

# CIA MTA. Lab 6

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## 1 Step by step Sendmail installation and setup

1. Installing sendmail from repositories.

```
sudo apt install sendmail
```

2. Added line to sendmail.mc to turn on sendmail on external interfaces.

```
DAEMON_OPTIONS('Port=smtp,Addr=188.130.155.42, Name=MTA')dnl
```

3. Adding new user to system, for mail purpose with shell false.

```
sudo useradd -s /bin/false a.abdulmadzhidov
```

4. Adding access rules to files (used standart one). Added aliases for mail for my name to be send to username mailbox. Also added alias for postmaster to root. ali: a.abdulmadzhidov  
postmaster: root

5. Creating config, aliases, access db files.

```
make
```

```
cd /etc/mail
```

```
makemap hash access < access
```

```
makemap hash aliases < aliases
```

6. Starting sendmail

```
sudo service sendmail start
```

7. Checking it's running

```
sudo service sendmail status
```

## Answers

1. (a) What are you need to add to you DNS zone? MX record for mail.st9.os3.su GLUE A record for record above PTR record from 42.155.130.188.in-addr.arpa. to mail.st9.os3.su  
(b) What extra information should be modified in PTR records for your IP, please provide this information to Azat.? He should add PTR record for our ip to mail.st9.os3.su
2. (a) Add a local account with your name.surname@stX.os3.su on your experimental machine and make sure that the MTA can deliver mail to it. Show the required configuration.  
Done in installation. We need to add user to system by useradd command, and add him to aliases file pointing usermname for mail and username in system who'll get mail for that user.

(b) Log

```
From mrfreezzzer@mail.ru Sun Sep 18 22:32:47 2016
Return-Path: <mrfreezzzer@mail.ru>
Received: from f330.i.mail.ru (f330.i.mail.ru [217.69.140.226])
    by mail.st9.os3.su (8.15.2/8.15.2) with ESMTP id u8IJWlqw022764
    for <ali@mail.st9.os3.su>; Sun, 18 Sep 2016 22:32:47 +0300
DKIM-Signature: v=1; a=rsa-sha256; q=dns/txt; c=relaxed/relaxed; d=mail.ru; s=mail2;
    h=Content-Type:Message-ID:Reply-To:Date:MIME-Version:Subject:To:From; bh=fZ/TjBBqITo3
    b=NEoH02bhDCvx1/U5CFyA0lRUPqPTctvMxpGaQ2kYq94yqrMMNGpg0ou7tAt8q6zfeUifLj1Lo6s95AJzKx8
Received: from [188.130.155.154] (ident=mail)
    by f330.i.mail.ru with local (envelope-from <mrfreezzzer@mail.ru>)
    id 1blhpW-0001Br-EC
    for ali@mail.st9.os3.su; Sun, 18 Sep 2016 22:32:46 +0300
Received: from [188.130.155.154] by e.mail.ru with HTTP;
    Sun, 18 Sep 2016 22:32:46 +0300
From: =?UTF-8?B?0JDQu9C4INCQOLHQtnGDOLvQvNCwOLbQuNC00L7Qsg==?= <mrfreezzzer@mail.ru>
To: =?UTF-8?B?YWxp?= <ali@mail.st9.os3.su>
Subject: =?UTF-8?B?Z2hqZ2hq?=
MIME-Version: 1.0
X-Mailer: Mail.Ru Mailer 1.0
X-Originating-IP: [188.130.155.154]
Date: Sun, 18 Sep 2016 22:32:46 +0300
Reply-To: =?UTF-8?B?0JDQu9C4INCQOLHQtnGDOLvQvNCwOLbQuNC00L7Qsg==?= <mrfreezzzer@mail.ru>
X-Priority: 3 (Normal)
Message-ID: <1474227166.17218210@f330.i.mail.ru>
Content-Type: multipart/alternative;
    boundary="--ALT--cL7RylSXAt3xuXh9Ix0tpViiLeuCqAb71474227166"
Authentication-Results: f330.i.mail.ru; auth=pass smtp.auth=mrfreezzzer@mail.ru smtp.mail.
X-95568C8E: 26815A15162540332840C59422DF1D5F199E47233F92776887959EFD9D048BA7C7B69D0197283
X-Mailru-Sender: F602C57692161D0AE7BEC8AF795BFC16F517E54B8E90ABBF77F13EDC6E3CFDDC8457918E
X-Mras: OK
X-Spam: undefined

----ALT--cL7RylSXAt3xuXh9Ix0tpViiLeuCqAb71474227166
Content-Type: text/plain; charset=utf-8
Content-Transfer-Encoding: base64
YmJramhqaAoKcTChINGDOLLQsNC20LXQvdC40LXQvCwK0JDQu9C4INCQOLHQtnGDOLvQvNCwOLTQ
ttC40LTQvtCyCmFiZHVsbWFKamlkb3ZAbGl2ZS5ydQ==

----ALT--cL7RylSXAt3xuXh9Ix0tpViiLeuCqAb71474227166
Content-Type: text/html; charset=utf-8
Content-Transfer-Encoding: base64

CjxIVE1MPjxCTORZPmJia2poamg8YnI+PGJyPjxicj7QoSDRg9Cy0LDQtC10L3QuNC10LwsPGJy
PtCQOLvQuCDQkNCx0LTRg9C70LzQsNC00LbQuNC00L7QsJxicj5hYmR1bG1hZGppZG92QGxpdmUu
cnU8L0JPRFk+PC9IVE1MPgo=

----ALT--cL7RylSXAt3xuXh9Ix0tpViiLeuCqAb71474227166--
```

(c) Log telnet

```
telnet 127.0.0.1 25
Trying 127.0.0.1...
Connected to 127.0.0.1.
Escape character is '^'.
220 mail.st9.os3.su ESMTP Sendmail 8.15.2/8.15.2; Sun, 18 Sep 2016 23:43:30 +0300
ehlo mail.st9.os3.su
250-mail.st9.os3.su Hello localhost [127.0.0.1], pleased to meet you
250-ENHANCEDSTATUSCODES
```

```

250-PIPELINING
250-EXPN
250-VERB
250-8BITMIME
250-SIZE
250-DSN
250-ETRN
250-AUTH DIGEST-MD5 CRAM-MD5
250-DELIVERBY
250 HELP
mail from: st9.os3.su
553 5.5.4 st9.os3.su... Domain name required for sender address st9.os3.su
mail from: ali@mail.st9.os3.su
250 2.1.0 ali@mail.st9.os3.su... Sender ok
rcpt to: mrfreezzzer@mail.ru
250 2.1.5 mrfreezzzer@mail.ru... Recipient ok
data
354 Enter mail, end with "." on a line by itself
text
.
250 2.0.0 u8IKhUSX023153 Message accepted for delivery

```

## 2 Mail Backup

### 2.1 'First, describe you have done on your own server to create two backup MTAs for your domain.'

We need to add two MX resource records to our zone, with lower priority.

mail	IN	MX	10	mail.st15.os3.su.
mail	IN	MX	5	mail.st12.os3.su.

10 and 5 in records are priority. Greater number, lower priority. In our zone, mail would go to mail.st12 and if it fails there too, it'll go to mail.st15

### 2.2 'Setting up our sendmail.mc as backup for other two

1. Add to features to sendmail.mc. access\_db to allow relay not our mails to needed mail servers, and mailertable that shows which emails on what server should we send.

```

FEATURE(access_db, 'hash -o -T /etc/mail/access')
FEATURE(mailertable, 'hash -o -T /etc/mail/mailertable')

```

2. Add rules to route mails to /etc/mail/mailertable

```

mail.st12.os3.su    smtp:mail.st12.os3.su
st12.os3.su        smtp:mail.st12.os3.su
mail.st15.os3.su    smtp:mail.st15.os3.su
st15.os3.su        smtp:mail.st15.os3.su

```

3. Add rules to access relay for mail server that we are backuping to /etc/mail/access

```

TO:mail.st12.os3.su RELAY
TO:st12.os3.su RELAY
TO:st15.os3.su RELAY
TO:mail.st15.os3.su RELAY

```

4. To compile config files and create hash db files from mailertable and access files we need to call make all command in /etc/mail folder
5. reloading config files in sendmail

```
service sendmail reload
```

## 2.3 Log of backup and getting my mail

We can see that sudent15@mail.st15.os3.su was sending it to my root@mail.st9.os3.su it went through mail.st12.os3.su and when i turned on my sendmail it recieved to me.

```

From sudent15@st15.os3.su Mon Sep 19 13:26:49 2016
Return-Path: <sudent15@st15.os3.su>
Received: from st12.os3.su (mail.st12.os3.su [188.130.155.45])
    by mail.st9.os3.su (8.15.2/8.15.2) with ESMTP id u8JAQmYE029325
    for <root@mail.st9.os3.su>; Mon, 19 Sep 2016 13:26:49 +0300
Received: from mail.st15.os3.su ([188.130.155.48] helo=st15.os3.su)
    by st12.os3.su with esmtp (Exim 4.87_167-ff5929e)
    (envelope-from <sudent15@st15.os3.su>)
    id 1bkq09-0006Bs-AL
    for root@mail.st9.os3.su; Fri, 16 Sep 2016 13:28:57 +0300
Received: by st15.os3.su (Postfix, from userid 1000)
    id 5089120210E4; Fri, 16 Sep 2016 13:28:53 +0300 (MSK)
Message-Id: <20160916102853.5089120210E4@st15.os3.su>
Date: Fri, 16 Sep 2016 13:28:53 +0300 (MSK)
From: sudent15@st15.os3.su (Student15)
Status: 0
Content-Length: 7
Lines: 1

test35

```

## 3 Installint mail client

I chose mutt - minimalistic mail client that can read and send mails.

1. Sendmail stores mails in /var/mail/*username* file and mutt reads them from that file.
2. In format of ASCII text file, formed like mail in logs above.

## 4 Mail queue

1. Sendmail queues mails in /var/spool/mqueue by itself.
2. Like other queues it assures deleviry of every mail to recepiant or return to sender. For example, if sender's mail server is off, mail will stay in queue and sendmail will try to send it later.
3. /var/spool/mqueue
4. with util name mailq and sendmail. For example we can watch all mails in queue by mail command and try to send them with sendmail -q.