

SMTP

SMTP:

Simple mail transfer protocol(SMTP) is application layer protocol used for reliable transmission (send/receiving) of mails. SMTP uses secure SSL connection on the Port number 25. SMTP uses IMAP and POP3 protocols. IMAP and POP3 are used on client end for retrieving mails. SMTP uses MIME(American Standard Code for Information Interchange) for non-ASCII data. Under SMTP, TCP is used for transmission, TCP provides interprocess communication environment. SMTP works as SMTP sender and SMTP receiver. SMTP sender creates the list of recipients by checking the envelope header and sends the mail to each recipient one by one. When a message is sent to multiple users of a single host, then the mail message will be sent only once to the destination host. The delivery to individual users will be handled at the destination host. If multiple messages have to be sent to a single host, in that case a single TCP connection can be used to reduce the overhead. SMTP receivers will be accepting the arriving messages and they will be placing the messages in the appropriate user mail boxes. If the mails are destined to a mail box connected to the particular server. But if it finds that the destination address does not belong to a particular user in the mailbox of its own, machine own server. Then it copies the mail message to an outgoing queue to some other SMTP server to a process called mail forwarding. Although SMTP is a reliable protocol but it does not provide the recovery of lost packets also there is no end-to-end Acknowledgement for Sender. Companies which have their own mail services, also use SMTP for sending and receiving mail outside the company domain.

SMTP Commands :

HELO: This command is used to setup the connection between sender and receiver. For example HELO gmail.com

MAIL: This command is used to mail address of sender, return address of mail.

RCPT: This command is the part of envelope header, which specifies the recipient address. For every recipient a separate command is used.

DATA: DATA specifies the message and header in the content. It also indicates start of the DATA transmission. RSET : This command is used to reset the connection in case of error in the transmission

Shortcoming of SMTP:

⇒ SMTP does not care about the message header, SMTP client will deliver the message even if message has badly broken or entirely nonexistent message headers.

⇒ SMTP does not have in-built security feature, SMTP can not block spammers.