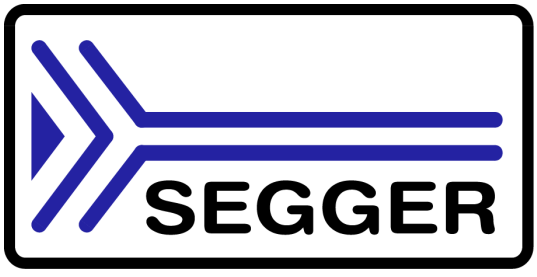
Application Note

Using Mercury/32 as an SMTP Relay Client

Document: AN00017

Revision: 2

Date: October 2, 2014



A product of SEGGER Microcontroller GmbH & Co. KG

www.segger.com

Disclaimer

Specifications written in this document are believed to be accurate, but are not guaranteed to be entirely free of error. The information in this manual is subject to change for functional or performance improvements without notice. Please make sure your manual is the latest edition. While the information herein is assumed to be accurate, SEGGER Microcontroller GmbH & Co. KG (SEGGER) assumes no responsibility for any errors or omissions. SEGGER makes and you receive no warranties or conditions, express, implied, statutory or in any communication with you. SEGGER specifically disclaims any implied warranty of merchantability or fitness for a particular purpose.

Copyright notice

You may not extract portions of this manual or modify the PDF file in any way without the prior written permission of SEGGER. The software described in this document is furnished under a license and may only be used or copied in accordance with the terms of such a license.

© 2014 SEGGER Microcontroller GmbH & Co. KG, Hilden / Germany

Trademarks

Names mentioned in this manual may be trademarks of their respective companies.

Brand and product names are trademarks or registered trademarks of their respective holders.

Manual versions

This manual describes the current software version. If any error occurs, inform us and we will try to assist you as soon as possible.
Contact us for further information on topics or routines not yet specified.

Print date: October 2, 2014

Revision	Date	By	Description
2	141002	OO	Chapter "Configuration of Mercury/32" updated. * Added information regarding a Mercury/32 configuration problem.
1	140926	OO	Updated all pictures. Chapter "Settings file (Mercury.ini)" removed. Chapter "Mail provider configuration" added. Chapter "Configuration of Mercury/32" updated. * Added information on how to setup authentication credentials.
0	140404	MC	First version.

Table of Contents

1 Mail provider configuration 5
1.1 Google Mail 6
2 Installation of Mercury/32 13
2.1 Starting the installation process 14
2.2 The Mercury/32 installation wizard 15
3 Configuration of Mercury/32 29
3.1 Getting started 30
3.2 Configuration of MercuryS 31
3.3 Configuration of MercuryC 34
3.4 Allowing remote client to send 35

 © 2014 SEGGER Microcontroller GmbH & Co. KG

 © 2014 SEGGER Microcontroller GmbH & Co. KG

Chapter 1

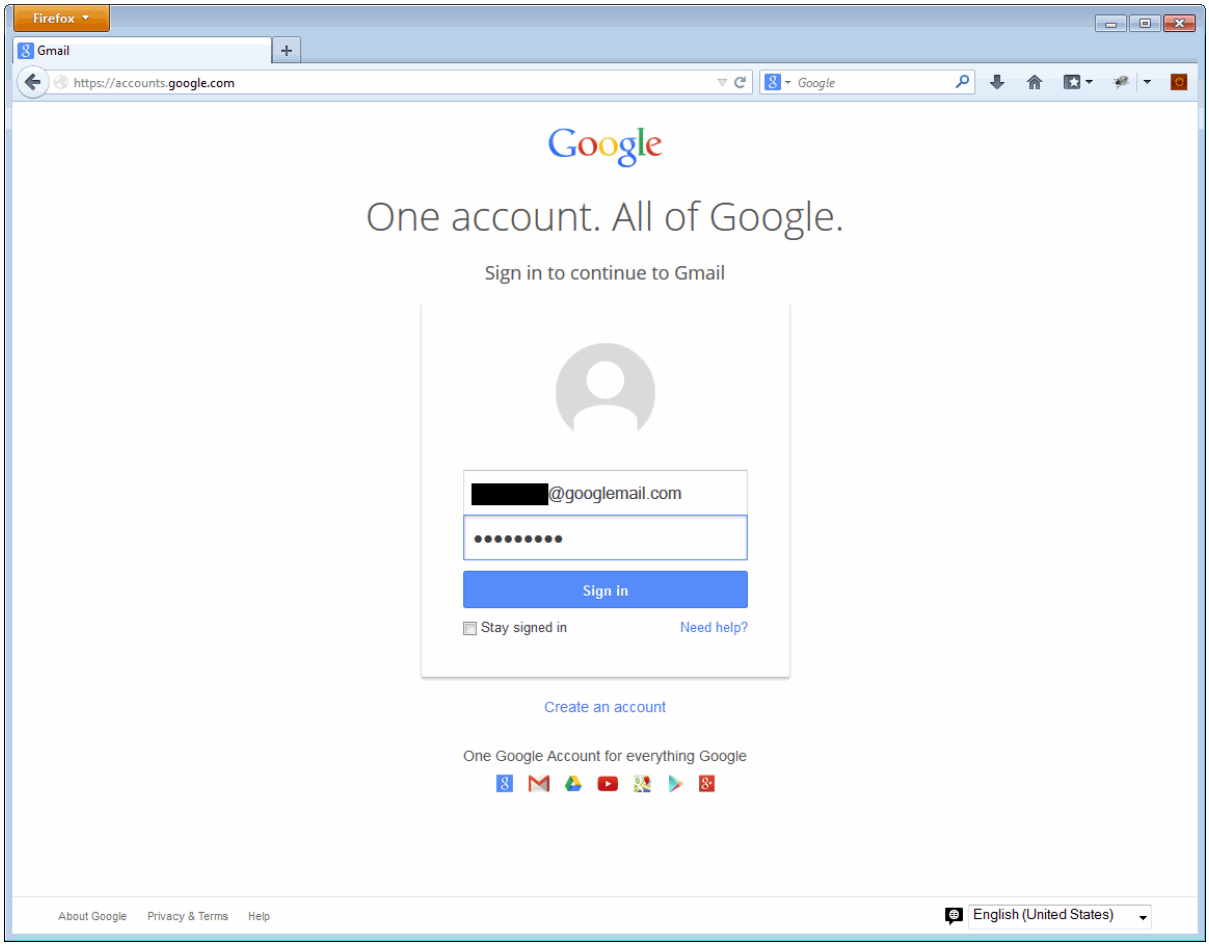
Mail provider configuration

Some mail providers are either not fully compatible with Mercury/32 and other mail clients. Some of them provide workarounds or settings to make them work with these clients as well. This chapter contains settings/workaround information for popular providers.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

1.1 Google Mail

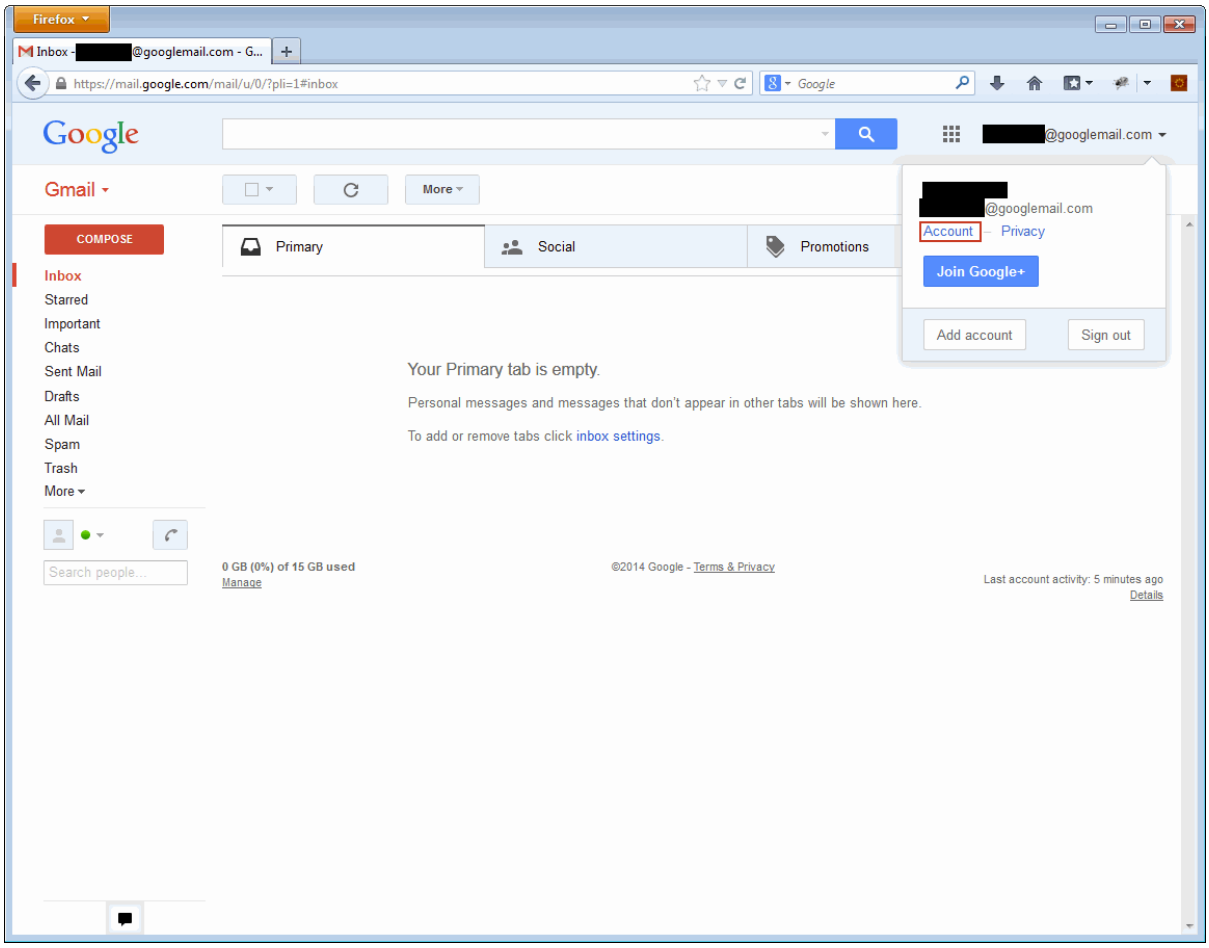
Google has changed their security requirements for Google Mail to OAuth2.0 . However even some popular clients such as Mozilla Thunderbird currently do not support it. Google Mail can be configured to lower the security to allow using those clients again. The following steps describe what needs to be done:



Login to your Google account by opening https://accounts.google.com in your browser. Enter your Google address and your password and click on the "`Sign in`" button.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

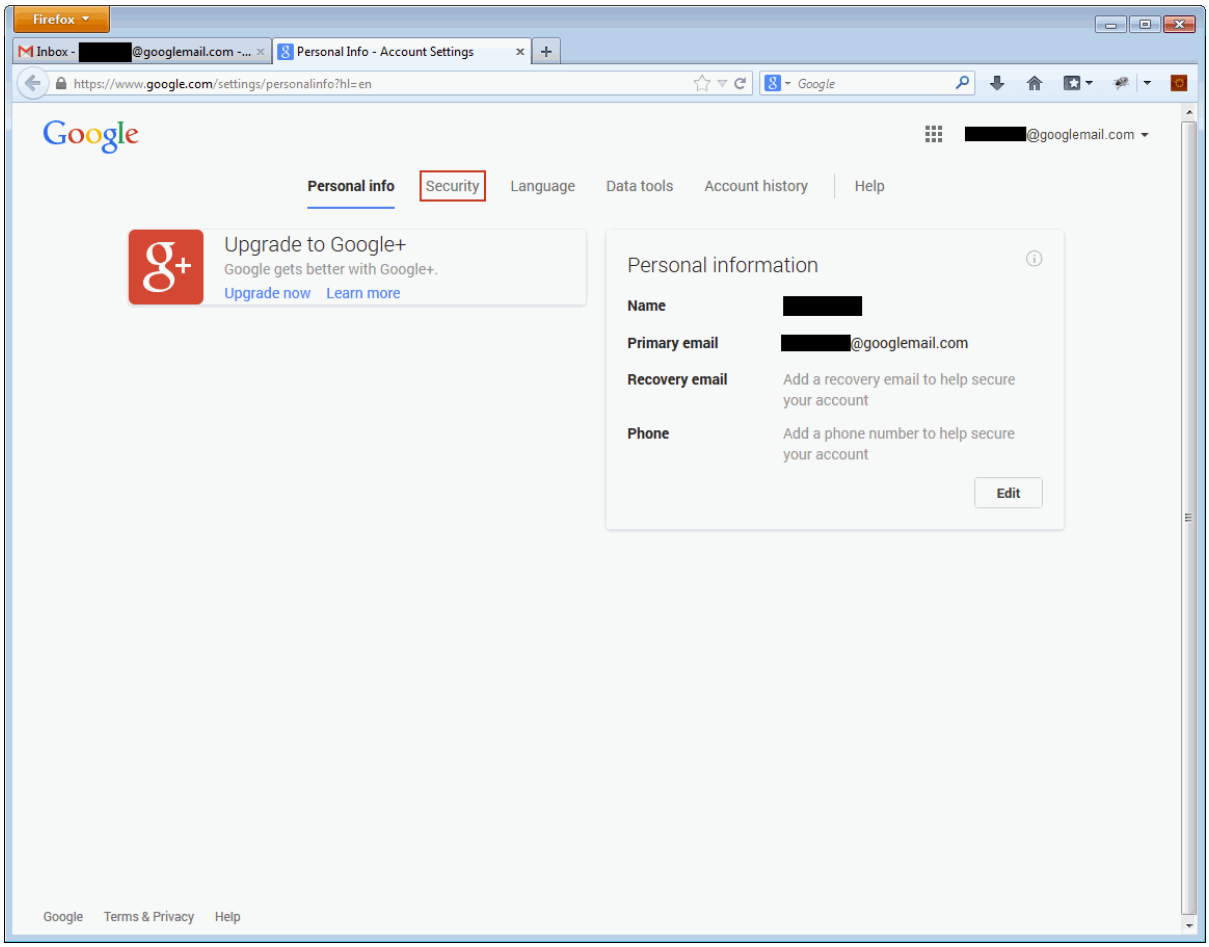
Once logged in to your Google account switch to your account settings in case you did not land here directly (in this example Google Mail was opened by default):



To switch to the account settings click on your Google name in the upper right corner and click on "`Account`" in the dropdown box that appears. The account settings will be opened in a new tab/window.

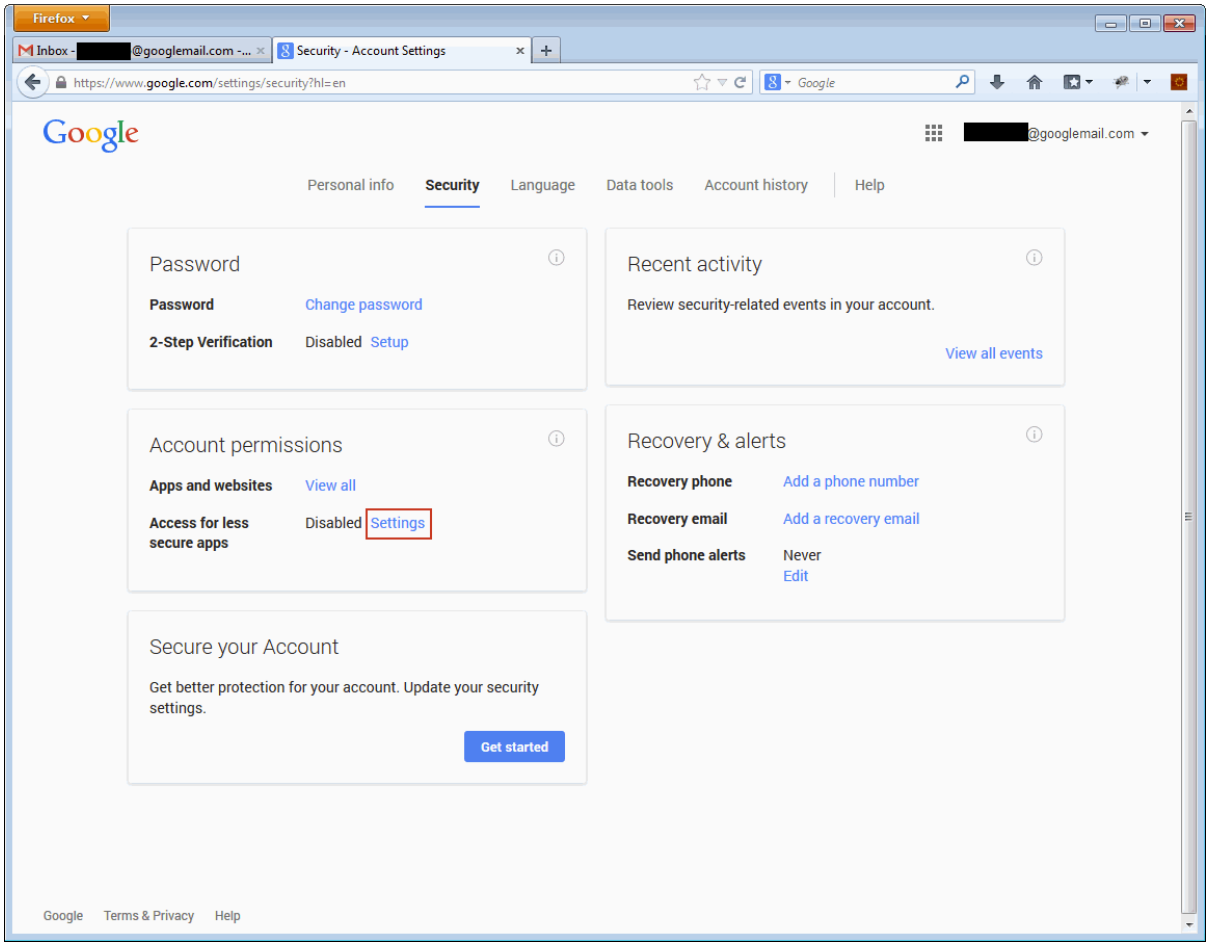
 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

In your account settings switch to the "`Security`" page:



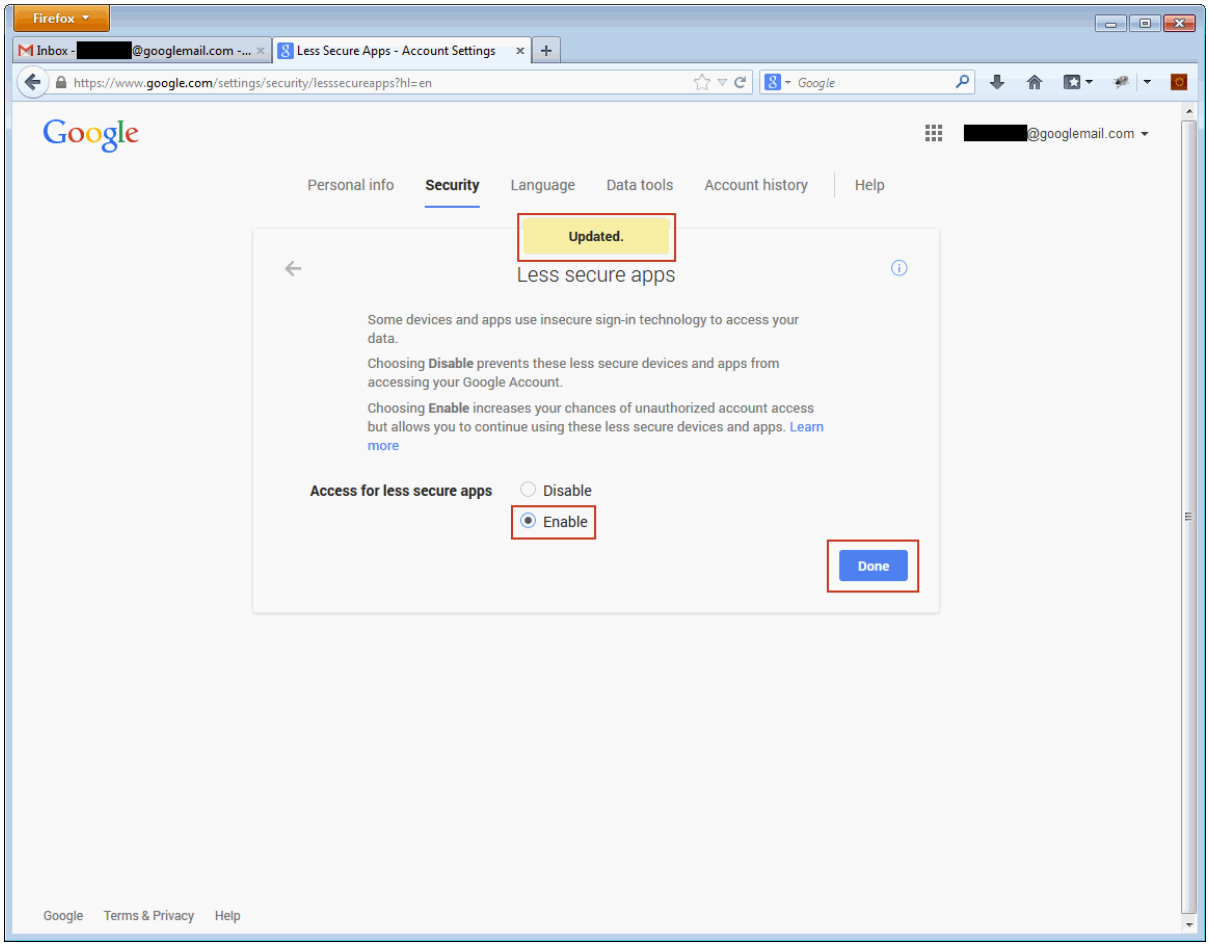
 © 2014 SEGGER Microcontroller GmbH & Co. KG

On the security page click "`Settings`" that can be found in the "`Account permissions`" box:



 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

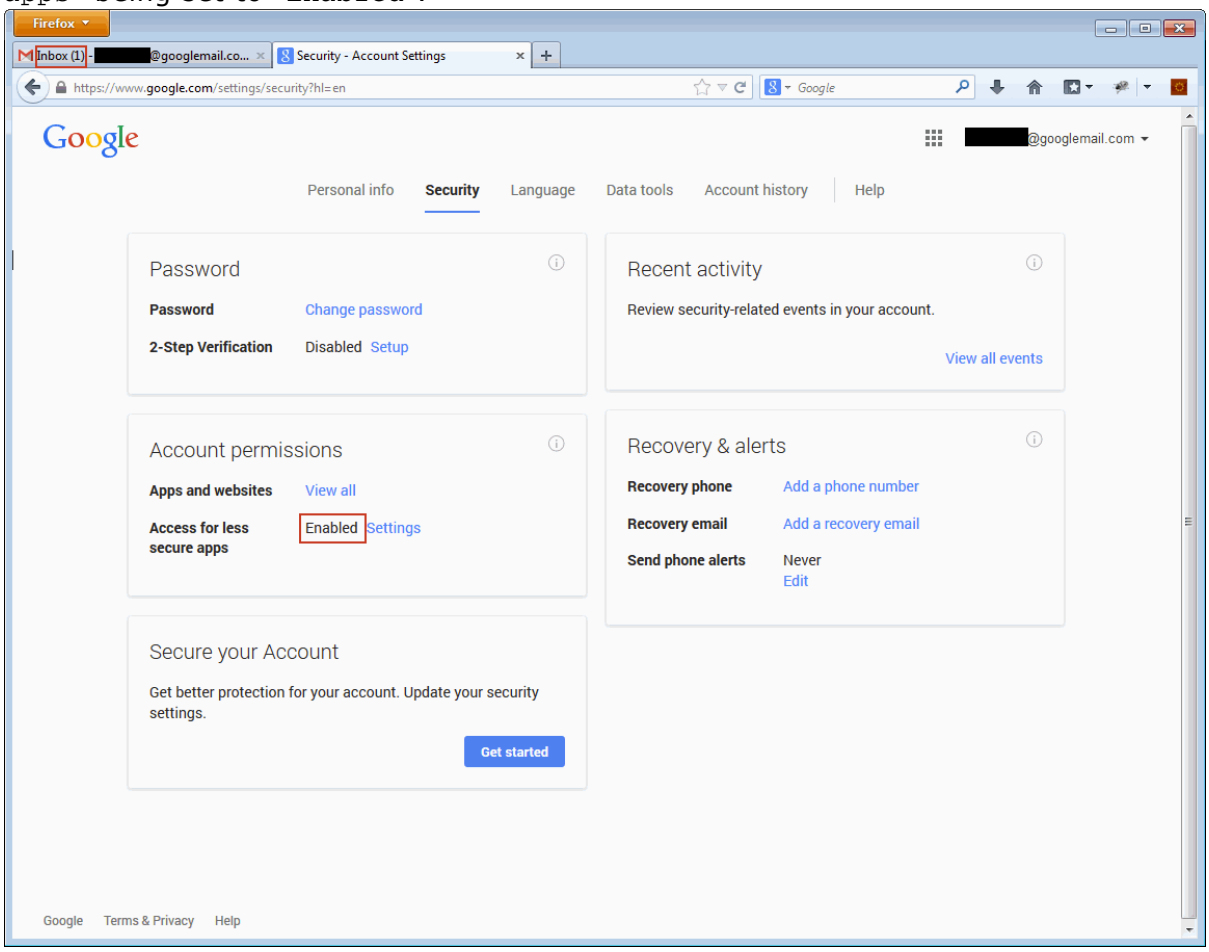
On the "Less secure apps" configuration page allow logins with older security mechanisms byswitching the setting to "Enable". You should recognize the word "Updated." in a yellow box appearing as can be shown below.



Then click the "Done" button to save and leave the settings dialog.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

Back on the security page you should be able to see the "`Access for less secure apps`" being set to "`Enabled`".



In addition to that Google has sent you a mail to your account notifying you of the change in case it was not your intention to do so.

You can then log out from your account and use mail clients like Mozilla Thunderbird or Mercury/32 with this Google Mail account.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

 © 2014 SEGGER Microcontroller GmbH & Co. KG

Chapter 2

Installation of Mercury/32

This chapter describes the installation of the Mercury Mail Transport System in order to use it as an SMTP Relay Client.

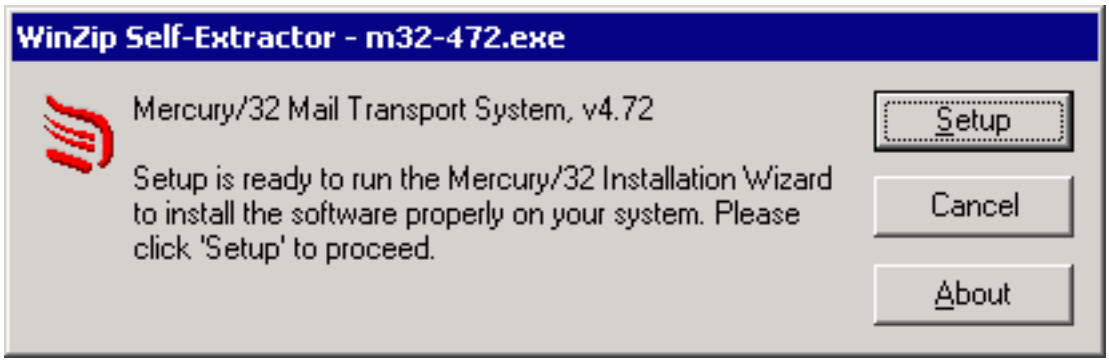
The Mercury Mail Transport System is a standards-compliant mail server developed by David Harris. As the installation of specific Mercury program modules (MercuryC and MercuryS) is obligatory for the purpose of this document, the installation process is described step-by-step. Additionaly, three initial configurations are set during the installation process. In case you want to skip this chapter of the application note, make sure that both modules are installed and set the appropiate configurations from within the application.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

2.1 Starting the installation process

The latest Win-32-application called Mercury/32, which is free to use for evaluation purposes, is available for download from:
`http://www.pmail.com/downloads_s3_t.htm` .

After downloading the executable, double-clicking it starts the installation process. As the executable contains a self-extracting archive, the first window to appear during the installation process is the Self-Extractor dialog:



Click “Setup” to temporarily extract the installation files and proceed with the actual installation process.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

2.2 The Mercury/32 installation wizard

Once the extraction of the installation files is completed, the Mercury/32 installation wizard should start automatically. It will then ask for several configurations such as installation paths and program modules. At first, the wizard should display the following window on your screen, asking whether an old version of Mercury/32 is already installed on the system:

This document focuses on installing Mercury/32 without any previous version installed, therefore you should click "`New installation`".

However, in case you already have an older version of Mercury installed, you may also click "`Install update`". Note that configuration settings of the previous installation will be preserved and need to be adjusted accordingly.

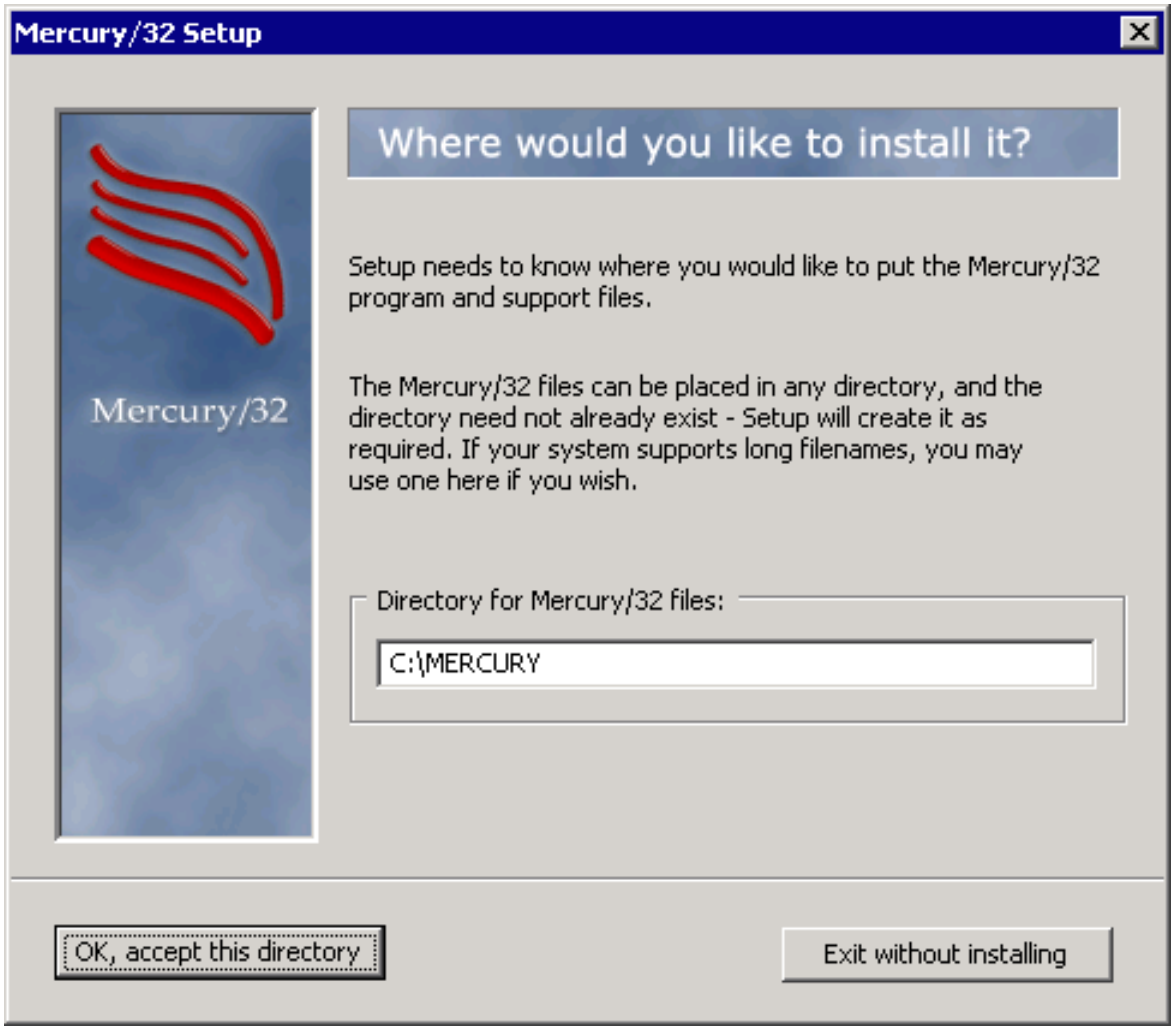
 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

The next window asks whether to install NetWare Support together with Mercury/32:

For the purpose of this document, NetWare Support is not required and should be omitted by clicking "`No NetWare Support`".

 © 2014 SEGGER Microcontroller GmbH & Co. KG

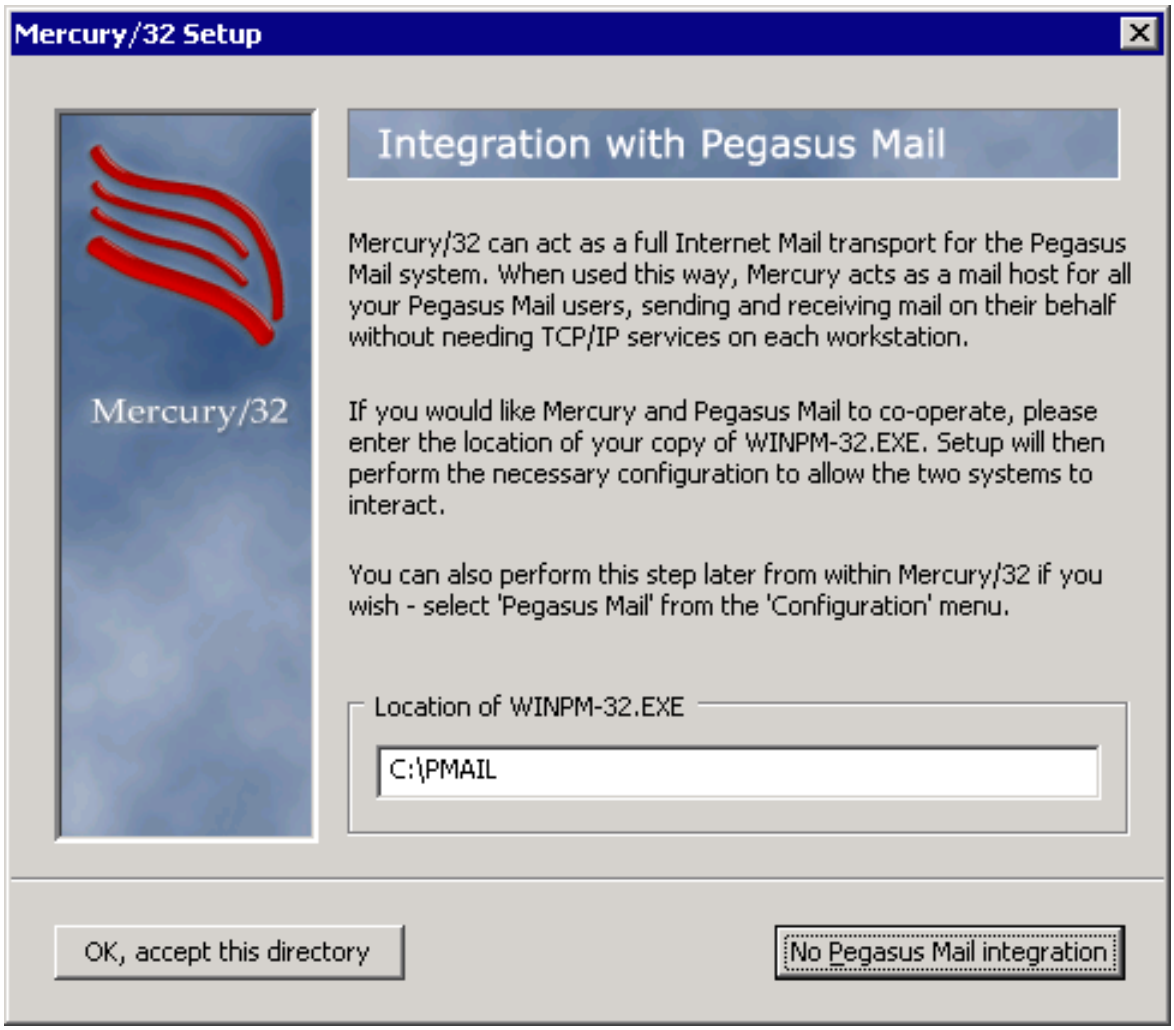
Now the user gets prompted to enter the installation directory for Mercury/32:



There is no restriction on where the Mercury/32 files should be installed. After entering a folder of your choice, click "`OK, accept this directory`" to proceed.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

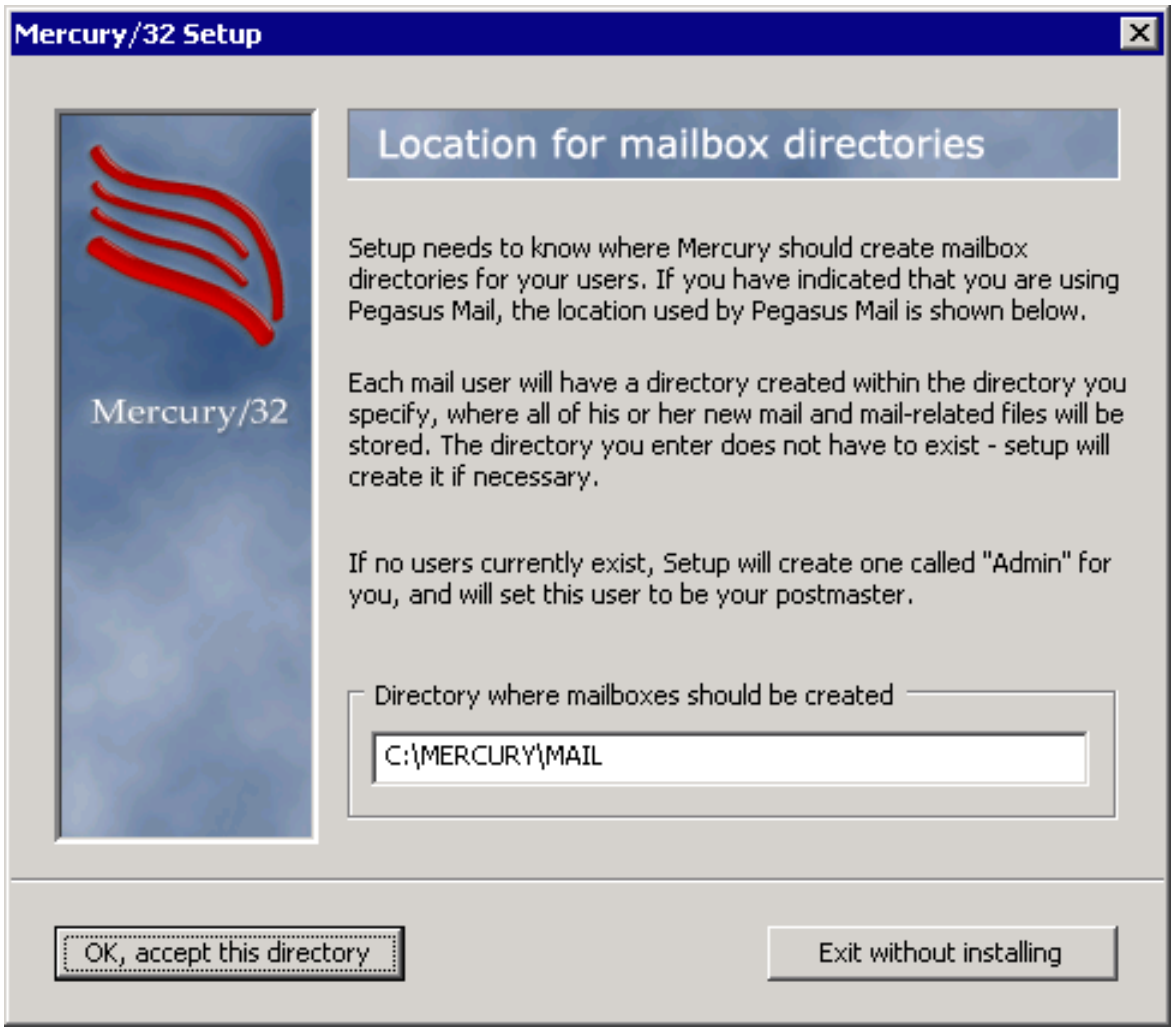
The next window asks whether to install Pegasus Mail together with Mercury/32:



For the purpose of this document, Pegasus Mail is not required and should be omitted by clicking "`No Pegasus Mail integration`".

 © 2014 SEGGER Microcontroller GmbH & Co. KG

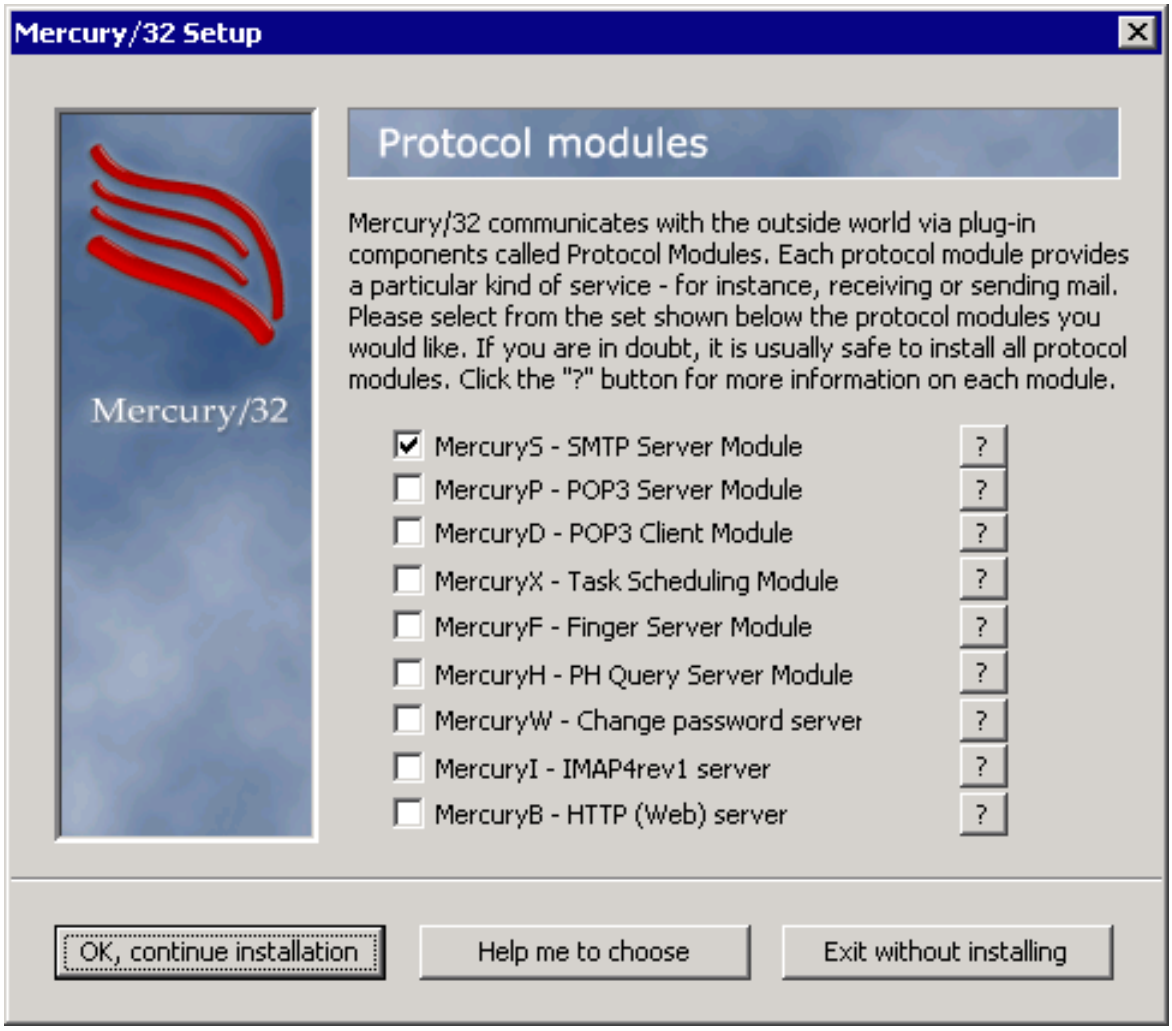
Once more the user is asked to specify a directory, but this time the directory will be used to store mails:



Using a subfolder of the installation directory is advisable, but not mandatory. After entering a folder of your choice, click "`OK, accept this directory`" to proceed.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

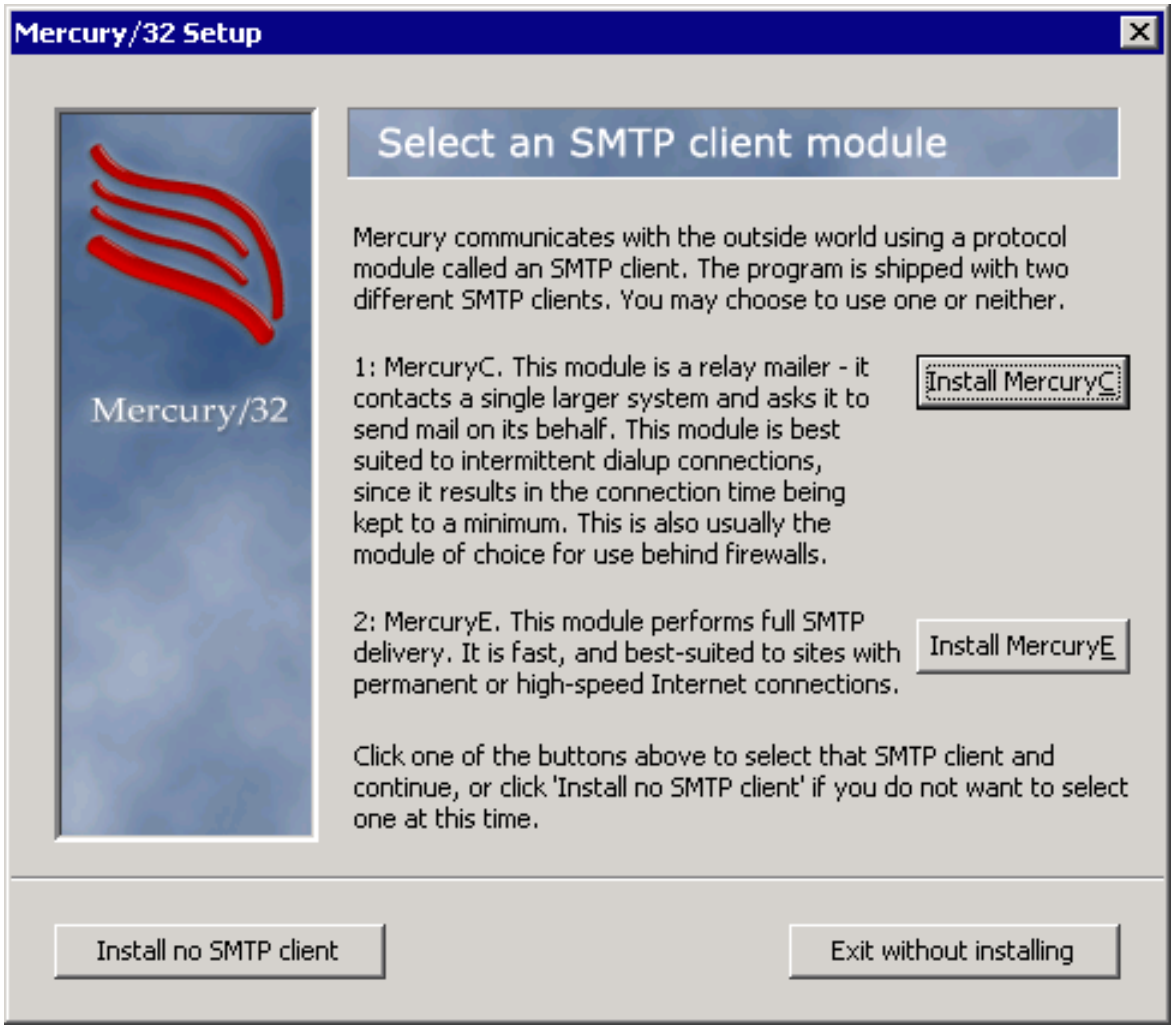
Now the user is asked which program modules should be installed:



Make sure "`MercuryS - SMTP Server Module`" is checked before proceeding by clicking "`OK, continue installation`". You may want to install further modules, but for the purpose of this application note, `MercuryS` is sufficient.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

In addition to an SMTP server module (`MercuryS`), an SMTP client module is required and can be installed within the following dialog:



Click "`Install MercuryC`" to install the Mercury SMTP Client module.

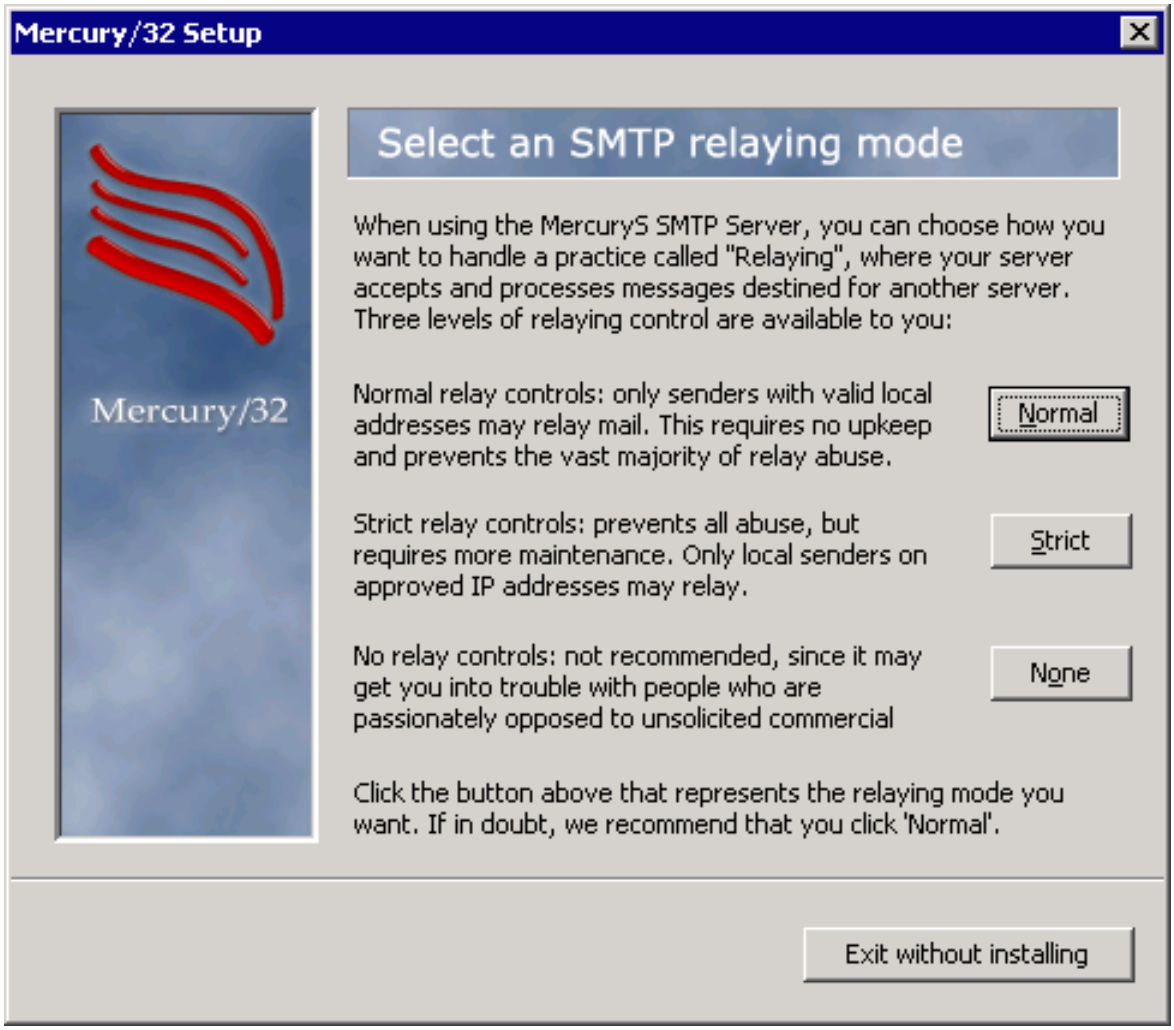
 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

The installation wizard now asks for initial configuration settings. In detail, it asks for the computer's internet domain name, the user name to use for the postmaster (admin), and the address of the host via which mails should be sent:

After entering valid values, click "`OK, continue installation`" to proceed.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

The next window asks for the SMTP relaying mode:



Unless you need a more restrictive setting (or no restrictions at all), click "`Normal`" to proceed.

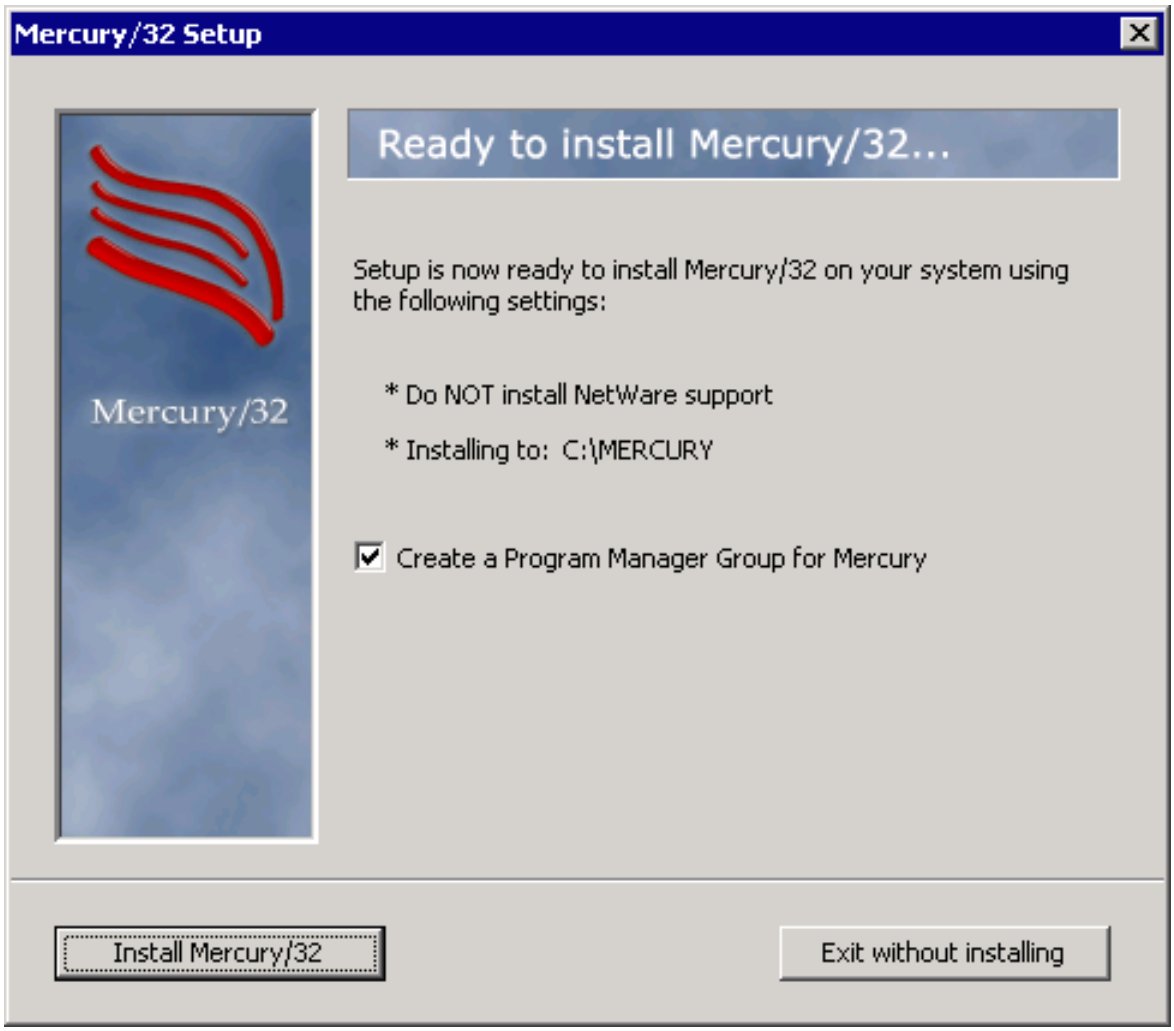
 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

Once more, the user is asked to specify a directory, this time for the message queue of mails to be processed:

After entering a folder of your choice for storing mail queues, click "`OK, continue installation`" to proceed.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

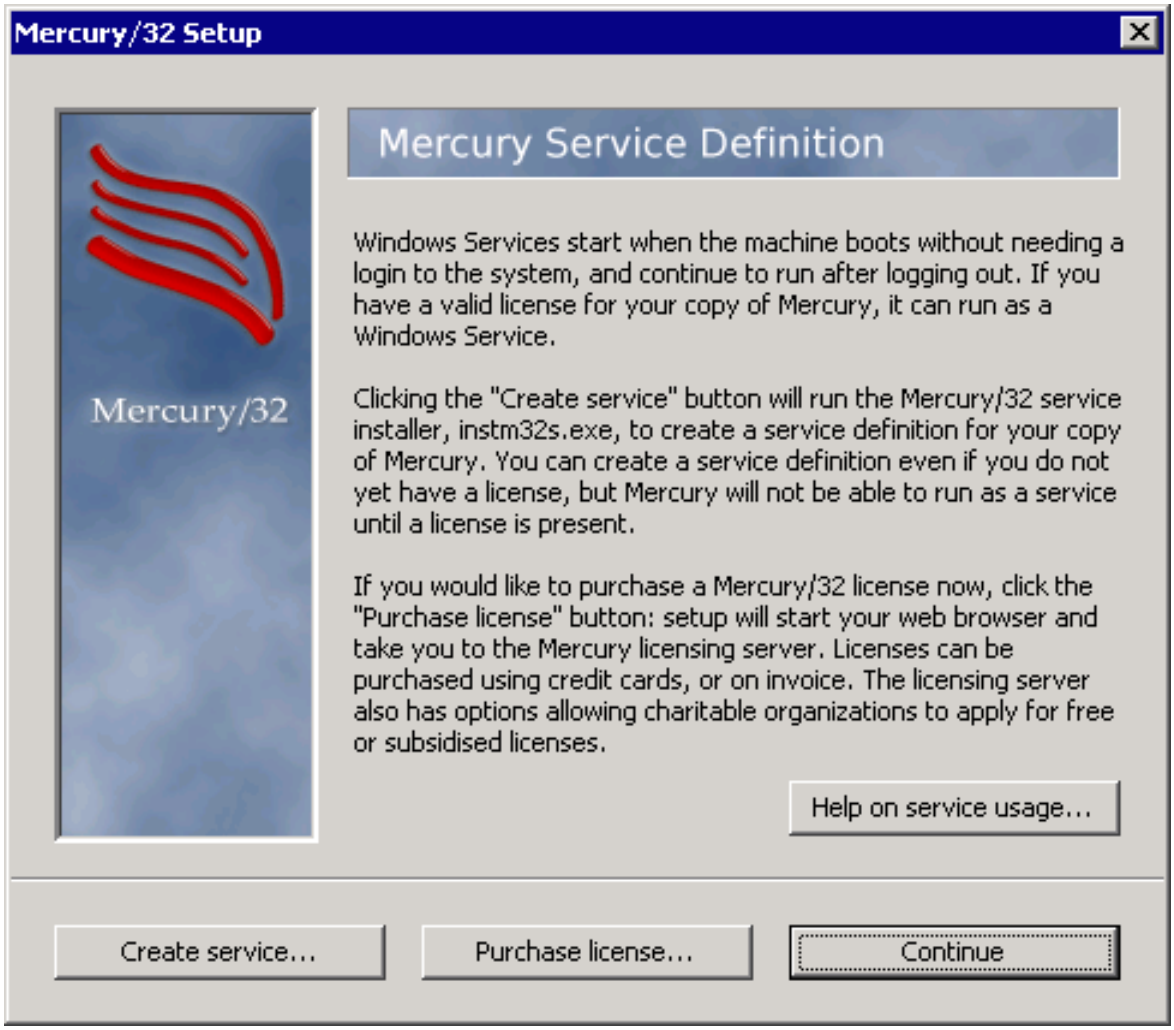
The installation wizard now has all the information it needs to execute the installation process:



Check or uncheck the "`Create a Program Manager Group`" box as you like and click "`Install Mercury/32`" to execute the actual installation.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

By now, the actual installation is completed. However, in case you purchased a license for Mercury/32, you may want to create a Windows service for it to run at Windows start automatically:



For the purpose of this document, no license is required. Just click "`Continue`" to proceed without creating a Windows service.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

Furthermore, the wizard now asks whether to install any Third-party Mercury Add-ins:

Click "Done" if you do not want any of the add-Ins to be installed. They are not required for the purpose of this document.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

Eventually, the installation process is completed:

Click "`Exit`" to close the installation wizard.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

Chapter 3

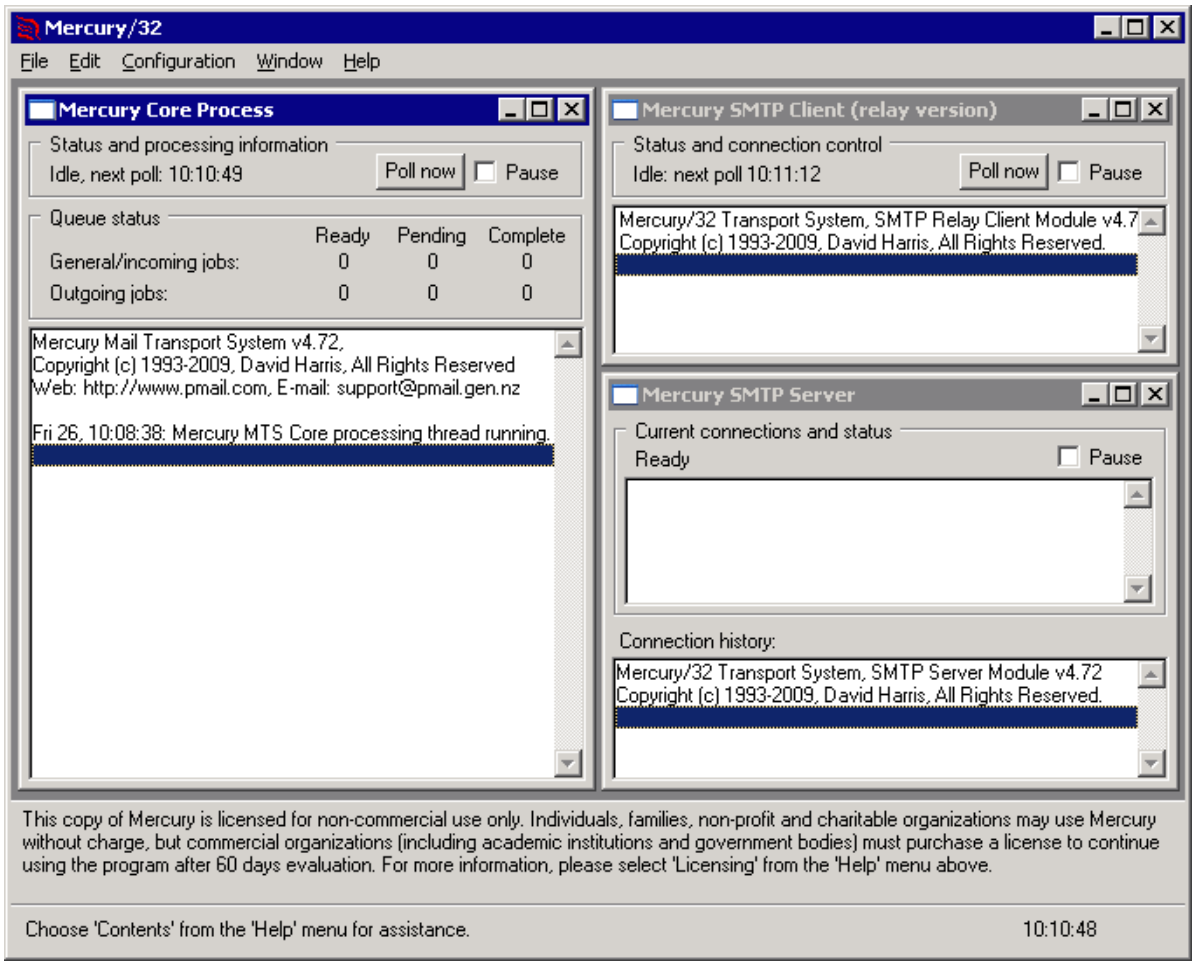
Configuration of Mercury/32

Even though some configurations have been set during the installation process, both the MercuryC and the MercuryS program modules require further configurations to properly work.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

3.1 Getting started

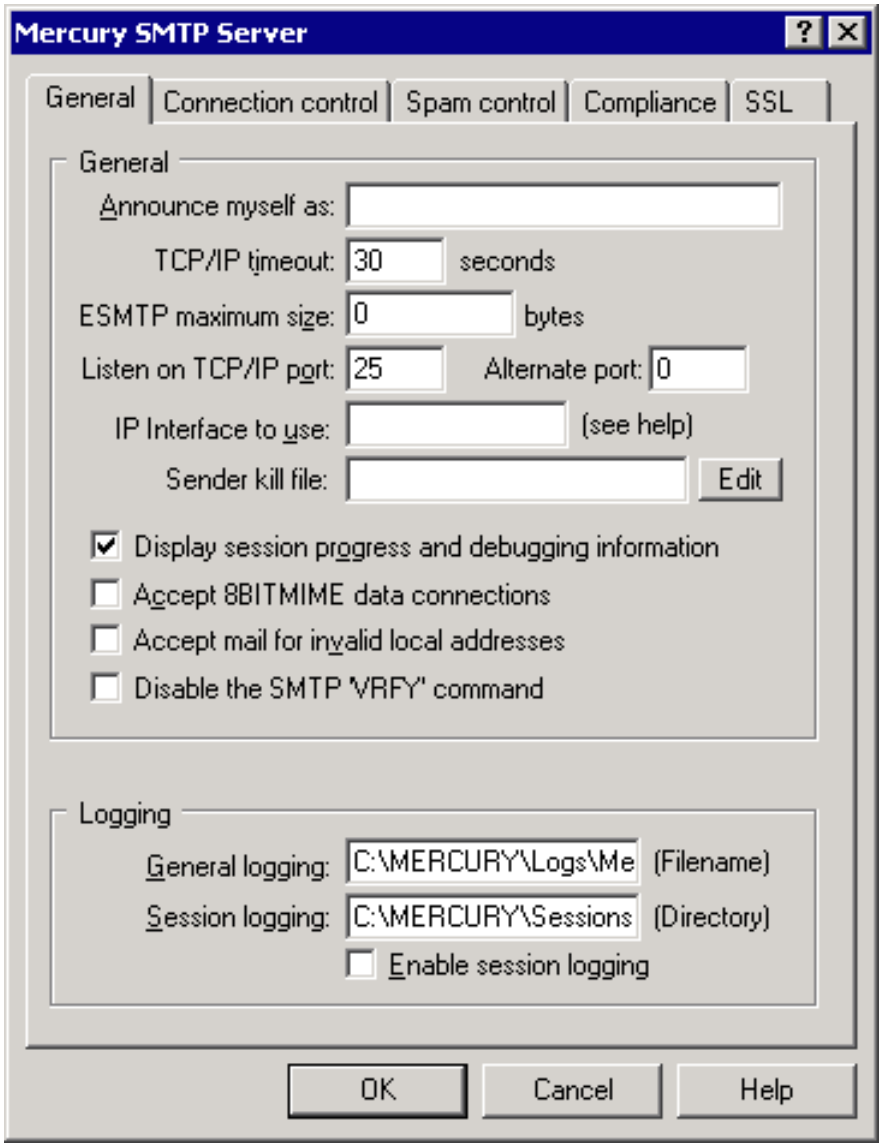
Run the Mercury/32 application, which should be displayed on your screen similar to the following screenshot (the windows have been arranged for a better overview):



 © 2014 SEGGER Microcontroller GmbH & Co. KG

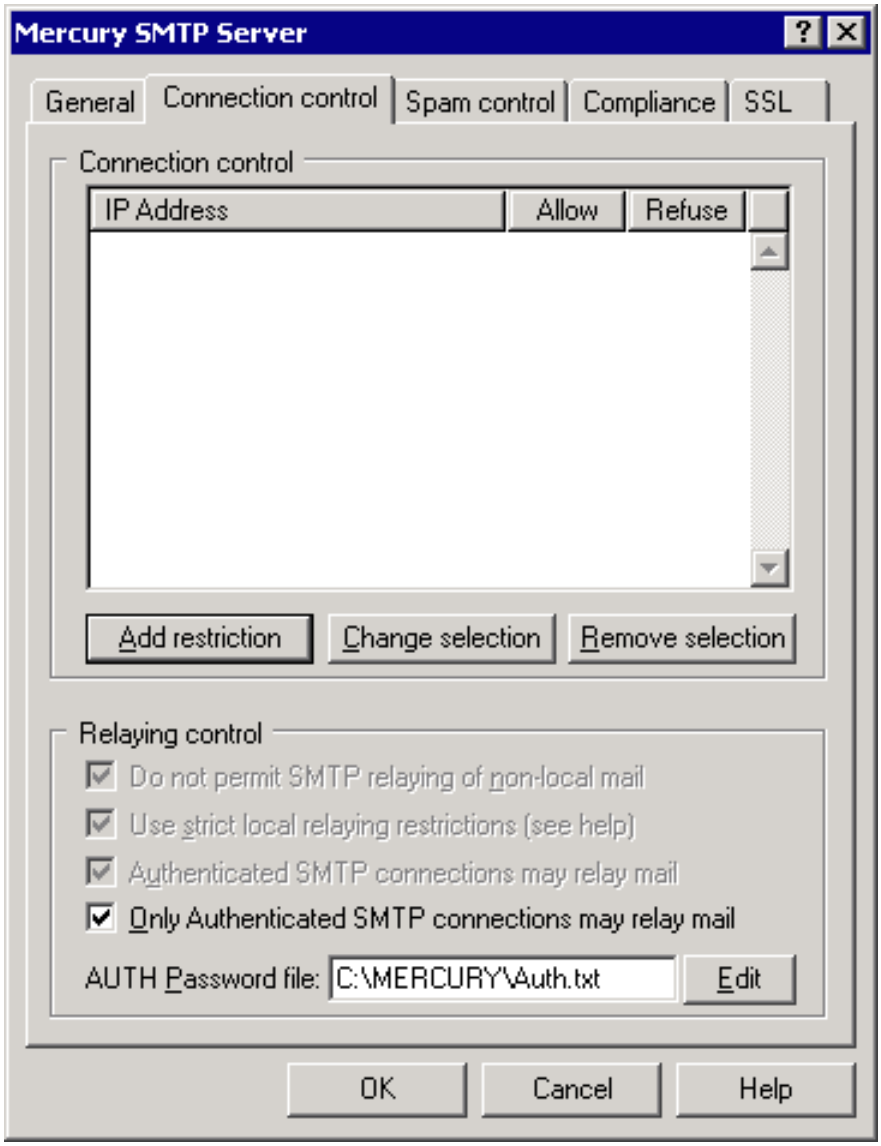
3.2 Configuration of MercuryS

Click "`Configuration`" on the menu bar and select "`MercuryS SMTP Server`". In the "`General`" tab of the now opened configurations window you can for example set another port to use instead of the default SMTP port 25. Doing so might prevent finding your server by search engines that check for vulnerable servers on the internet:



 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

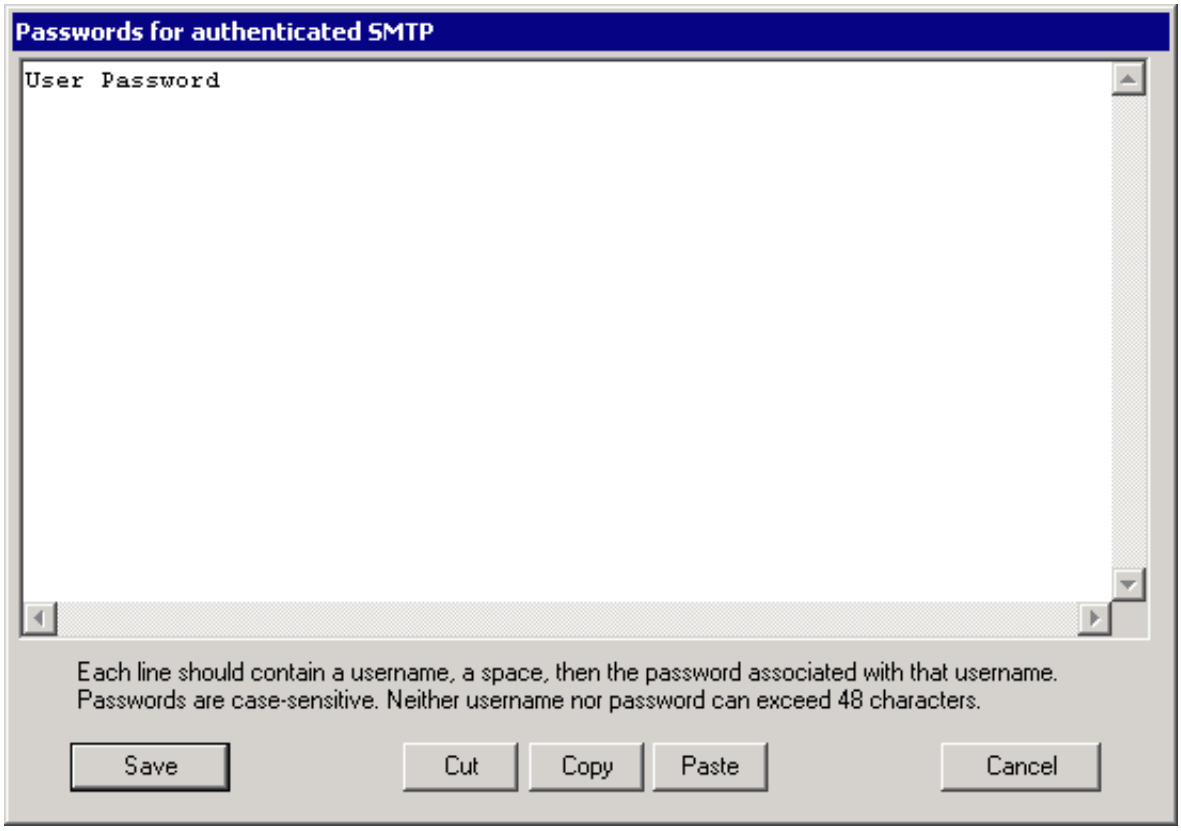
Proceed to the "`Connection control`" tab:



Check "`Only Authenticated SMTP connections may relay mail`". Enter the path to an authentication file to use manually (will be created if it does not exist). Click "`Edit`" to open the file for entering allowed credentials for authentication.

 © 2014 SEGGER Microcontroller GmbH & Co. KG

In the following you can enter credentials that shall be allowed to authenticate (login) to your server.



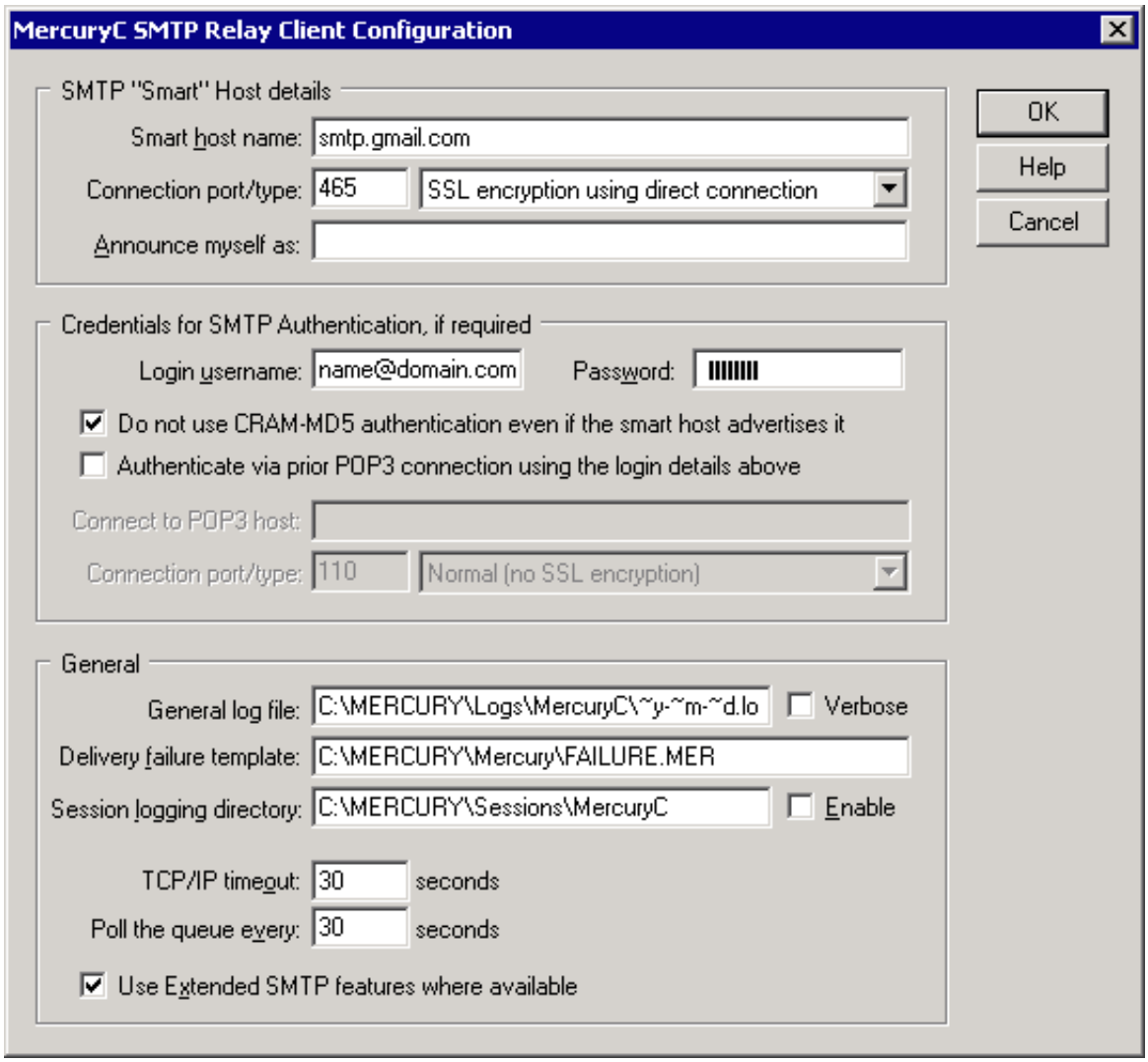
Combinations of username and password are entered with a space in between, one combination per line, are not allowed to contain spaces and both username or password may not exceed a length of 48 characters.

Save the changes by clicking "`Save`" and close the previous settings window by clicking "`OK`".

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

3.3 Configuration of MercuryC

Click "Configuration" on the menu bar and select "MercuryC SMTP Client". Your screen should now look similar to this screenshot:



Change the SMTP port if your server uses another port than 25. As the purpose of this doscument is to use Mercury/32 for relaying SSL messages, in most cases this would be the SSL standard port "465". For the connection type choose "SSL encryption using direct connection".

Enter a valid login username and password for your mail provider (e.g. name@domain.com, password123).

Check "Do not use CRAM-MD5 authentication even if the smart host advertises it".

Confirm these changes by clicking "OK".

 © 2014 SEGGER Microcontroller GmbH & Co. KG

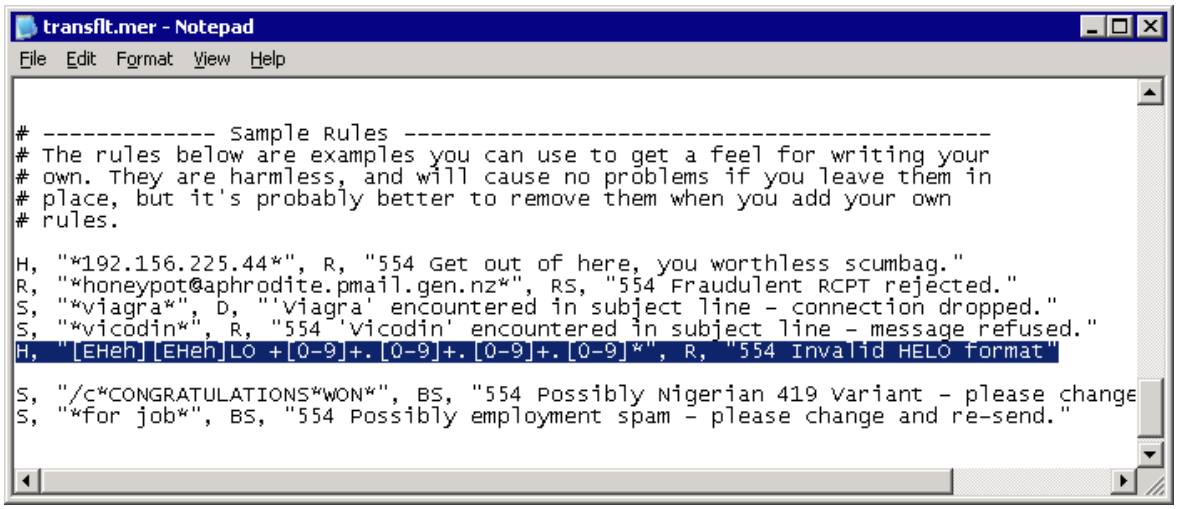
3.4 Allowing remote client to send

Mercury/32 comes with a non RFC compliant filter rule that might prevent sending mails from hosts other than the Mercury/32 server itself. This is a known problem that has been reported here: http://www.mantisbt.org/bugs/view.php?id=9645

To change the filter rule to be RFC compliant and allow sending mails from other hosts locate the file "`transfltr.mer`" in your Mercury/32 installation folder and open it with an editor.

Locate the following rule that can be found nearly the end of the file as shown below:

```
H, "[EHeh][EHeh]LO +[0-9]+.[0-9]+.[0-9]+.[0-9]*", R, "554 Invalid HELO format"
```



Replace the line with the following rule:

```
H, "[EHeh][EHeh]LO +[0-9]+.[0-9]+.[0-9]+.[0-9]+.*", X, ""
```

Save the file and restart Mercury/32 if necessary.

 © 2014 SEGGER SEGGER Microcontroller GmbH & Co. KG

 © 2014 SEGGER Microcontroller GmbH & Co. KG

Index

A
Address of the host via which to send mails 22

C
Configuration of MercuryC 34
Configuration of MercuryS 31

D
Download Mercury/32 14

I
Installation directory 17

M
Machine’s internet domain name 22
Mercury Mail Transport System 13
Mercury/32 installation wizard 15

N
NetWare Support 16

P
Pegasus Mail 18
Program modules of Mercury/32 20

S
SMTP Client module 21
SMTP relaying mode 23
SMTP Server module 20

T
Third-party Mercury Add-ins 27

U
User name for postmaster 22

 © 2014 SEGGER Microcontroller GmbH & Co. KG