

# Computer Networks

## Part 3: Capture the packets

1)

### Syslog Protocol

- **Operation:** Syslog is used for message logging, allowing devices such as routers, switches, and servers to send log messages to a central server for monitoring and debugging.
- **Layer:** Application Layer
- **RFC:** RFC 5424

### LDAP (Lightweight Directory Access Protocol)

- **Operation:** LDAP is used for querying and modifying directory services, commonly used for authentication and centralized user management in enterprise networks.
- **Layer:** Application Layer
- **RFC:** RFC 4519

### NNTP (Network News Transfer Protocol)

- **Operation:** NNTP is used to distribute, retrieve, and post news articles (Usenet newsgroups) over the Internet. It is mainly used for online discussion forums.
- **Layer:** Application Layer
- **RFC:** RFC 3977

### BGP (Border Gateway Protocol)

- **Operation:** BGP is used for exchanging routing information between autonomous systems (AS) on the Internet. It is essential for global Internet routing.
- **Layer:** Application Layer
- **RFC:** RFC 4271

### SMTP (Simple Mail Transfer Protocol)

- **Operation:** SMTP is used for sending and forwarding email messages between mail servers. It operates on a push model, meaning emails are sent from a client to a mail server and then relayed to the recipient's server. SMTP works alongside protocols like IMAP and POP3 for email retrieval.
- **Layer:** Application Layer
- **RFC:** RFC 5321

2)

## Analysis of Request Line, Protocol Version, and Persistent Connection

By visiting the websites **Netflix**, **GitHub**, and **Canara Bank**, we have analyzed the request-response details, including the IP addresses, request line, and persistent connections.

### Netflix

- **IP Address:** 54.74.73.31:443
- **Response Headers:**
  - accept-ch: Sec-CH-UA-Platform-Version,Sec-CH-UA-Model
  - cache-control: no-cache, no-store
  - content-security-policy-report-only: Specifies security policies for content sources.
- **Request Headers:**
  - accept: Various MIME types accepted, including HTML, images, and application data.
  - accept-encoding: Supports compression formats like gzip, deflate, and br.
  - accept-language: en-US,en;q=0.9
- **Connection: Not Persistent**

### GitHub

- **IP Address:** 20.207.73.82:443
- **Response Headers:**
  - content-type: text/html; charset=utf-8
  - date: Sat, 01 Feb 2025 15:51:54 GMT
  - etag: W/"59eb3c5ca3c41c4bf99e43c360a81bef"
- **Request Headers:**
  - accept: Similar to Netflix, allowing multiple MIME types.
  - accept-encoding: Supports gzip, deflate, br, and zstd.
  - accept-language: en-US,en;q=0.9
- **Connection: Not Persistent**

### Canara Bank

- **IP Address:** 107.162.160.8:443
- **Request Line:** GET / HTTP/1.1
- **Response Headers:**
  - connection: close
  - content-security-policy: Defines security rules for scripts, styles, and images.
  - content-type: text/html; charset=utf-8
- **Request Headers:**
  - accept: Accepts various content types, similar to Netflix and GitHub.

- accept-encoding: Supports gzip, deflate, br, and zstd.
- accept-language: en-US,en;q=0.9
- **Connection: Persistent**

3)

