WaveMail over TCP/IP

SCHUEMPERLIN ENGINEERING AG 2000
WMTCPIP

This information is valid for
WaveMail version 1.09 and higher

20.NOV.2000

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1. Overview

Starting with version 1.09, WaveMail supports TCP/IP links as connection between two WaveMail stations.
This is very convenient in places where a connection to the Internet is available but not reliable, because
- you can benefit from low traffic charges via Internet as long as the Internet access is OK
- WaveMail can use other types of connections (Pactor, Packet Radio, Inmarsat...) when the Internet access is down

The calling WaveMail station (client) can use a Dial-Up or a permanent connection to the Internet.
The called WaveMail station (server) should have a permanent connection to the Internet and a fixed IP-Address.
Typically you would setup the WaveMail station in your headquarter as a TCP/IP-Server. The remote WaveMail stations can then access this server over TCP/IP (or Pactor, or Inmarsat, or ...).

More than one WaveMail station in a network can be setup as a TCP/IP-Server, however all TCP/IP-Servers should have permanent Internet access and a fixed IP-Address. A WaveMail station can be setup as TCP/IP-Client and/or TCP/IP-Server.

WaveMail over TCP/IP is only available on **32-bit systems** (Windows 9x, Windows NT ...).

2. Setup and operation of a WaveMail TCP/IP-Client station

2.1. Internet access

The PC where WaveMail is running must have access to the Internet, either via a Dial-Up connection or via a permanent connection. It is assumed that you have a well configured and working Internet access before you continue.

2.2. Prepare WaveMail for use of TCP/IP

1. Select **Station Setup** from the **Setup** menu
2. Activate the **ADD MODEM** button in the 'Station Setup' dialog (the word "modem" is a bit misleading, you do not add a modem, you add a TCP/IP-Connection. But because the procedures are very similar to adding a Swiss-PTC-Modem or a Telephone-Modem etc., we just kept the wording.)
3. Select **TCP/IP** in the 'Add Modem' dialog.
4. Select the appropriate options in the 'Modem Properties' dialog

   Make dial-up connection
   Check this option, if WaveMail should automatically establish the dial-up connection when necessary.

   Always disconnect
   Select this option, if WaveMail should always disconnect the dial-up connection after messages have been exchanged.

   Disconnect only when dialled by WaveMail
   Select this option, if WaveMail should only disconnect the dial-up connection when WaveMail has established the dial-up connection (this prevents WaveMail from disconnecting when the dial-up connection was already established by another application before WaveMail started to transfer messages).

Notes:
- It is recommended to select the options **MAKE DIALUP CONNECTION** and **ALWAYS DISCONNECT**
- If the option **MAKE DIALUP CONNECTION** is activated, WaveMail will establish the 'default dial-up connection' as defined in Windows.
- If WinGate or any other similar program is used to manage the dial-up connection, then you should only select option **DISCONNECT ONLY WHEN DIALLED BY WAVEMAIL**
- If WinGate or any other similar program is used to manage the dial-up connection, then you must make sure that this program supports 16-bit access (in WinGate you might have to install ENS and activate NAT, see WinGate manual).

2.3. Define a WaveMail link over TCP/IP

1. Select **NETWORK SETUP** from the **SETUP** menu
2. Activate the **ADD** button on the "Links" page of Network Setup
3. On the 'Link Properties' dialog:
   - enter the **Station-ID**
   - select **TCP/IP** as modem
   - enter **IP-Address** and **Port-Number** of the remote station in the Phone Number/Call line. IP-Address and Port-Number must be seperated by a ':' . Below you find an example for IP-Address 193.200.322.15:56789 and Port 56789

     Example:

     ```
     193.200.322.15:56789
     ```

2.4. Establishing a connection over TCP/IP

Establishing a connection over TCP/IP works exactly the same way as for connections over SWISS-PTC or Telephone-Modems:

1. Use the **Send+Receive** button or the functions of the **Connection** menu
2. Select the desired link (which you have defined in Network Setup, see above).

If you cannot establish a connection, check the following:

- is your Internet access OK (test Internet access with the normal Windows Dial-Up function)
- is the IP-Address correct
- is the Port-Number correct
- is the station you are calling setup as TCP/IP-Server

If you get a 'Login failed' error message, then the called TCP/IP server station has not defined a link with your station or you are using a wrong password (the connection works but you are not allowed to exchange messages).

3. Setup of a WaveMail TCP/IP-Server station

A WaveMail TCP/IP-Server is a WaveMail station which can accept incoming TCP/IP connect-requests from another WaveMail station. A WaveMail TCP/IP-Server should have a permanent connection to the Internet and it should have a fixed IP-Address.
Typically you would setup the WaveMail station in your headquarter as a TCP/IP-Server. The remote WaveMail stations can then access this server over TCP/IP (or Pactor, or Inmarsat, or ...).
You have to manually edit the file WAVEMAIL.INI to setup WaveMail as a TCP/IP-Server. Exit from WaveMail and make a backup-copy of WAVEMAIL.INI before you edit this file.

3.1. Changes in WAVEMAIL.INI

3.1.1. Minimum Setup

Add the following lines to WAVEMAIL.INI:

```
[TCPIPserver]
enabled=1
```

As a default, WaveMail will offer 5 Sockets, allowing 5 concurrent connections over TCP/IP. The WaveMail TCP/IP-Server will listen on Port-Number 56789 for incoming connections. See below to change these defaults.

3.1.2. Number of sockets

If you need more or less concurrent connections than the default value, you can add the line

```
sockets=n
```

where n must be in the range 1..10.

3.1.3. Port-Number

As a default WaveMail will listen on Port 56789. In order to define a different Port-Number, you can add the line

```
port=n
```

where n must be a valid port number. Remote stations must know the defined Port-Number in order to connect to the TCP/IP-Server.

3.1.4. Example for settings in WAVEMAIL.INI

```
[TCPIPserver]
enabled=1
sockets=7
port=4711
```

3.1.5. Remarks

- The changes in WAVEMAIL.INI will only be effective after you restart WaveMail.
- If you are using a firewall, make sure that connections to the defined Port-Number are enabled.
- Make sure that the selected Port-Number does not conflict with other applications.
- Make sure you do not insert the lines within the lines of an other section in WAVEMAIL.INI.

3.2. Network Setup

Only remote stations for which a link has been defined in the Network Setup (menu SETUP - NETWORK SETUP) can exchange messages with your TCP/IP-Server station. However, if a remote station sometimes connects using TCP/IP and sometimes connects using a SWISS-PTC or another modem, then it could be sufficient to enter just one link (even if only a link over SWISS-PTC is defined, the remote station can connect over TCP/IP).
But if you are using the "*Maximum Message Size*" option (in SETUP / STATION SETUP/ MODEM PROPERTIES), then you should at least define a link over the modem which has the biggest (or unlimited) value for "*Maximum Message Size*" (links over other modems can also be defined but the link over the modem with the biggest value for "*Maximum Message Size*" is important, because otherwise messages might be rejected by WaveMail) (background: from those modems over which links are defined to a particular remote station, WaveMail takes the highest value of "*Maximum Message Size*" to determine whether a message should be accepted for that station or rejected because of oversize).
If you define a link over TCP/IP for a remote station, then you will probably not know the IP-Address of the remote station, because that station probably does not have a fixed IP-Address (dial-up). In this case you can enter any value in the 'Phone number/Call of remote station' field (e.g. 0.0.0.0) because this value is only used when your station is calling the remote station. If the remote station calls, the value of the 'Phone number/Call of remote station' field is not used.