

**Assignment 01**  
**Jainendra Kumar (jaikumar)**

**TASK 1.**

**2.**

```
[jaikumar@silo ~]$ telnet mail-relay.iu.edu 25
Trying 129.79.1.38...
Connected to mail-relay.iu.edu.
Escape character is '^'.
220 Sendmail ESMTP - IU Campus Communications Team - Mail-Relay
HELO HEY
250 mail-relay.iu.edu Hello silo.soic.indiana.edu [129.79.247.5], pleased to meet you
MAIL FROM:jaikumar@iu.edu
250 2.1.0 jaikumar@iu.edu... Sender ok
RCPT TO:sice-networks-l@list.indiana.edu
250 2.1.5 sice-networks-l@list.indiana.edu... Recipient ok
DATA
354 Enter mail, end with "." on a line by itself
Subject:Jainendra Kumar Assignment 01 SMTP
To:sice-networks-l@list.indiana.edu
Hi,
This is a mail from Mail-Relay server for Assignment 01 Task1 SMTP.
Thanks,
Jainendra Kumar
.
250 2.0.0 x8K36rrC009152 Message accepted for delivery
```

**3. a) What happens when you try to send to a non-IU email address? Why?**

When I try to send the email to non-IU email address I get the error code 550 saying Relaying denied. Proper authentication required. The job of the relay server is to act as a middleman and to relay the message to other server using SMTP protocol. However, relay server is not always required and ISP's email server can also act as a relay. Relaying is denied either if the sender of an email address has not been authenticated (not the case as iu sender's email is authenticated in this case) or if the recipient of the message is not managed or configured to communicate by the relay server. Since the IU relay server is configured to only relay to IU email address and is not configured to communicate/manage or authenticate other email servers, hence relaying is being denied when the mail is sent to outside IU.

```
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Trying 129.79.1.38...
Connected to mail-relay.iu.edu.
Escape character is '^'.
220 Sendmail ESMTP - IU Campus Communications Team - Mail-Relay
HELO HEY
250 mail-relay.iu.edu Hello silo.soic.indiana.edu [129.79.247.5], pleased to meet you
MAIL FROM:jaikumar@iu.edu
250 2.1.0 jaikumar@iu.edu... Sender ok
RCPT TO:jainendrakumar10@yahoo.com
550 5.7.1 jainendrakumar10@yahoo.com... Relaying denied. Proper authentication required
```

## **b) What happens when you use a made-up from address? Why?**

Message gets accepted for delivery and the email is delivered even if made-up from address is used.

This is happening because IU's email server is an open relay network which does not perform any authentication of FROM address. In other words, IU relay server is not configured to authenticate email addresses that reside on other relay servers. This is potential security flaw as one can send any email from made-up address to IU email address.

### **Made-up address with invalid domain:**

```
[jaikumar@silo c]$ telnet mail.relay.iu.edu 25
telnet: mail.relay.iu.edu: Name or service not known
mail.relay.iu.edu: Unknown host
[jaikumar@silo c]$ clear
[jaikumar@silo c]$ telnet mail-relay.iu.edu 25
Trying 129.79.1.38...
Connected to mail-relay.iu.edu.
Escape character is '^]'.
220 Sendmail ESMTP - IU Campus Communications Team - Mail-Relay
HELO HI
250 mail-relay.iu.edu Hello silo.soic.indiana.edu [129.79.247.5], pleased to meet you
MAIL FROM:xyz@xyz.com
250 2.1.0 xyz@xyz.com... Sender ok
RCPT TO:jaikumar@iu.edu
250 2.1.5 jaikumar@iu.edu... Recipient ok
DATA
354 Enter mail, end with "." on a line by itself
Test.
.
250 2.0.0 x8K6G07c018872 Message accepted for delivery
```

### **Made-up address with valid domain:**

```
[jaikumar@silo c]$ telnet mail-relay.iu.edu 25
Trying 129.79.1.38...
Connected to mail-relay.iu.edu.
Escape character is '^]'.
220 Sendmail ESMTP - IU Campus Communications Team - Mail-Relay
HELO HEY
250 mail-relay.iu.edu Hello silo.soic.indiana.edu [129.79.247.5], pleased to meet you
MAIL FROM:xyzsdf@yahoo.com
250 2.1.0 xyzsdf@yahoo.com... Sender ok
RCPT TO:jaikumar@iu.edu
250 2.1.5 jaikumar@iu.edu... Recipient ok
DATA
354 Enter mail, end with "." on a line by itself
TEST
.
250 2.0.0 x8K6Kghe019139 Message accepted for delivery
```