

*One of the most powerful tools on earth, let's unravel the curtains and dig inside Google....*

## Exterior Network Security (What's Known)

**DNS Load Balanced** : Splits traffic

**Firewall filters traffic** (smtp, POP)

**NetScaler Load Balancers:**

take requests from FW blocks and

DOS attacks, ping floods. Also blocks non IPv4/6 and some specific ports

**Squid:** The user requested information...HUGE CACHE (Reverse Proxy)

**GWS :** If info isn't in cache...then its sent here, running on a custom C++ server)

## Data Center

Over 36 data centers around the world and in 2011, Google has had a reported storage capacity of over 5 Petabytes.

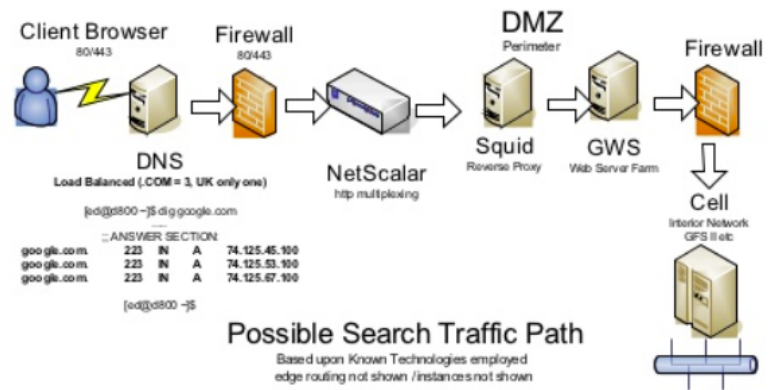
Standard data center holds 1160 servers in 30 racks.

## The Custom Servers

The servers are all custom, 1/3<sup>rd</sup> the size of a normal 1 then switched over to the 2 racks (2U) but remain custom.

Motherboards directly mounted into rack, no casing

Currently using a 2-way/Dual Core/16 GB/1-2 TB SATA



## Software

Google Web Servers: Runs off a custom Linux OS (Redhat Linux based)

Storage systems run off a in-house Google File System, BigTable, Spanner, Google F1.

\*\*Many different software depending on the product but those are the main ones.