a. Customer authentication processes
   b. Database queries
   c. List instances status

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DNS Server Progress

Web Server Progress

Future Plan Next Sprint

Sprint Objective

- Develop DNS Management Server without load balancing

Tasks

- Redirect user's request to our Cacheserver
- Connect origin server to our CDN
- Setup and test Varnish cache servers
- Combine web_server database to dns_server
- InstanceData page improvements

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Thank you, Questions?