Microsoft Bob Mail Gateway – Installation Sheet

For Bob on Windows XP or on a 32-bit Windows virtual machine. Mail server: msbob.org.

What this does

Bob was built to fetch and send mail through MCI Mail over a modem. The gateway replaces Bob's MCI Mail engine (`UMLMM.DLL`) with one that uses your own server instead. Mail written in Bob is sent over SMTP, and each Bob user's own mailbox is checked over POP3. Bob itself, its address book and its screens do not change.

The same `UMLMM.DLL` works on a native Windows XP machine and inside a virtual machine. Each machine needs its own small settings file, `POP3.INI` .

Before you start

Check each item on the machine you are installing on.

- Bob is installed. This sheet assumes it is in `C:\MSBOB` . If yours is elsewhere, change the paths to match. To find it, open `C:\WINDOWS\WIN.INI` and look in the `[MS-BOB]` section for the line `UtopiaDir=` .
- The machine runs a **32-bit** version of Windows. Bob's 16-bit programs do not run on 64-bit Windows, so use a virtual machine with Windows XP (or a Windows 9x system) there.
- The 16-bit WinSock library is present. Look for `C:\WINDOWS\SYSTEM32\WINSOCK.DLL` on Windows XP, or `C:\WINDOWS\SYSTEM\WINSOCK.DLL` on Windows 9x.
- Bob's mail accounts have been set up (see the next section).
- Each person has a mailbox on msbob.org, with a user name and password.
- You have the finished `UMLMM.DLL` (see "Building the DLL once" below).
- If this is a virtual machine, its network can reach msbob.org (the ordinary NAT or bridged setting is fine).

Setting up Bob's mail accounts

No MCI account is needed. Bob only checks that an ID looks like an MCI ID, and the gateway never contacts MCI.

1. In Bob's mail account setup, enter any well-formed placeholder ID for the household, such as `218-0242`, with any password, name and phone number.
2. Give each household member their own individual ID in the same style, such as `218-0241`.
3. Find each person's ID afterwards in the file `MAILROOM.INI`, in the `[USERS]` section. A line looks like this: `Marisa=Marisa Giancarla,218-0241`. The part after the comma is the individual ID. You will need it below.

To find `MAILROOM.INI`, search the drive for it, or look in the Bob folder from the previous section.

Building the DLL once

Build `UMLMM.DLL` on one machine, then copy it to every other machine. The other machines do not need a compiler.

1. Install Open Watcom (free; it runs on Windows XP).
2. Put `umlmm.c`, `umlmm.lnk` and `build.bat` in one folder, for example `C:\GATE`.
3. Open a Command Prompt in that folder and run `build.bat`. If the compiler complains about the `_asm` lines, run `build.bat nodate` instead.
4. The result is `UMLMM.DLL` in the same folder.

Installing on each machine

1. **Close Bob completely**, then wait about 10 seconds so the 16-bit subsystem can exit.
2. **Back up the original engine.** In `C:\MSBOB`, copy `UMLMM.DLL` to `UMLMM.ORG`. Do this only if `UMLMM.ORG` does not already exist. Never overwrite an existing `UMLMM.ORG` with the gateway DLL, because it is your way back.
3. **Copy the gateway DLL.** Copy the new `UMLMM.DLL` into `C:\MSBOB`, answering Yes to replace the old one. If Windows says the file is in use, Bob (or its background process) is still running: close it and try again, or restart the computer.
4. **Create `POP3.INI`.** In `C:\MSBOB\MAILROOM` (the folder that holds `MAILRUN.LOG`), create a text file named `POP3.INI` using the template below.
5. **Start Bob** and run mail.

The POP3.INI template

Replace the placeholders. Add one `[USER.<id>]` section per Bob user, and list every ID on the `Users=` line.

```
[SERVER]
SmtpHost=msbob.org
SmtpPort=25
Hello=localhost
Pop3Host=msbob.org
Pop3Port=110
Users=218-0241,218-0243
Delete=1
KeepRaw=1
MaxPerRun=25
NewestFirst=0
DateStyle=mci

[USER.218-0241]
Email=firstperson@msbob.org
User=firstperson
Password=THE-MAILBOX-PASSWORD
FullName=First Person

[USER.218-0243]
Email=secondperson@msbob.org
User=secondperson
Password=THE-MAILBOX-PASSWORD
FullName=Second Person
```

The section name must be `USER.` followed by the individual ID, exactly as it appears in `MAILROOM.INI`. `FullName` is the name Bob shows for that person as the recipient of incoming mail.

Settings reference

Setting	Meaning	Recommended
`SmtpHost`, `SmtpPort`	Server and port used for sending	`msbob.org`, `25`

Setting	Meaning	Recommended
`Pop3Host`, `Pop3Port`	Server and port used for receiving	`msbob.org`, `110`
`Hello`	Name the gateway announces to the server	`localhost`
`Users`	Individual IDs whose mailboxes are checked on each mail run	every Bob user
`Delete`	`1` removes each message from the server once it has been downloaded; `0` leaves it there (the same mail is then downloaded again every run)	`1`
`KeepRaw`	`1` also saves an untouched copy of each downloaded message as `<name>.EML` in the `MAILROOM` folder	`1`
`MaxPerRun`	Most messages downloaded in one mail run; the rest wait for the next run (`0` = no limit)	`25`
`NewestFirst`	`1` downloads the newest message first, which helps when a mailbox has a large backlog	`0`
`DateStyle`	How the date of incoming mail is written for Bob (`none`, `mci` or `rfc`). Bob does not display dates for these messages in any setting, so this does not matter in practice	`mci`
`Email`	Address used as the sender	the user's address
`User`, `Password`	Server login, used for sending and for receiving	the user's login
ShowRecipients	1 lists the other To and Cc people of incoming mail in Bob (in the header drop-down); 0 shows only the Bob user	1

If sending and receiving need different logins, add `SmtpUser`, `SmtpPassword`, `PopUser` or `PopPassword` to that user's section.

Checking that it works

Do each test once per machine, with a throwaway message.

1. **Send.** Write a short message in Bob to an outside address and run mail. Confirm it arrives.
2. **Receive.** From another account, send a short message to the Bob user's address. Run mail in Bob and confirm it appears in the inbox.
3. **Enclosures.** Repeat both tests with a small file attached (Bob calls attachments *enclosures*). Confirm the file arrives and opens in each direction.
4. **Read the logs.** Open `C:\MSBOB\MAILROOM\UMLMM.TRC`. It describes the most recent mail run. You should see `Message delivered` for each message sent and `Stored message` for each one received, and no lines starting with `ERROR:`. Errors are also added to `MAILRUN.LOG` in the same folder.

If a user has a large backlog of old mail on the server, set `MaxPerRun=3` and `NewestFirst=1` for the first test, so a long download does not interrupt it. Change both back afterwards.

Troubleshooting

What you see	Likely cause	What to do
`MAILRUN.LOG` says *No serial port available*	The original `UMLMM.DLL` is still in `C:\MSBOB`	Close Bob and copy the gateway DLL into place again
Bob cannot start the mail run at all	`WINSOCK.DLL` is missing	Check the file named under "Before you start"
No Users= line in [SERVER]	`Users=` is missing from `POP3.INI`	Add it, listing every individual ID
no [USER.xxx] section with Email=	The section name does not match the ID, or `Email=` is missing	Compare the section name with the ID in `MAILROOM.INI`
SMTP login failed or *POP3 login failed*	Wrong user name or password	Correct `User=` and `Password=` for that person

What you see	Likely cause	What to do
cannot resolve host name or *cannot connect*	No network, or the virtual machine has no network access	Check that the machine can reach msbob.org; check the virtual machine's network setting
Receiving works but sending cannot connect	Some networks block outgoing port 25	Ask the network owner, or ask whoever runs msbob.org whether another SMTP port is available, then set `SmtpPort=`
A recipient was *skipped* in `MAILRUN.LOG`	Only Internet addresses can be sent to	Address the message to an Internet address
The same mail keeps coming back	`Delete=0`	Set `Delete=1`
Mail run stopped halfway (crash or reset)	Files being written at that moment can be left empty or filled with zeros	In `MAILROOM\IN`, delete any empty or all-zero file together with the files that share its name. Mail already downloaded is safe: each message also has an `.EML` copy in `MAILROOM`
UMLMM.TRC shows cannot connect to server (WinSock error 10061 or 10060)	10061 means the server refused the connection (service stopped, wrong port or a firewall). 10060 means it did not answer in time	Check that the server is running and that SmtpPort and Pop3Port are right. Unsent mail stays in Bob's outbox and goes out on the next successful run

Going back to the original

Close Bob, wait about 10 seconds, then in `C:\MSBOB` copy `UMLMM.ORG` over `UMLMM.DLL`. Bob returns to its original behavior. The `POP3.INI` file does no harm if you leave it.

Security notes

- Passwords are stored as plain text in `POP3.INI`, and they cross the network unencrypted, because the gateway does not use TLS. Use this only on a network you trust, and keep the file private.
- `UMLMM.TRC` and the `.EML` copies contain sender names, subjects and message text. Do not send them to anyone you would not show the mail to.
- `KeepRaw=1` keeps a copy of every message in `C:\MSBOB\MAILROOM`. They accumulate, so delete old `.EML` files from time to time.

Known limits

- Messages can only be sent to Internet addresses. Bob and MCI Mail address types are skipped.
- Bob shows no date on received messages.
- A mail run downloads at most `MaxPerRun` messages, so a very large backlog takes several runs.
- The gateway was built from Bob's own file formats and has been tested in a household setting with a plain-text server. A different server or Windows setup may need an adjustment.