



VSR://EDU/SVS

Security of Distributed Software

SS 2020 – 7. Tutorial

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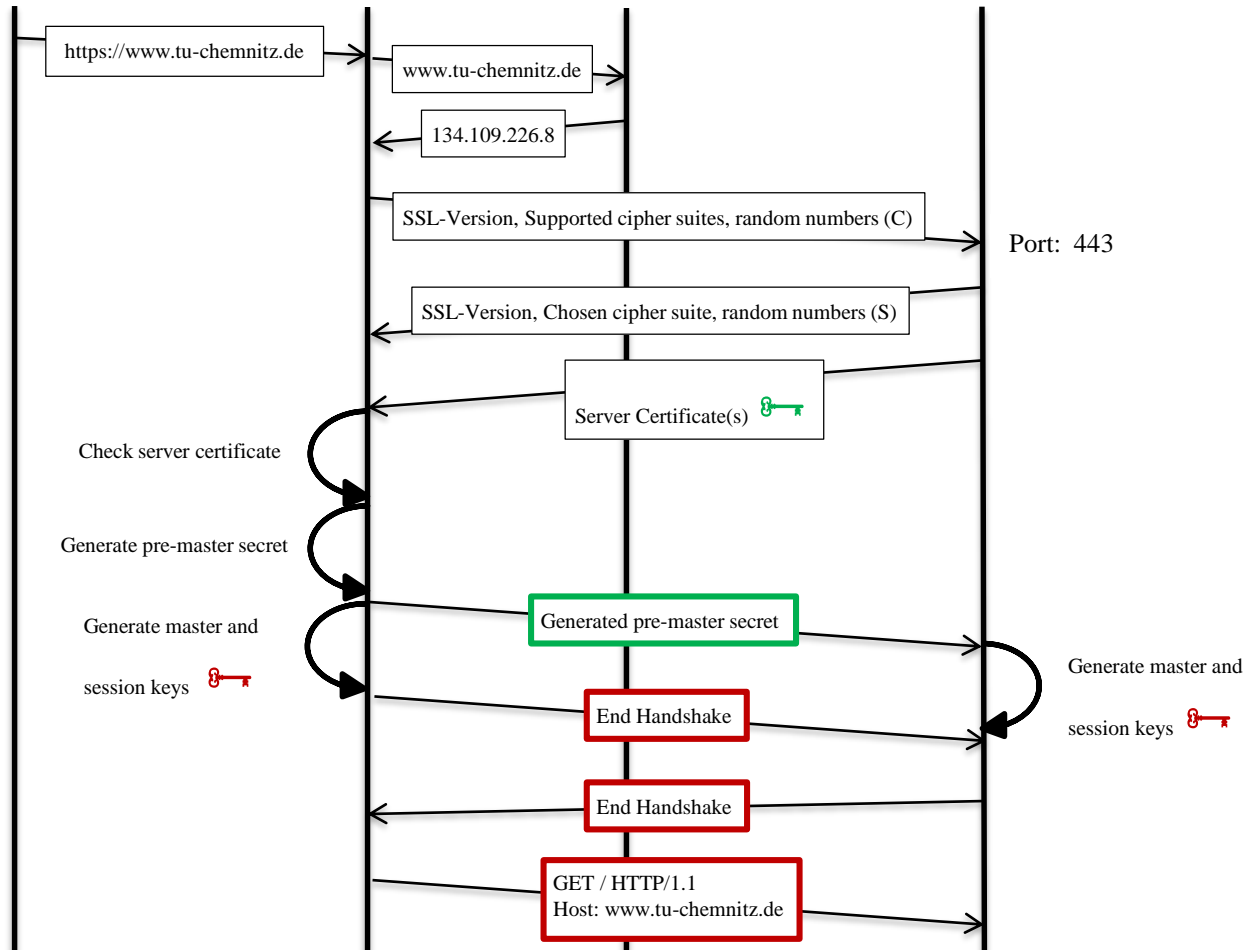
Task 1

User

Browser

DNS Server (IP: 134.109.133.1)

Server (IP: 134.109.226.8)



a. Which goals does SSL/TLS have?

- Confidentiality
- Authenticity
- Integrity

Which risks exist despite of usage of SSL/TLS?

- Out-of-scope

b. How does server decide, which certificate should be shown if several virtual hosts exist?

- Server Name Indication (SNI)
- Wildcard-Certificates
- Multidomain-Certificates

2 Task 2



- Prevent phishing
- No password storage at apps
- Prevents chosen-plaintext attacks
- Prevents replay attacks



- Many security options are optional
- man-in-the-middle attack
- Prevents strong hash algorithm

3. What would a client send as a response to the following server message, if his username would be „Max“ and his password - „Secure123“?

Request:

```
GET /index.html HTTP/1.1  
Host: localhost
```

Response:

```
HTTP/1.0 401 Unauthorized  
WWW-Authenticate: Digest realm="Secured Area",  
nonce="aer95b7fg2dd2hhe8b11d0f6f7afb0c14v"  
Content-Length: 0
```


HA1 = MD5(username:realm:password)

HA2 = MD5(method:digestURI)

response = MD5(HA1:nonce:HA2)

3 Task 3

Inform yourself about Public Key-Authentication in SSH Authentication Protocol.

1. Create key pair for a user
2. Transfer the public key to the server
3. Configure the ssh service to use Public Key-Authentication
4. Test the authentication using the newly created keys



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Your feedback on today's session:



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Questions?

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