

Implementing Microsoft Exchange™ Mail on Demand

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1.0 Introduction

Microsoft Exchange is an e-mail server that can be used to handle local (Intranet) e-mail. It can also be configured to send and receive outgoing (Internet) mail on demand (dial on demand). For more information on the Exchange Server, please see:

http://www.microsoft.com/products/prodref/49_newf.htm

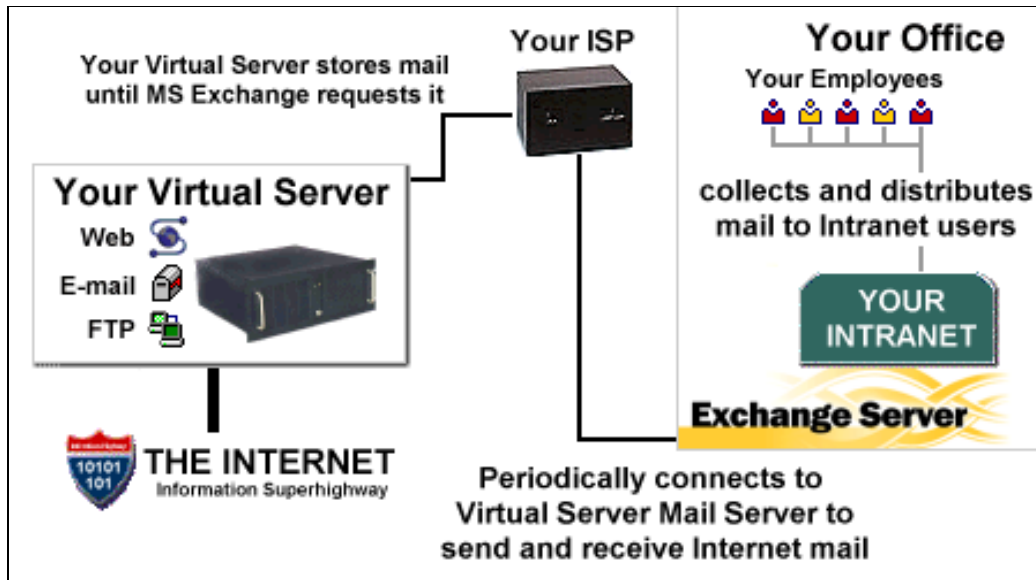
Not only can Microsoft Exchange be used as a local mail server to handle your intranet mail, but it can also be configured to send and receive mail to and from the Internet. Typically, a dedicated Internet connection, including the purchase of a high speed line (T1), a router, a CSU-DSU, a firewall, DNS Servers, etc, would be required in order for your Local Area Network (LAN) to send and receive Internet mail. The capital required to make such a commitment, in most cases, is far too high and prohibits small to medium sized businesses from integrating the Internet into their LAN or Intranet.

However, with the Microsoft Exchange server, you can have the server dial-up to your local ISP on demand, then connect to the mail service on your Blue Reef Virtual Server and download any stored mail. This allows you the ability to have continuous e-mail support on your local intranet where traffic is heavier, in addition to being able to send and receive e-mail to and from the Internet on a more periodic basis. You should be aware that Blue Reef does not currently have a solution for MS Exchange for Virtual Hosts. Blue Reef may have this solution in the future (technically Blue Reef will handle this just fine), but until then, if you desire to use this solution for Virtual Hosts you will be responsible for the sendmail configuration changes.

Because your Blue Reef Virtual Server is always connected to the Internet, it is always available for incoming mail messages and can store (or queue) these messages for you until you are ready to retrieve them. The ability of the Microsoft Exchange server to perform dial-on-demand e-mail retrieval allows you to take advantage of the lower prices of a dial-up connection, providing a more affordable Internet mail solution for your company. The information provided here should be easily adaptable for any other Mail Server, such as Novell's Workgroup Server.

The diagram at the top of the following page illustrates the theory behind the process. You and your fellow employees are located on your LAN or Intranet at **Your Office** . You use a dial-up connection through **Your ISP** to surf the web, read news, download files, and remotely administrate **Your Virtual Server** . You may have previously had both an internal LAN mailbox and a POP or IMAP mailbox on your Virtual Server.

Using the Microsoft Exchange server (or equivalent software) you can now queue your Internet mail on your Virtual Server and instruct Microsoft Exchange to periodically connect to the Internet, download the mail from your Virtual Server, and then distribute it to your local area network mailboxes.



2.0 Configuration

2.1 Client Side

On the client side, you will need to configure the Exchange Server to dial-up to the local ISP on demand. How to do this should be documented in your Exchange Server manuals. A great additional resource is provided by Simpler Web Inc. (<http://www.swinc.com>). In essence you need to:

1. Configure your RAS/DUN.
 - a. You will need an entry in the phonebook that makes an automatic connection to your local ISP at the intervals you specify.
 - b. You need a TCPIP hostname and domain configured in Control Panel/Networks/TCPIP
2. Configure the Exchange SMTP service. For Exchange 5.0 this will be the Internet Mail Service. This should be pointed to the SMTP server for your Blue Reef Virtual Server (`smtp.yourdomainname.com`).

3. If necessary, configure the SMTP Addresses for your users. You can globally configure this using the Site Addressing configuration page, or you can use Directory Import to configure individual addresses. This would only be necessary in the event you had multiple users in your “Intranet” that had a different Blue Reef Virtual Server.
4. Now, you need to configure the server to tell the mail server to dequeue mail. You will need to configure your Exchange Server to run the “etrn” command. This command tells Blue Reef to attempt to resend your queued mail. A script written by Simpler Web Inc. will help set up your Exchange server to do this:

<http://www.swinc.com/files/dequeue.exe>

In essence, you’re connecting to your smtp port and telling the mail server you want to dequeue your mail. For those people not using MS Exchange, you could write your own script. Here is an example UNIX shell script that would do the same (substitute your domain name for my-domain.com).

```
#!/bin/sh
# I got this from:
#   http://www.swinc.com/resource/exch_smtp.htm
# Send ETRN command to sendmail 8.8.x
# written by Andy Rabagliati <andy@wizzy.com>
#
telnet mail.my-domain.com smtp <<SMTP_EOF
ETRN my-domain.com
QUIT
SMTP_EOF
#
# End of Shell script
#
```

Or alternately

```
#!/bin/sh
OURSITE=exchange.isp.com
MAILSERVER=mail.sfpsi.com
TELNET=/usr/bin/telnet
PORT=25

echo "etrn $OURSITE" | $TELNET $MAILSERVER $PORT
exit 0
```

2.2 ISP configurations

You must have a dedicated IP address for the MS Exchange Dial-up solution to work. There is no other alternative to this (currently). This will require either that you:

1. Purchase a dedicated modem at your ISP's modem bank that only you connect to and that is assigned your dedicated IP address

OR

2. Your ISP has the ability to detect when you dial in and can assign that dial-in your dedicated IP number.

The second thing your ISP must do for you is map a domain name to that dedicated IP address. For example, if your local Internet Service Provider has a domain name "my-isp.com" and they were going to give you an IP address of 222.222.222.222, you want them to map 222.222.222.222 to a unique instance of my-isp.com. As an example:

exchange.myisp.com mapped to 222.222.222.222

Here is an example dns entry for this:

```
@           IN SOA  ns1.my-isp.com. hostmaster.my-isp.com. (
          1997072802    ; Serial number
          86400        ; Refresh
          7200         ; Retry
          2592000      ; Expire
          172800 )     ; Minimum TTL

          NS       NS1.MY-ISP.COM.
          NS       NS2.MY-ISP.COM.

          A        222.222.222.1
          MX 10    my-isp.com

exchange   A        222.222.222.222
```

Another alternative would be to use your Blue Reef domain name in the zone file above instead of the name "exchange". For example if I had a Blue Reef Virtual Server and my domain name was for the Virtual Server was internetserver.com I might have my ISP set up their dns zone file to point to

```
internetserver A 222.222.222.222
```

Now, all mail sent to internetserver.my-isp.com would resolve to the dedicated IP address 222.222.222.222

This is important, you must have a dedicated IP address (one that is uniquely assigned to your Exchange Server), and you must have a domain name pointing to that IP address for the MS Exchange solution to work.

2.3 Blue Reef Virtual Server Configuration

This one is easy. You need to do two things:

1. Email dns@bluereef.net and have us edit your zone file for your Virtual Server's domain.
2. Setup your Virtual Server to queue up e-mail until the ETRN command is received by your Exchange Server.
 - a. Add the following line to the Options section of the `~/etc/sendmail.cf` file.

```
Odqueueonly      # defer mail on the server
```

- b. Comment out the following two lines in Ruleset 0:

```
R$+<@$=w>        @$>90$1      Remove local addresses
R<@$=w>$-$+      @$>90$3      Remove local routes/UUCP
```

These two lines let the server know what domains are local to your Virtual Server. For mail dequeuing, no domain should resolve locally.

Add the following line to your Virtual Server [Crontab](#) file to flush the queue every 4 hours:

```
00 0-23/4 * * * /usr/local/bin/virtual sendmail -q
```

You may need to modify this according to how long your Exchange Server may be off line.

ALL e-mail (incoming and outgoing) will wait in the queue until it is flushed out.

Also, mail dequeuing will affect ALL domains hosted on your Virtual Server.