

**ABSTRACT**

For our project, we constructed our own e-commerce website using an open-source template to use within our server as a simulation for a small business. Working through the server assigned through us, we installed our e-commerce site and built a security program around it. Our security includes an Avast anti-virus, Tripwire IDS, Fail2Ban IPS, and the Red Hat firewall. We also changed some settings within the server to only allow for some changes to be made as well as changed user and root passwords.

**Methods**

We researched the best route to go through with to find the perfect security system with the tools available to us. We found that the best course of action would be to install the Avast anti-virus, the Tripwire IDS, the Fail2Ban IPS, and the important Red Hat firewall.

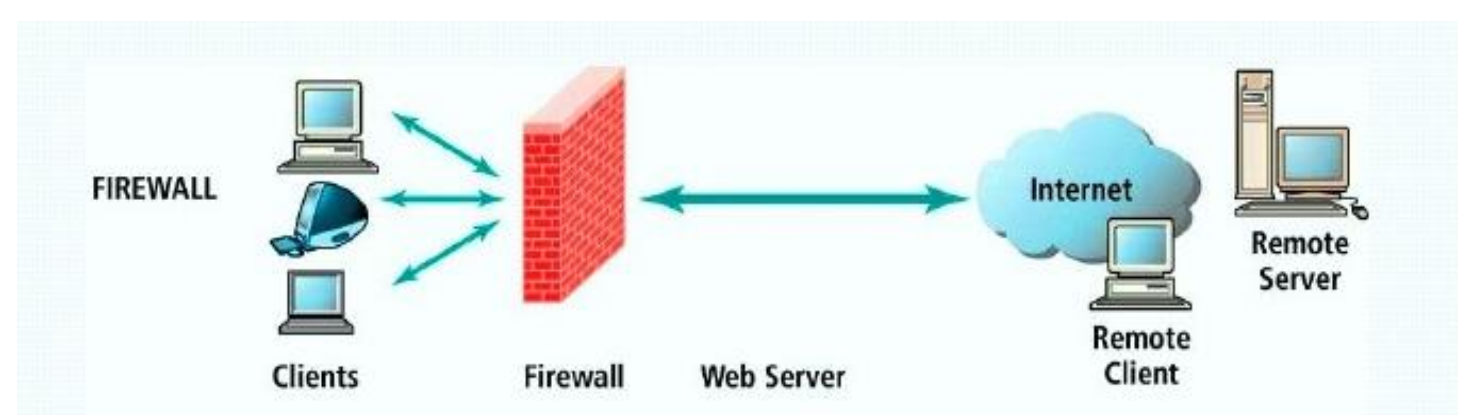


Image 1: <https://qph.fs.quoracdn.net/main-qimg-34aedf84d0dd99fce9214c2f15e6be29>

**RESULTS**

Our server was safely configured into two layers. The first being the user interface while the second and main one being the security layer. Within that we implemented a firewall, an Avast anti-virus, Tripwire IDS, the Fail2Ban IPS, as well as creating a secure login. With those tools working in our server we were able to secure it from outsiders trying to log into our remote server.

**Resources:**

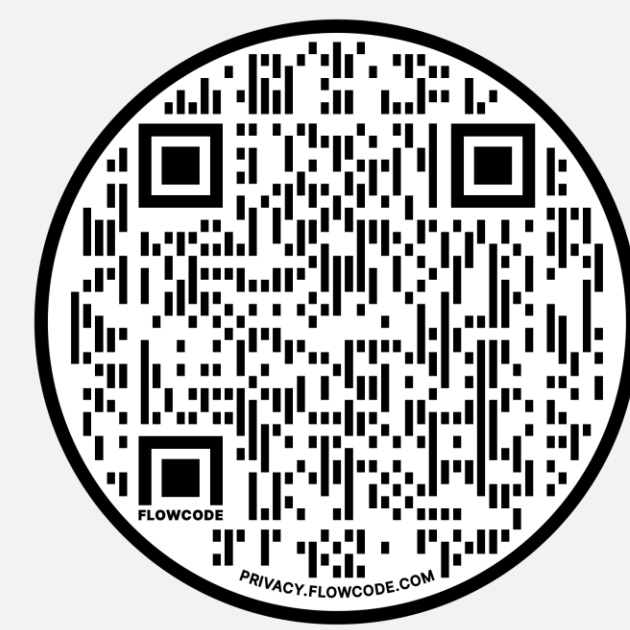
Avast: <https://www.avast.com/en-us/index#pc>

Tripwire: <https://www.tripwire.com/free-downloads>

Fail2Ban: <https://www.fail2ban.org>

Red Hat: <https://www.redhat.com/en>

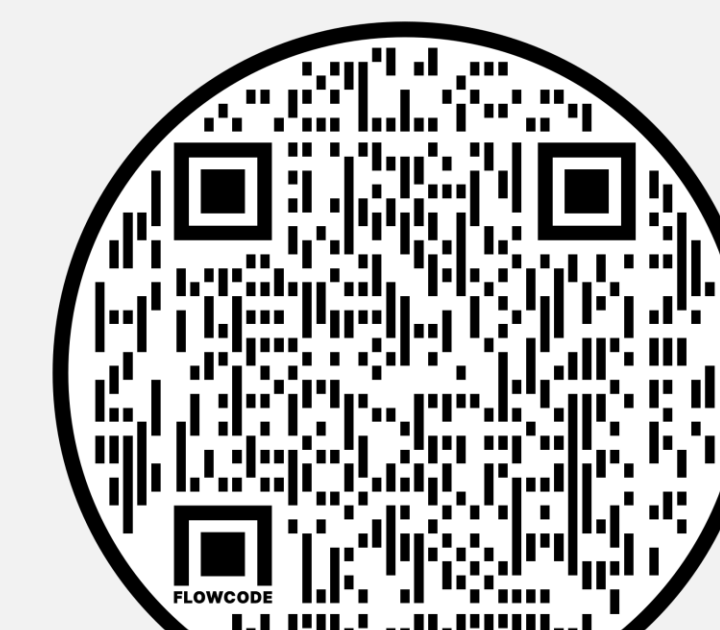
**Our project entails us to create a plan to secure a server for an E-commerce website. We researched several of the best security plans and implemented what we concluded to be the best option for our project.**



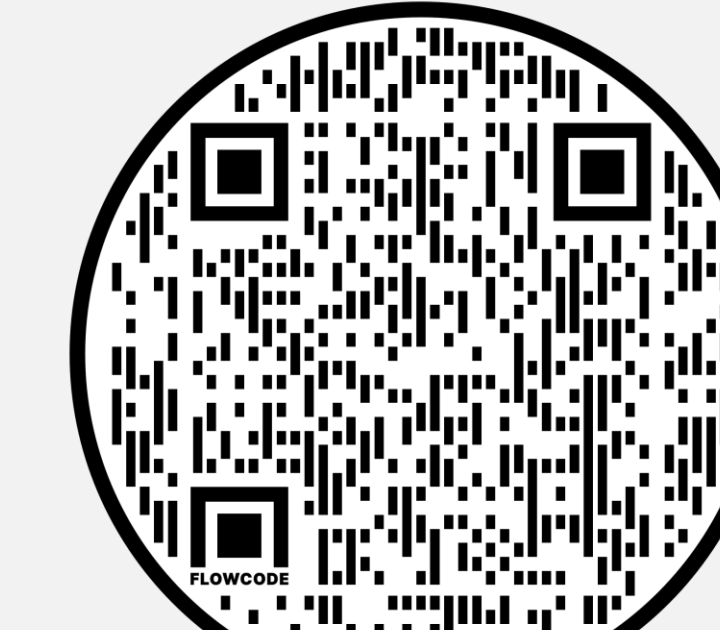
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