Design & Requirement Document

by

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Prioritized Security Requirements

RID	Requirements	Threats	Relevant Elements
R01	Client User interface should be operated so that only authorized user can use it	Spoofing : Unauthorized command request from spoofed client	Client
R02	Client User interface should accept the valid user's input.	Denial of Service : Attacker could use the user input to slow down or crash the system	Client
R03	Client should communicate securely with the server(Robot)	Tampering Spoofing Information of disclosure	Client, Server, TCP Connection
R04	Client User interface should provide audit log	Non-Repudiation	Client
R05	The server(Robot) should provide the service when the client request.	Denial of Service	Server

Design Decision

R01. Client User interface should be operated so that only authorized user can use it
- System properties
    - The client system should create the public key using a certificate file(private key).
    - The certificate should be created by RSA & X509.
    - The client system should encrypt the certificate file using key(user's password)
    - Encryption of client certificate should use AES-128

R02. Client User interface should accept the valid user's input
- System properties
    - The client system should check the validation of password and value entered by user
    - The size of input value should be decided and checked

R03. Client should communicate securely with the server(Robot)
- System properties
    - TCP communication should be protected by TLS 1.2.
    - The server should manage(save) the client's public key

R04. Client User interface should provide audit log
- System properties
    - The client system should save the commands to server and information by server.
    - The client system should encrypt the log file using key(User's password)

R05. The server(Robot) should provide the service when the client request
- System properties
    - The server should accept only the request by permitted network port.
    - The server should support firewall feature