

ECE 40400: Introduction to Computer
Security
Spring 2024

Prateek Yashwant Jannu

Purdue University, West Lafayette

Professor: Dr. Avinash C Kak

Recipe_1

Let's take a look at the JunkMail Files:

```
with ESMTPA id 902414387 for <dmckinne@purdue.edu>; Tue, 5 Apr 2011
From: <dmckinne@purdue.edu>, <iposey@purdue.edu>, <ereinebo@purdue.edu>,
<ibetram@purdue.edu>, <ajensen@purdue.edu>, <kak@purdue.edu>
```

All of the files have multiple FROM entries, one of the easiest methods is to check for **multiple purdue.edu** but then what if the email consists of other domains, this would not work hence we check for the **parenthesis following the email highlighted above which when matched we know for sure that there are multiple entries in the FROM header.**

^From.*>\, <

^: Means the pattern to the beginning of a line.

From: Matches the literal characters "From".

.*: Matches any character except newline zero or more times. This allows for flexibility in matching any sequence of characters after "From".

>\, <: Matches the characters **>**, **<** exactly. The backslashes **** are used to escape the special characters **>** and **<**.

Recipe_2

This recipe is to examine the subject lines of incoming email messages. If any subject line contains any of the specified keywords the email is processed to file recipe_2.

*

^Subject.*(degree|watches|medications|diploma|Diploma|pills|Pills|plills|Ppjills|Magento):

*****: Indicates the beginning of a condition.

^Subject.*: Matches lines in the email's subject header that start with "Subject" followed by any number of characters

(degree|watches|medications|diploma|Diploma|pills|Pills|plills|Ppjills|Magento): It matches any of the listed keywords in the subject line.

Recipe_3

:0 B:

^*(Ruby|ruby|GEMSTONE|MINING)

B: This flag specifies that the condition line type is based on the body of the email.

^*: This part indicates that the condition should be checked against the body of the email message, for any number of characters until the condition is met.

(Ruby|ruby| GEMSTONE|MINING): These are the casino/gambling and mining companies we are trying to avoid.

Recipe_4

:0 HB:

*** ^Content-Type: multipart/alternative**

*** ^Content-Type: text/html;(charset = "utf-8"| charset=utf-8|\$)**

*** ^Content-Type: text/plain;(charset = "utf-8"| charset=utf-8|\$)**

*** ^Content-Transfer-Encoding: (7bit|8bit|quoted-printable)**

HB: Flags indicating that the condition line type is based on the body of the email.

*** ^Content-Type: multipart/alternative:** Checks if the MIME header "Content-Type" specifies that the email contains a multipart message with alternative This condition targets emails that have the "multipart/alternative" MIME type, which typically includes both plain text and HTML versions of the email content.

*** ^Content-Type: text/html;(charset = "utf-8"| charset=utf-8|\$):** Checks if the MIME header "Content-Type" specifies that the email contains an HTML version with a specified character set of UTF-8. This condition targets emails that have a "text/html" MIME type with a charset of UTF-8.

*** ^Content-Type: text/plain;(charset = "utf-8"| charset=utf-8|\$):** Checks if the MIME header "Content-Type" specifies that the email contains a plain text version with a specified character set of UTF-8. This condition targets emails that have a "text/plain" MIME type with a charset of UTF-8.

* ^ Content-Transfer-Encoding: (7bit|8bit|quoted-printable): Checks if the MIME header "Content-Transfer-Encoding" specifies that the email content is encoded using one of the specified methods (quoted-printable, 8bit, or 7bit). This condition targets emails that have a specified Content-Transfer-Encoding method.