

## CSE487 Cybersecurity, Law, and Ethics

### Project 1 Description

#### Marks distribution for the Mini Projects

Project Title	Teaching-Learning Method	CO	Mark of Cognitive Learning Level		Mark of Psychomotor Learning Levels		Mark of Affective Learning Level			CO Mark
			C3	C4	P2	P4	A2	A3	A4	
Securing a networked system with PKI and configure Firewall and IDS	Group-based moderately complex security systems design project with report writing and oral presentation	CO2	1	1	3					5
		CO5			2		3			5
		CO6				2			3	5
		CO5			2		3			5
		CO6				2			3	5

#### Project 1: Securing a networked system with Public Key Infrastructure

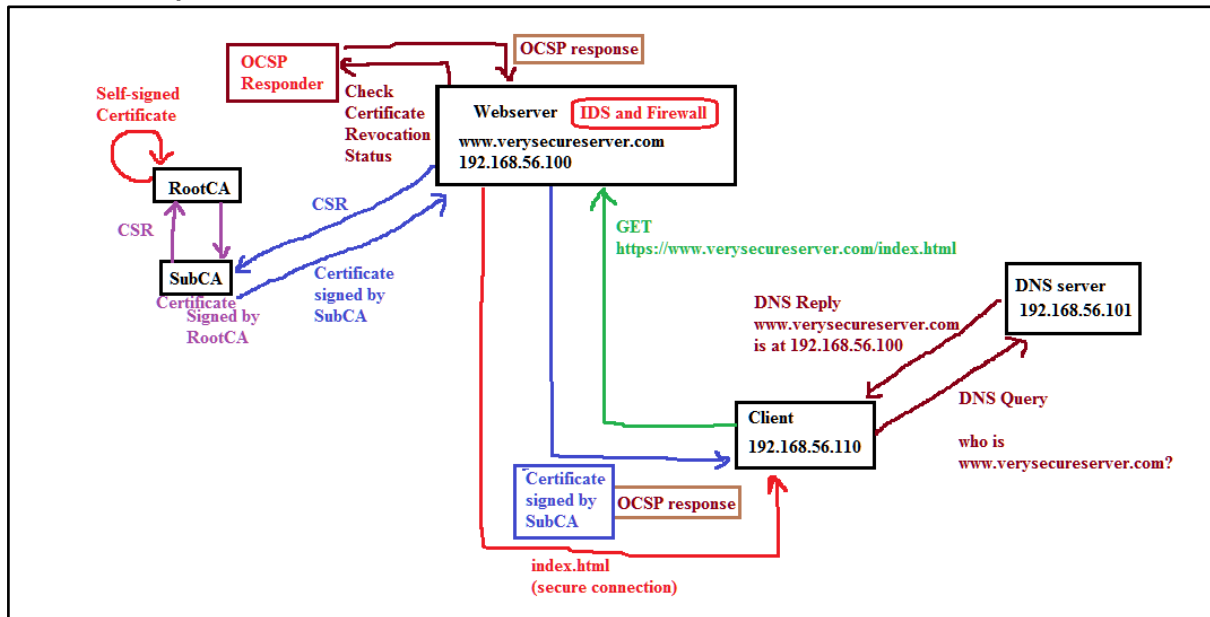
#### Implementing Transport Layer Security on HTTP for https:// connection

Project: Securing a networked system with PKI

**Activity:** Moderately complex security systems design project with **report writing** and **oral presentation**.

#### Requirements:

- Configuration of **Certification Authority** AcmeCA with AcmeRootCA as the RootCA.
- Configuration of the **Web Server** with **Apache2** on a **Linux** Host.
- **DNS configuration** for [www.verysecureserver.com](http://www.verysecureserver.com)
- **Firewall configuration** to allow necessary ports (53, 80, 443) only
- CSR Configuration and Generation for the [www.verysecureserver.com](http://www.verysecureserver.com)
- Transferring the CSR to AcmeCA.
- Certification process (Verification and Certificate Generation from CSR)
- Transferring the certificate from AcmeCA to [www.verysecureserver.com](http://www.verysecureserver.com)
- Installation of the signed the SSL certificate in the server of [www.verysecureserver.com](http://www.verysecureserver.com)
- Making the system trust Acme-RootCA
- Implementation of a simple file uploading page in the server.
- Verifying the security of the connection by inspection (the padlock icon), and with **Wireshark** from another computer.

**Network Setup:****Reporting:**

Submit a **written tutorial in WORD format** with necessary screenshots, instructions, and commands that can be followed to fulfill the requirements.