Comp5130 Internet & Web System
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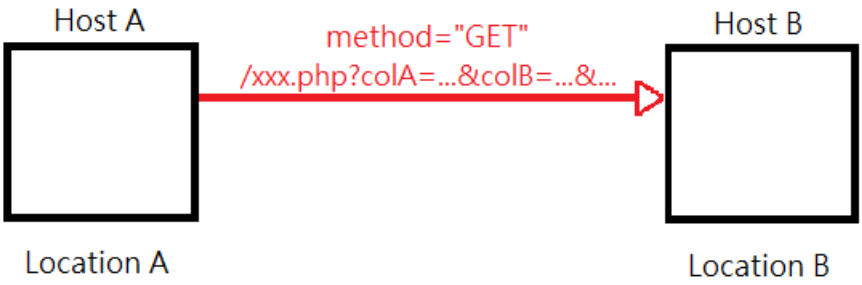
2018-10-05

Week 3

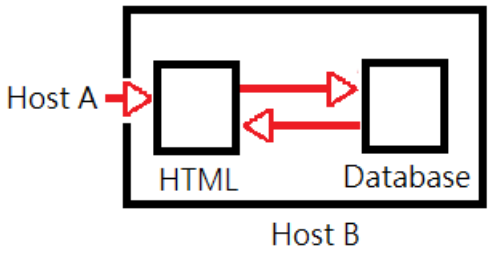
The story I talk about this time is simple. There are host A and B located at the different location and also on the different network zone. The final goal is that host A wants to get the data from the database which is on the host B, and host B will return the value back to host A. The schema looks like the picture below.

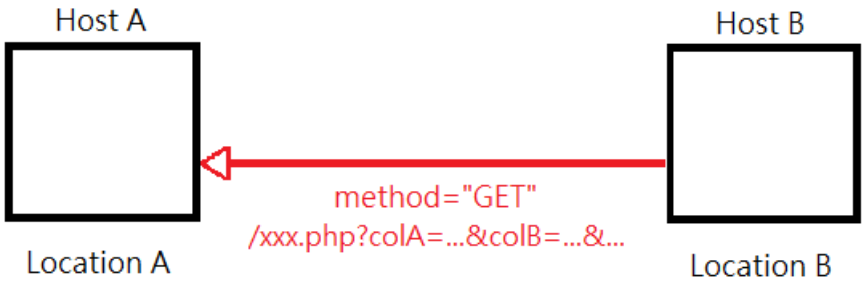
To reach the goal, I write a simple HTML form on host A and apply SQL commands, but the first problem occurs when host A wants to connect to the database. The database denies the connection from the host A because the connection is from where it does not know.

The solution for this problem is not hard, just add the IP of the host A into the whitelist of the host B. So, everything seems to be done, host A can connect to host B and host B can return the data back to host A. However, another problem appears when host A has restarted. Because the IP for host A is dynamic, the IP for host A always changes. Therefore, the connection to the host B will be denied when host A changes its IP. To add every IP for host A into the whitelist of host B is not possible, so I send the whole HTML form to host B using GET method.



Host B receives whole form data from host A and analyzes it to decide which data should be send back to host A. After collecting the information, connect to the database to retrieve the value from every column, and send everything back to host A also using GET method.





So, everything has done, host A has got the data from the database on the host B. However, there are some issues on exchanging the data between host A and host B. If there is an intruder between host A and B, it is easy for him to modify the information and my data will be exposed to the public. Therefore, to think about a safe way to do the data exchange is crucial in the future.

This is entirely my own work, except as disclosed in the documentation. I gave help to the following persons:

Signed _Cheng Wei Liao_