OSI Layer 6 Presentation

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Overview

The presentation layer is layer 6 of the OSI model. This layer accounts for things like data translation, data encryption and data compression. The presentation layer is basically an intermediary between layer 7 (the application layer) and layer 5 (the sessions layer. This layer makes sure that data is sent to the application layer in secure and efficient form.

Protocols, Devices, and applications

- Protocols
  - Secure Socket Layer (SSL)/Transport Layer Security (TLS)
    - Used in HTTPS to secure web traffic.
  - Multipurpose Internet Mail Extensions (MIME)
    - Used in email protocols like SMTP and in web communications to handle different types of media.
- Devices
  - Web Servers
  - Email Servers
- Applications
  - Web Browsers
    - Chrome, Firefox
  - Email Clients
    - Outlook, Apple Mail
  - File Transfer Applications
    - WinZip, WinRAR
  - Media Players

How our layer interacts with layer 5 session

- The Presentation Layer handles the translation, encryption, and compression of data to ensure it is in a format that can be understood by the receiving application.
- It establishes, maintains, and terminates connections or sessions between applications. It also manages session synchronization and recovery.

How our layer interacts with Layer 7 Application

- The Presentation layer is able to translate data from different systems. (Changes the format for each system)
- Data Encryption and Decryption, If data was needed to be encrypted for secure transmission, the Presentation Layer will handle the encryption before sending it to the Application Layer. (Likewise for decryption)

Challenges or issues

- Incompatible data formats

Thi	s s	ent	enc	e d	idn	't	fit

- Decryption/encryption failures

  - **Password123** -encrypt-> **oL7bFwS0NGr** -decrypt-> **c0xP7ADuDd8**

- Compression/decompression issues

  - **aaaaaaaa** -> **8a** -> **eighta**

References

https://www.linkedin.com/pulse/troubleshooting-network-issues-using-osi-model-hacktifycs-apxmf