

Maxeler Apps HTTP Web-Server



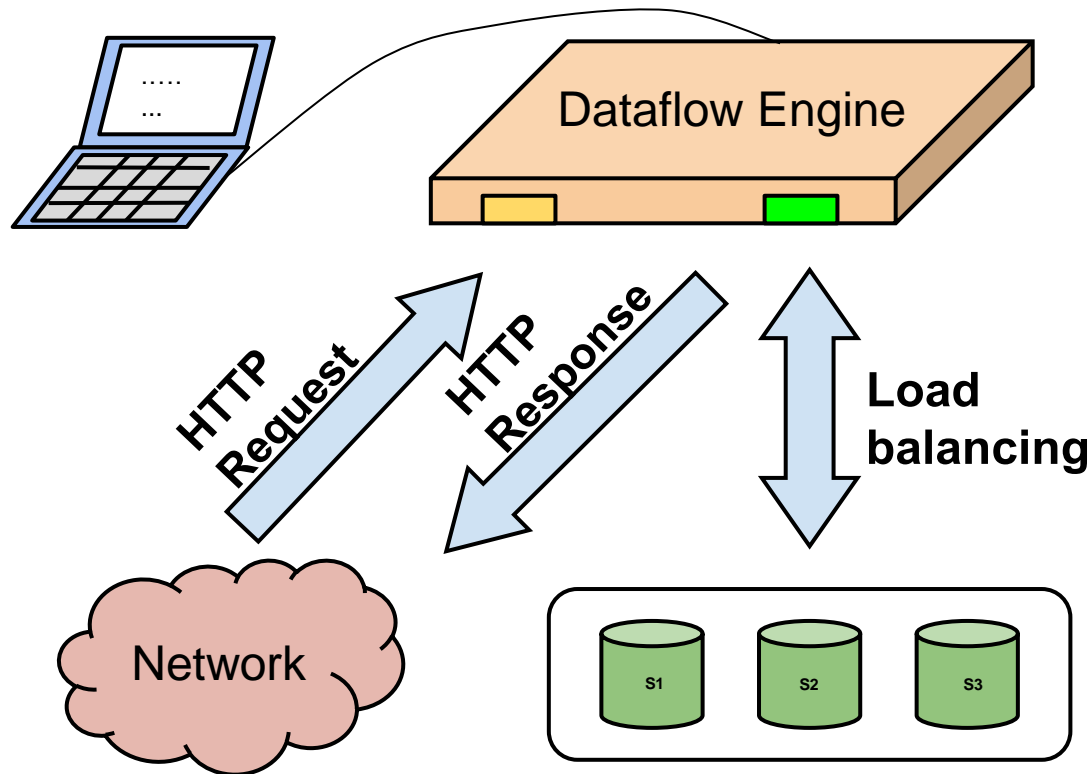
Jan 2015

HTTP Web-Server

- A web server is a computer system that processes requests via HTTP network protocol used to distribute information on the World Wide Web. The most common use of web servers is to host websites.
- The primary function of a web server is to store, process and deliver web pages to clients. The communication between client and server takes place using the Hypertext Transfer Protocol (HTTP). Pages delivered are most frequently HTML documents, which may include images, style sheets and scripts in addition to text content.
- A user agent, commonly a web browser or web crawler, initiates communication by making a request for a specific resource using HTTP and the server responds with the content of that resource or an error message if unable to do so.
- The resource is typically a file on the server's storage, but this is not necessarily the case and depends on how the web server is implemented. If specific resource is not on the server, one possible solution would be to forward incoming request to the other servers using a user defined load balancing algorithm.

HTTP Web-Server

- For DFEs with Ethernet connectors (MAX4N, JDFE)
- Handles incoming HTTP requests
- If web pages exist in DFE LMEM, returns HTTP Responses
- In case web pages are not on the DFE, forwards incoming request to the other servers using a user defined load balancing algorithm



Use case 1: Static Web Pages HTTP Web-Server

- Static web pages are stored in RAM for fast access
- Hardware web-server would have better throughput i.e. number of requests served
- It would also be much more predictable at high loads because there is no OS, no process scheduling, etc. that make software version unpredictable.
- Amazon did a study and found out that every 100ms of latency cost them 1% in sales:
- <http://blog.gigaspaces.com/amazon-found-every-100ms-of-latency-cost-them-1-in-sales/>

Use case 2: Load Balancing HTTP Web-Server

- If resource is not stored on the card, HTTP Web-Server will forward the request to one of the available software servers using specified load balancing algorithm. Load balancing algorithm might be implemented by the customer
- HTTP Web Server could keep statistics about requests. Number of access to some URI, etc. And return this information to the CPU to be presented to the user (system administrator)