

SAP Internet Mail Gateway (BC-SRV-COM)



HELP.BCSRVCOMINT

Release 4.6C



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Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax
	Tip

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SAP Internet Mail Gateway (BC-SRV-COM)

Purpose

This component connects the R/3 mail system to the Internet. It enables R/3 users or R/3 applications to send electronic messages to Internet addresses or to receive them in the R/3 System. The connection is made using the standard protocol used in the Internet, SMTP (Simple Mail Transport Protocol).

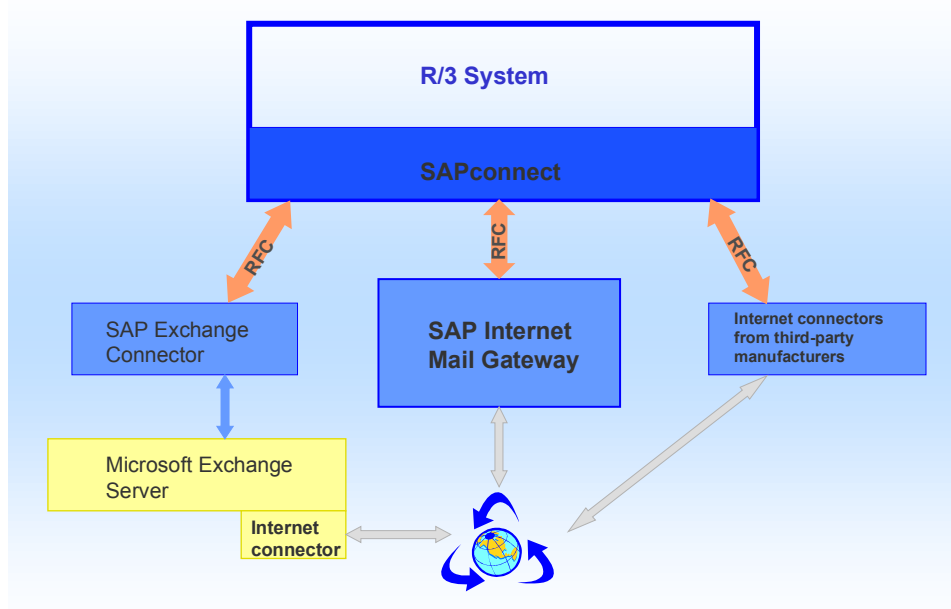
Introduction notes

In addition to the SAP Internet Mail Gateway contained in the R/3 standard system, a [mailing program \[Page 17\]](#) is also required for the connection to the Internet.

If you protect your R/3 System with a firewall, you can regulate access to the Internet using a proxy. In this case, the connections are controlled using the [SAProuter \[Ext.\]](#).

Integration

The Internet Mail Gateway supplied by SAP is one way of connecting the R/3 mail system to the Internet:



The connection is made by RFC to the R/3 communication interface [SAPconnect \[Ext.\]](#). As a result, the SAP Internet Mail Gateway enables message to be sent from the [Business Workplace \[Ext.\]](#) and directly from R/3 applications.

SAP Internet Mail Gateway (BC-SRV-COM)

This documentation describes the [planning \[Page 12\]](#) of the Internet link, the [structure \[Page 9\]](#), the [installation \[Page 19\]](#) and the [configuration \[Page 24\]](#) of the SAP Internet Mail Gateway and contains notes on [testing \[Page 62\]](#) and on [error analysis \[Page 64\]](#).

SAP Internet Mail Gateway

Purpose

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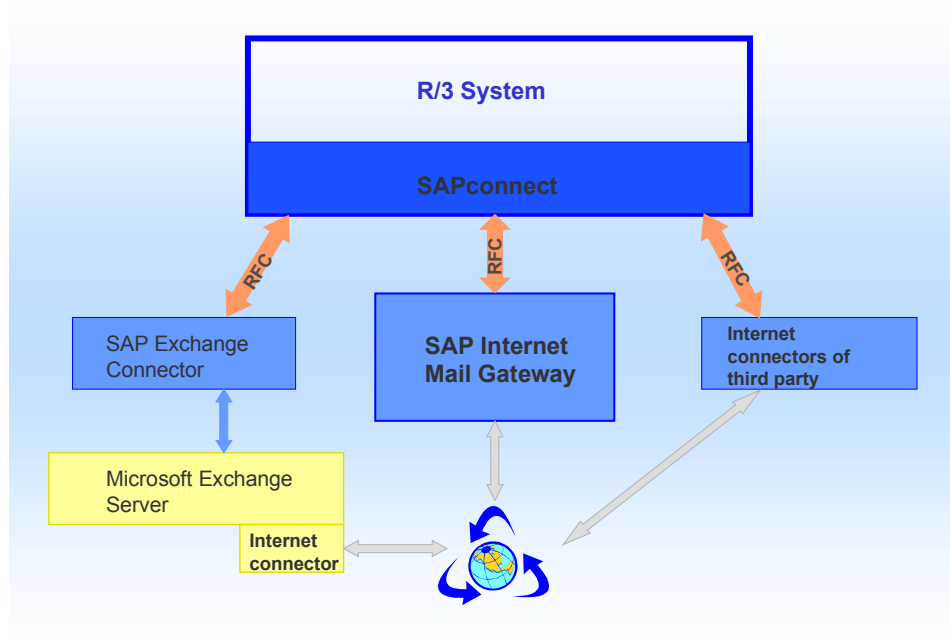
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Integration

The Internet Mail Gateway supplied by SAP is one of the possibilities of linking the R/3 mail system to the Internet:



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SAP Internet Mail Gateway

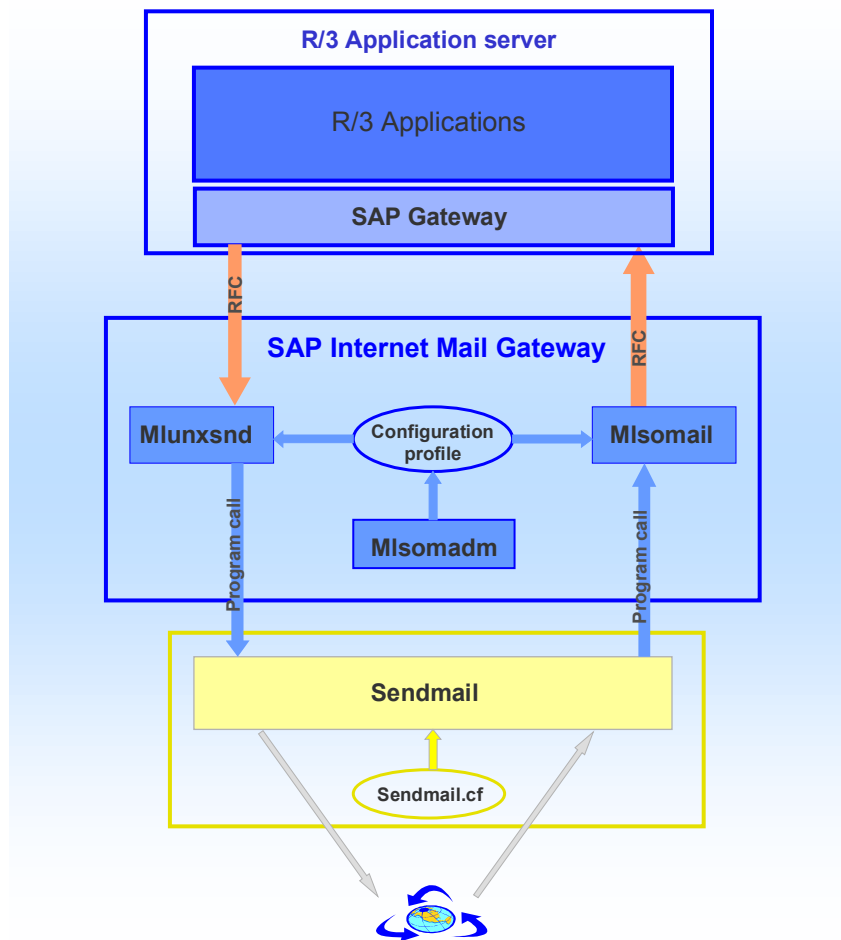
This documentation describes [Planning \[Page 12\]](#) the Internet link, the [Structure \[Page 9\]](#), the [Installation \[Page 19\]](#) and the [Configuration \[Page 24\]](#) of the SAP Internet Mail Gateway and contains notes on [Testing \[Page 62\]](#) and on [Error analysis \[Page 64\]](#).

Structure of the SAP Internet Mail Gateway

The SAP Internet Mail Gateway consists of the following executable programs:

- **Mlsomadm**
A configuration profile with the logon data for the R/3 System and the call up of the mailing program is created and stored in the coded form with this program.
- **Mlsomail**
This program transfers the messages from the mailing program to the R/3 System.
- **Mlunxsnd**
This program transfers the messages from the R/3 System to the mailing program.

The gateway is linked via RFC with the R/3 System and via direct program calling with the mailing program. The following graphic clarifies the data flow for outgoing and incoming messages, where the mailing program sendmail is used with the configuration file Sendmail.cf:



Structure of the SAP Internet Mail Gateway

Outgoing messages are generated and sent in the Business Workplace or by an R/3 application. They are then transferred from SAPconnect via RFC to Mlunxsnd. Mlunxsnd converts the messages into MIME format (Multipurpose Internet Mail Extension), reads from the configuration profile the command to call up the mailing program and transfers the messages to the mailing program for forwarding to the Internet. If the mailing program cannot transfer a message to the Internet, it generates a non-delivery receipt, which contains the sender as an Internet message in its Business Workplace inbox.

The mailing program takes **incoming messages** from the Internet, reads from the relevant configuration file the data on calling Mlsomail and transfers the messages to Mlsomail. Mlsomail converts the messages into a compatible format for the R/3 System, reads from the configuration profile the data for logon to the R/3 System and then transfers the messages to SAPconnect. The message recipients are determined from address management, and the messages are placed in the Business Workplace inbox. SAPconnect returns the message to the gateway, whether or not the messages were sent successfully. This transfers the message to the mailing program, with which the sender can be sent a non-delivery receipt in the case of errors.

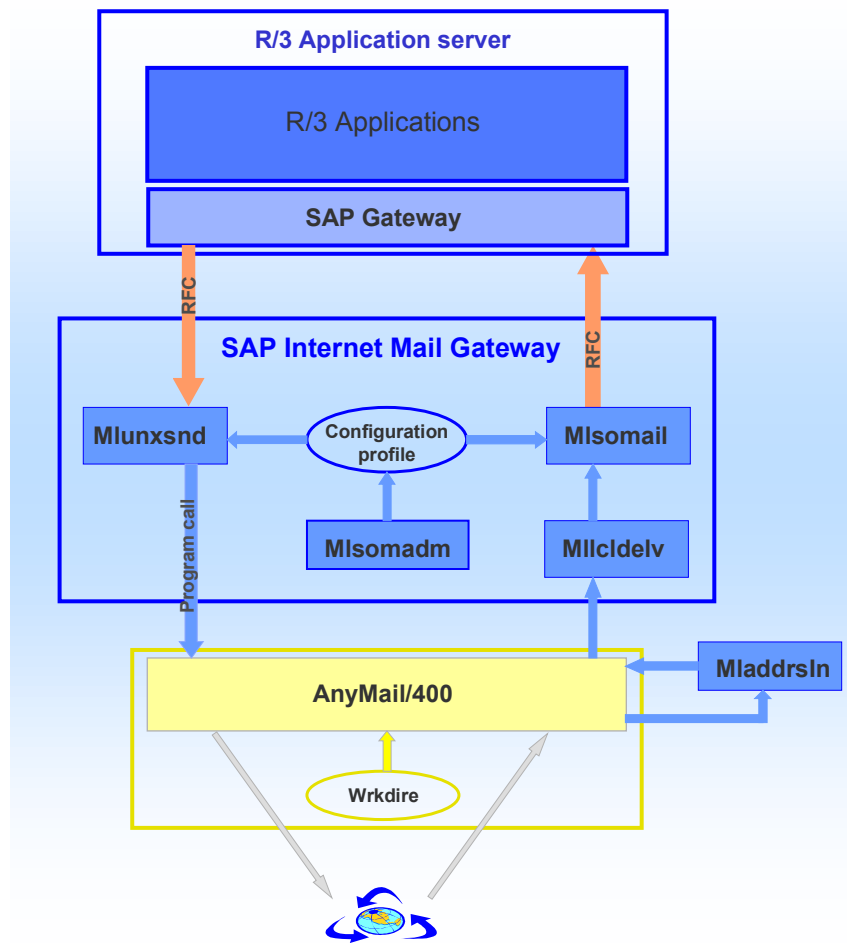
The SAP Internet Mail Gateway for AS/400

For system platform AS/400 the SAP Internet Mail Gateway contains the additional following programs:

- **Mlmsfcfg**
AnyMail/400 is configured via this program.
- **Mladdrsln**
Outbound program for AnyMail/400
- **Mllcldelv**
Outbound program for AnyMail/400

The following graphic clarifies the data flow for outgoing and incoming messages for AS/400, where the mailing program Anymail/400 is used:

Structure of the SAP Internet Mail Gateway



Planning the Internet Link

Planning the Internet Link

For the configuration of the Internet link it is necessary to specify how the Internet link should be set up and in which environment the SAP Internet Mail Gateway should run. The following questions are to be clarified:

- How should the transfer of Internet messages within your [network structure \[Page 13\]](#) be regulated?
- Which [hardware and software \[Page 14\]](#) is used, and on which computer should the SAP Internet Mail Gateway be installed?

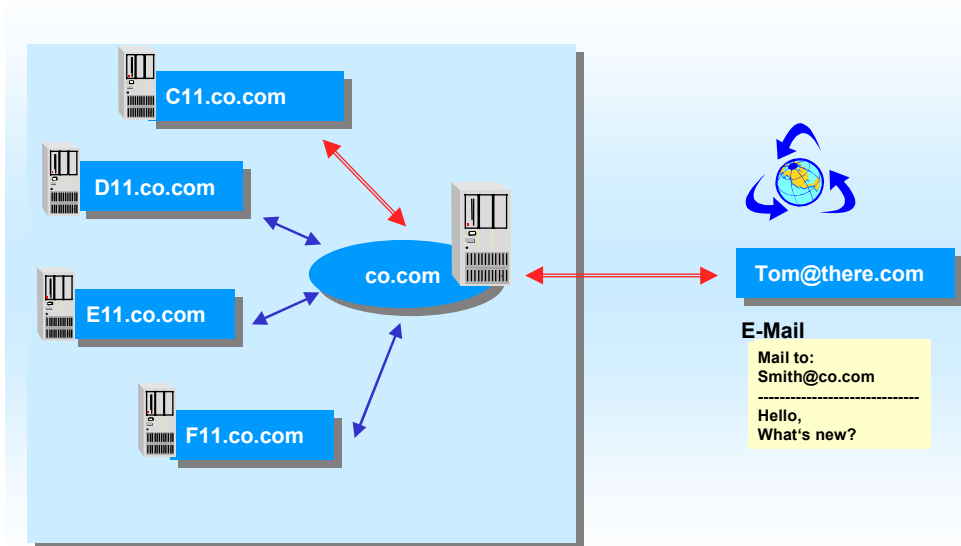
Both of the following questions are therefore related:

- Which [mailing program \[Page 17\]](#) should be used?
- With which [activation type \[Page 16\]](#) should the program run, so that the outgoing Internet messages are transferred from the R/3 System to the Internet.
- How should the [Internet addresses \[Page 18\]](#) be set up in my company?

Internet Link Network Structure

If you use a network structure for which several R/3 Systems should be linked to the Internet, a SAP Internet Mail Gateway must be installed for every R/3 System. The following possibilities exist for message transfer between R/3 Systems and the Internet:

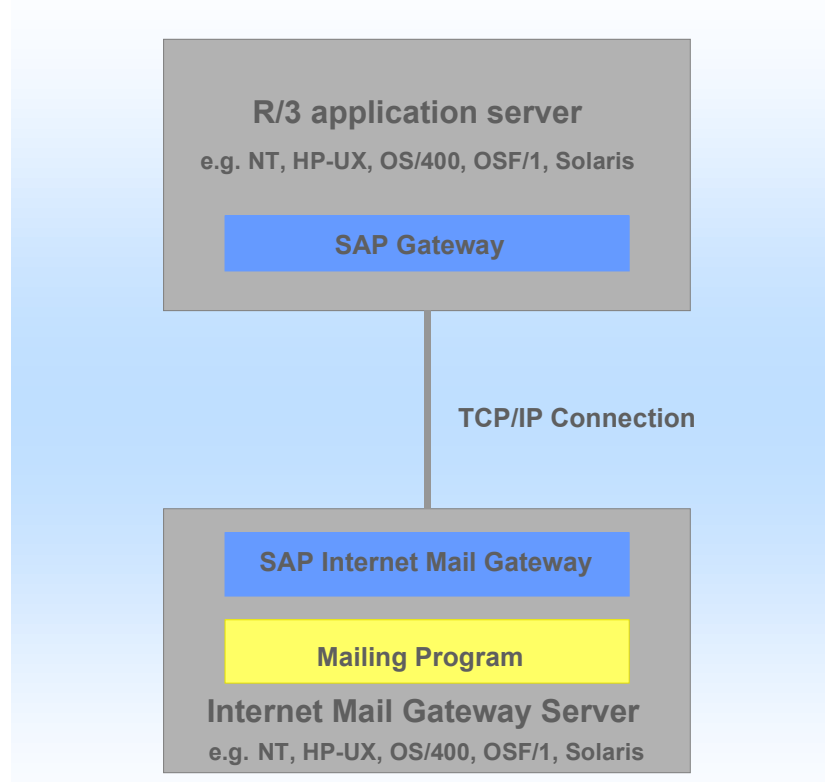
- **Distributed**, so that every R/3 System directly receives the Internet messages. In this case the mailing program configuration file must be adapted on other machines.
- **Centrally**, so that one computer receives all Internet messages addressed to your company. This computer then distributes the messages to the other computers, even if these are not linked via the Internet log. In this case, you must adapt the mailing program configuration file to the central computer and determine which addresses are transferred to the Internet Mail Gateway of the other computers.



In a central structure, none of the names of the computer which receives the Internet messages may be identical to the system name of an R/3 System which is operated by the gateway. Otherwise, messages cannot be easily forwarded to R/3 systems.

Hardware and Software for the Internet Link

The SAP Internet Mail Gateway belongs to the standard system of the R/3 System. In addition, you require a [mailing program \[Page 17\]](#) for the Internet link. The gateway is installed together with the mailing program either on an R/3 application server or - as in the graphic - on a separate NT-, Unix- or AS/400 computer. In the last case, both computers must be linked via a TCP/IP connection.



Specify the computer on which you wish to install the Internet Mail Gateway server:

- on an R/3 application server
- on a separate computer

The computer on which you install the Internet Mail Gateway Server must not have the same system platform as the R/3 application server.

Include in your specifications the [activation type \[Page 16\]](#) with which the SAP Internet Mail Gateway program should run, so that the outgoing Internet messages are transferred from the R/3-System to the mailing program.

If you install the Internet Mail Gateway server on a **Windows NT computer**, additional software is required, depending on the activation type:

Hardware and Software for the Internet Link

Activation type	Additional software
Start on an R/3 application server (recommended)	No additional software is required.
Start on a separate computer	R/3 stand alone gateway or remote shell server The R/3 stand alone gateway is part of the standard system of the R/3 System. The remote shell server is part of the <i>Microsoft Windows NT Resource Kit</i> .
Registering	NT help program Srvany The program is part of the <i>Microsoft Windows NT Resource Kit</i> .

To be able to use the activation type Registering on **AS/400**, you also require additional software. See **Note 42710** in SAPNet.

Activation Type Choice

Activation Type Choice

There are different options for communication between the SAP System and the program Mlunxsnd which handles the forwarding of messages to be sent to the mailing program. These depend on which activation type the RFC link was created with:

Start (recommended)

Program Mlunxsnd is automatically started from the SAP System by SAPconnect when required. The SAP Internet Mail Gateway runs either on a SAP application server or on an separate computer. In the last case, the program is either called via remote shell, or an SAP stand alone gateway is installed.

Registering

The program Mlunxsnd is registered as an RFC server on the SAP application server. It is also started manually and then runs as a daemon process on the application server.

For further information on the [RFC interface \[Ext.\]](#), see the BC documentation - The RFC API.

Mailing Program

You need a mailing program for connection to the Unix Internet world. Generally the program **Sendmail** - or for AS/400 the program **AnyMail/400** - is used.



If you install the SAP Internet Mail Gateway on a **Windows NT computer**, you need a mailing program for Windows NT. The company Sendmail Inc. offers the program Sendmail for NT. For further information, see the following Internet site:
<http://www.sendmail.com>.

This documentation does not describe the installation of the mailing program. See the information on the online program documentation regarding this, which you call up with the command **man**, for example **man sendmail**. We also recommend that you read additional information on this subject.

Literature available

- We recommend the following standard texts on this subject:
 - Sendmail* by Bryan Costals with Eric Allman & Neil Rickert, published by O'Reilly & Associates, Inc., 1997.
- See the SAP booklet *SAP supported Network Products* for information on which mailing programs SAP supports.
- For AS/400: IBM booklet *AnyMail/400 Mail Server Framework Support V4* (SC41-5411)

Sendmail

The mailing program receives the Internet messages and determines how they will be distributed. For example, when the **sendmail** program receives an incoming message, a configuration file is accessed. This concerns the ASCII file **Sendmail.cf**. The configuration file contains, among other things, rules, on how addresses are defined and determines how and via which mailer a message is sent.

Standard directory of the configuration file Sendmail.cf

Platform	Standard path
HP HP-UX	/etc/mail/sendmail.cf
IBM AIX	/etc/sendmail.cf
SNI SINIX	/usr/ucblib/sendmail.cf
DEC DIGITAL-UNIX	/var/adm/sendmail.cf
SUN Solaris	/etc/mail/sendmail.cf
Microsoft Windows NT	c:\sendmail\sendmail.cf

Notes on Addressing Mails

Notes on Addressing Mails

Internet addresses have the technical form

username@computername

The right part of the address is the domain, the left is the local part. To enable addresses in, for example, the form

firstname.lastname@company.com

to correspond, you must specify the host **systemname.company.com** as the mail exchange for the address **company.com** in the Domain Name System (DNS). Here you must create an MX entry, because in some configurations an alias can lead to messages not being forwarded to an SAP Internet Mail Gateway, but rather forwarded locally.



The line **ok mx** must be activated in the configuration file `sendmail.cf` under AIX, so that DNS is used. Other mailers may have similar features. Not all mailers can recognize MX entries.

Another possibility may be more robust, but involves more administration than that of an MX entry. You must also create an alias for every R/3 user on an existing mail server. An example of the entry in the configuration file **Aliases** of the Unix mailing program:

firstname.lastname: firstname.lastname@systemname.company.com

For information on how users assign addresses in the R/3 System see [Internet addresses \[Page 61\]](#).

Installation of the Internet Link

Purpose

In order to link the R/3 mail system to the Internet, it is necessary to install the SAP Internet Mail Gateway and the mailing program.

Prerequisites

To carry out the installation and configuration you require the following authorizations for the Internet Mail Gateway server:

- **UNIX** Superuser authorizations
- **Windows NT** Administrator authorizations
- **OS/400** *SECOFR authorizations

Process Flow

1. install the [mailing program \[Page 17\]](#)

For information on the procedure see the documentation for the product you are using.

2. [Install the SAP Internet Mail Gateway \[Page 20\]](#)



Under Windows NT, you must additionally [Install the R/3 stand alone gateway \[Page 22\]](#) depending on the [Activation type \[Page 16\]](#) of program Mlunxsnd.

Result

You have exited the installation process. So that the Internet Mail Gateway server is adapted for your network environment, you must still make some [settings \[Page 24\]](#).

Installing SAP Internet Mail Gateway

Installing SAP Internet Mail Gateway

Procedure

Programs **Mlunxsnd**, **Misomail** and **Misomadm** (and for AS/400 also programs **Mlmsfcfg**, **Mladdrsln** and **Mlcldelv**) must be put on the Internet Mail Gateway server. The procedure depends on where the Internet Mail Gateway server is located:

Internet Mail Gateway Server	Activity
On an R/3 application server	<p>UNIX and Windows NT: The programs are located in the SAP executables directory <code>/usr/sap/<SID>/SYS/exe/run.</code> <SID> stands for the SAP system ID, for example C11.</p> <p>OS/400: The programs are located in the kernel library.</p>
On a separate computer with the same system platform as the application server	<p>UNIX and Windows NT: Copy the programs from the SAP executables directory on the SAP Internet Gateway server, for example in directory <code>/usr/local/bin.</code></p> <p>OS/400: Place the programs in any library. Ensure that this library appears in the library list when you work with the SAP Internet Mail Gateway.</p>
On a separate computer with a different system platform as the application server	<p>UNIX and Windows NT: Unpack the programs from the R/3 kernel CD using program CAR, which is also on the CD, for example in directory <code>/usr/local/bin.</code></p> <p>OS/400: Place the programs in any library. Ensure that this library appears in the library list when you work with the SAP Internet Mail Gateway.</p>



Under OS/400, the programs are unpacked with the following command:
CPYTOSAVF SAVF (QGPL/R3IMG)
STMF ('/QOPT/<CD_Name>/OS400/AS400/<OS_Version>/R3IMG'),
 where **CD_Name** is the name of the R/3 kernel CD and **OS_Version** is the OS/400 Release, on which the CD has been created. In order to restore the program, use the command **RSTLIB**. The library name is R3<REL>IMG, where <REL> is the R/3 Release.



The program **Misomail** must be stored in the Sendmail directory under Windows NT, for example C:\SENDMAIL\MLSOMAIL.EXE. Both other programs can also be stored in another directory, for example C:\SENDMAIL\SIMG\MLUNXSND.EXE or C:\SENDMAIL\SIMG\MLSOMADM.EXE.

Installing the SAP Stand Alone Gateway

Installing the SAP Stand Alone Gateway

Prerequisites

You need administrator authorization for the SAP Internet Mail Gateway server.

You have assigned a system name <SID> for the R/3 stand alone gateway.



The same restrictions apply for the SID as for a normal R/3 installation (three alphanumeric characters, first character cannot be a number). Please note that the following names are **not** permitted:

ADD, ALL, AND, ANY, ASC, COM, DBA, END, EPS, FOR, INT, KEY, LOG, MON, NOT, OFF, RAW, ROW, SAP, SET, SGA, SHO, SID, UID.

You can for example select SIG as the system name (provided this does not clash with a system that is already installed).

The installation program is located on your computer (in Windows NT in the subdirectory \NT\i386\) or on the R/3 Presentation CD, which is part of the standard system of the R/3 System.

Procedure

1. Unix and Windows NT:

Execute the file **R3gwinst.exe**.

A wizard guides you through the installation process.



Set the number of CUA users to **0**, as only R/3→R/3 connections are used.

If the installation is unsuccessful and the Service SAP <SID> is already installed, you must remove the service manually using the command **ntscmgr remove SAP<SID>_<ID>** before the next installation attempt.

OS/400:

- a) Log on as user <SID>OFR.
- b) Execute the command **CRTR3SYS**.
- c) Execute the command **CRTR3INST**.
- d) Make the required entries. Enter ***GATEWAY** in the field *Instance role*.

Alternatively use program R3SETUP as described in the installation guide *R/3 Installation on IBM AS/400*.

2. Add the following lines to the Gateway profile SIG_G00_<hostname>:

```
rdisp/max_gateways = 1
rdisp/workdir = d:\usr\sap\SIG\G00\work
```

Installing the SAP Stand Alone Gateway

```
rdisp/TRACE = 1
gw/max_sys = 30
gw/max_shm_req = 10
gw/max_wp = 0
gw/remsh = remsh
gw/keep_process = 1
gw/rem_start = REMOTE_SHELL
```

Internet Link Configuration

Internet Link Configuration

Purpose

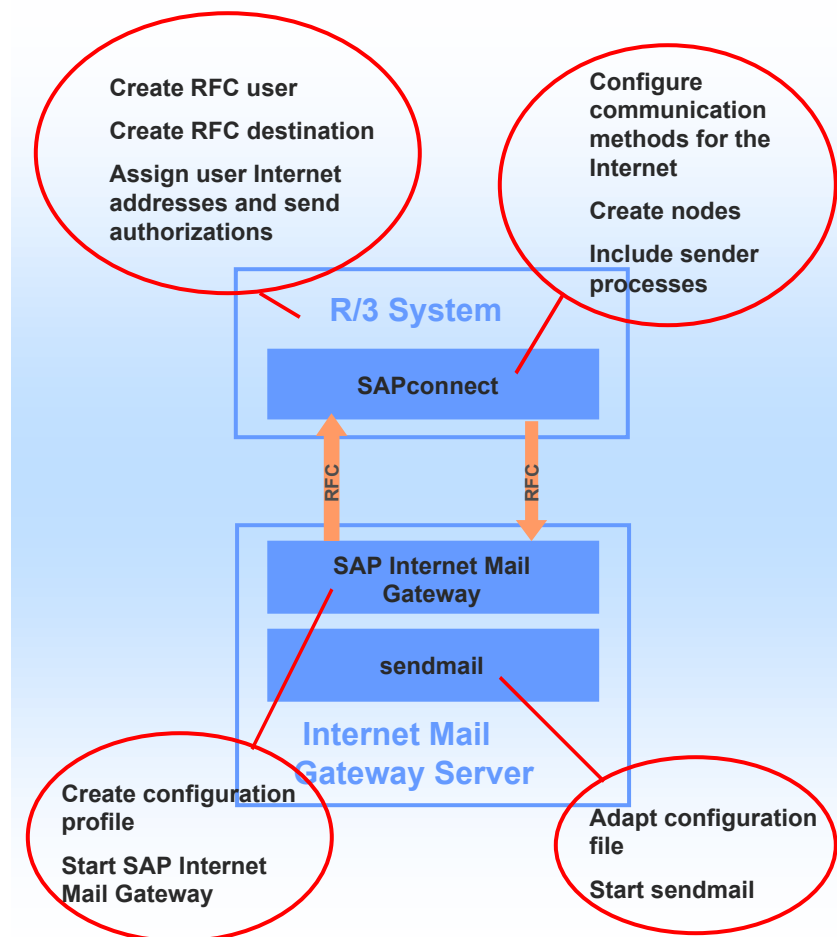
In order for the SAP Internet Mail Gateway to operate in your network structure, you must make a number of settings.

Prerequisites

The SAP Internet Mail Gateway and the mailing program are installed on the Internet Mail Gateway server.

Process Flow

There are settings in the R/3 System and on the Internet Mail Gateway server that must be made:



It makes sense to make the settings in the following order:

1. [Make settings on the Internet Mail Gateway server \[Page 26\]](#)
2. [Make settings in the R/3 System \[Page 49\]](#)

3. [Test Internet mail connection \[Page 62\]](#)

Settings on the Internet Mail Gateway Server

Settings on the Internet Mail Gateway Server

Purpose

Settings for the functionality of the SAP Internet Mail Gateway and for the adaptation of mailing programs to the gateway are carried out on the Internet Mail Gateway server.



The following terms are used in this documentation to distinguish between the two configuration files:

- Configuration **profile** for those of the SAP Internet Mail Gateway
- Configuration **file** for those of the mailing program.

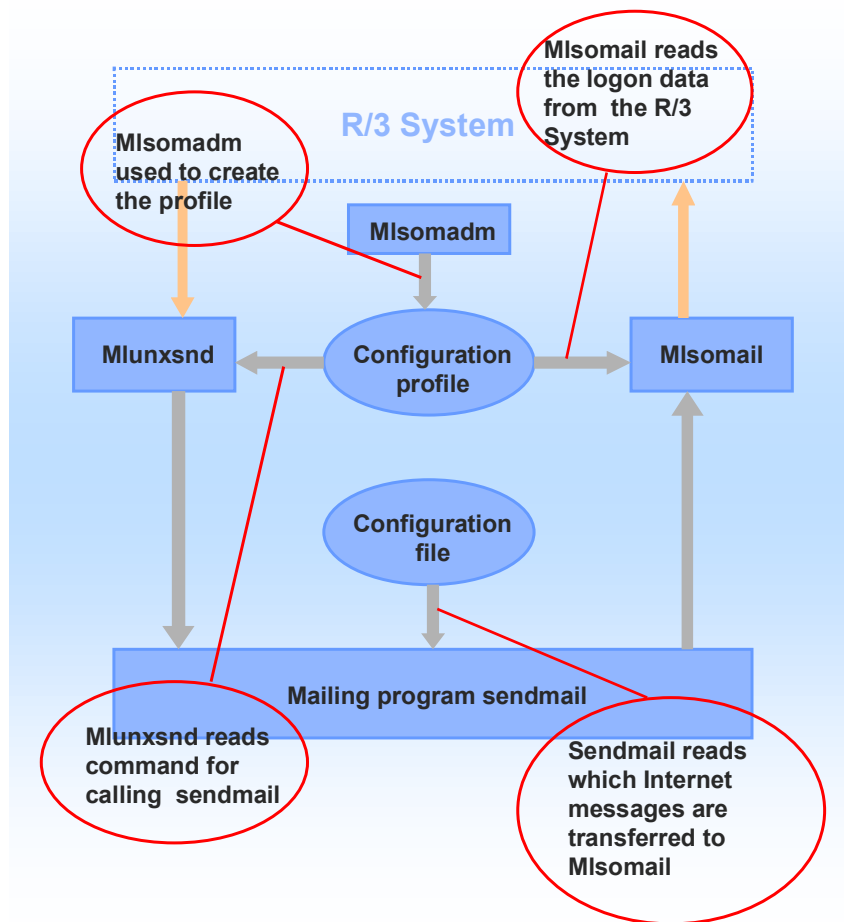
Process Flow

Carry out the following activities:

1. [Create the configuration profile \[Page 28\]](#)
2. [Adapt the configuration file for the mailing program \[Page 35\]](#).
3. [AS/400-specific settings \[Page 44\]](#)

The following graphic illustrates with the help of the mailing program sendmail with the configuration file Sendmail.cf, which tasks the configuration profile and the configuration file have:

Settings on the Internet Mail Gateway Server



For outgoing messages, Mlunxsnd reads from the configuration profile the command to call up the sendmail. For incoming messages the sendmail reads from the configuration file which Internet messages are transferred to Mlsomail. Mlsomail reads the logon data of the RFC user to the R/3 System from the configuration profile.

Configuration Profile

Configuration Profile

Use

The SAP Internet Mail Gateway configuration profile contains the logon data of the R/3 System and the call parameters of the mailing program. Programs Mlsomail and Mlunxsnd read the required information from the configuration profile in order to set up the RFC connection to the R/3 System and to call up the sendmail program.

You create the configuration profile using the program Mlsomadm. It is then stored in coded form. You also make changes to the profile (for example, the configuration of the trace) using the program Mlsomadm.

Prerequisites

You can choose the storage location and file name of the configuration profile. The path and name must be made known so that the SAP Internet Mail Gateway finds the file.

The file name is copied to the programs Mlsomadm and Mlsomail as the first call parameter. The program Mlunxsnd searches for the configuration profile. It proceeds in the following order:

Process Flow	Result
1. Is the environment variable GWCONFIG [Page 33] defined?	The file specified is used as the configuration profile.
2. Is the file Mailgw.ini in the same directory as Mlunxsnd?	Mailgw.ini is used as the configuration file.
3. Is Mlunxsnd in the directory <path>/exe/run and the file Mailgw.ini in the directory <path>/profile?	Mailgw.ini is used as the configuration file.

It is recommended that you store the configuration profile under the name Mailgw.ini in the profile directory of the SAP System (/usr/sap/<SID>/SYS/profile/mailgw.ini). You do not then need to set the environment variable GWCONFIG.

Features

The configuration profile must contain the information that is required for the link in the case of incoming and outgoing messages.

Inbox




Field	Description	Example
Client	Client in the R/3 System in which the Internet messages are received	001
User name	Name of the RFC user with which the SAP Internet Mail Gateway registers with the R/3 System.	Mailadm
Password	RFC user password	Init
Logon language	One of the logon languages used	E

Configuration Profile

System name	Logical name of the R/3 System in which the Internet messages are received	C11
Load balancing	For Y, load balancing [Ext.] is used, for N, you must enter a specific application server	Y
Message server (with load balancing)	Name of the message server for the relevant R/3 System If load balancing is to be used, the message server port is configured in File/etc/services (for example, with the entry sapmsc11 3601/tcp)	hp0011
Login group (with load balancing)	Name for the login group	Public
Host name (without load balancing)	Name of the R/3 application server with which the SAP Internet Mail Gateway registers	
System number (without load balancing)	Two-character number of the R/3 System on the application server	
Gateway host name (without load balancing)	Name of the host on which the SAP gateway runs; usually the name of the R/3 application server	
Gateway service (without load balancing)	Name of the SAP Gateway service; usually in /etc/services. As a rule, you do not need to make an entry here. The system uses the default sapgwXX, where XX stands for the system number.	
Use SAProuter	Use the SAProuter [Ext.] as the proxy if you protect access to your systems with a firewall. The SAProuter is used for Y, but not for N.	N
SAProuter string (with SAProuter)	The SAProuter string describes the link (for example, /H/mysaprouter/S/3299) without specifying the message server, application server or gateway host.	
Trace Level	Specification of the log levels: 0 for <i>Switch off trace</i> 1 for <i>Errors only</i> 2 for <i>Errors and warnings</i> 3 for <i>Errors, warnings and information</i>	1
Trace File	Path and file name of the file in which the trace entries for incoming messages are written	/tmp/tracein.txt

Configuration Profile

Outbox

Field	Description	Example
Sendmail command	<p>Command line for calling the sendmail program from the SAP Internet Mail Gateway. You must enter the complete path. By default, no command options are required; however, the options -i and -f<SENDER_ADDRESS> are highly recommended.</p> <p> Do not use the option -t.</p> <p> Do not replace the expression <SENDER_ADDRESS> when entering the sendmail command. The sender is assigned later by the program.</p>	<code>/usr/lib/sendmail -i -f<SENDER_ADDRESS></code>
Code Page	<p>Iso name of the SAP System code page</p> <p> SAP Systems with Japanese code page Shift JIS (8000) are exceptions. You have to enter the ISO name for JIS: ISO-2022-JP.</p>	ISO-8859-1
Trace Level	<p>Specification of the log levels:</p> <p>0 for <i>Switch off trace</i></p> <p>1 for <i>Errors only</i></p> <p>2 for <i>Errors and warnings</i></p> <p>3 for <i>Errors, warnings and information</i></p>	1
Trace File	Path and file name of the file in which the trace entries for incoming messages are written	/tmp/traceout.txt

Activities

You [create the configuration profile \[Page 31\]](#) by answering the questions that the program Mlsomadm asks.

Creating a Configuration Profile

Procedure

1. Call program Mlsomadm as follows:

- **UNIX and Windows NT:**

After the system prompt, enter **mlsomadm <filename>**

<filename> is a freely definable file name for the configuration profile, for example **/usr/sap/C11/Sys/profile/Mailgw.ini**.

- **OS/400:**

Log on to the AS/400 system as user **<SID>OFR** and call the program from the console:

CALL MLSOMADM PARM('<filename>'), for example CALL MLSOMADM PARM('/usr/sap/C11/Sys/profile/Mailgw.ini')

If a file with the entered name already exists, MLSOMADM recognizes this as a valid configuration file and proposes the values existing in the file during the dialog. You can copy the proposed values or change them as required.

2. In the subsequent dialog box, specify the required parameters.



The following example shows a dialog for changing the configuration profile **Mailgw.ini** with program Mlsomadm:

Creating a Configuration Profile

```
%mlsomadm mailgw.ini

This program is used to create and/or modify the configuration
information for the SAP R/3 Internet Mail Gateway. If you do
not understand what to enter for a particular parameter, type ?
as your response and you will be given further instructions.
Cannot open configuration profile mailgw.ini
Unable to open parameter file mailgw.ini for reading.
Will attempt to create a new file...

Parameters for inbound mail (program mlsomail)
-----
System Name [C11] :
Client [000] : 001
Username [MAILADM] :
Password [*****] : Again:
Language [E] :
Load Balancing [N] : Y
Message Server [] : hp0011
Group Name [] : PUBLIC
Use SAP Router [N] :
Trace Level (Inbound) [0] : 1
Trace File (Inbound) [/tmp/tracein.txt] :

Parameters for outbound mail (program mlunxsnd)
-----
Sendmail Command [/usr/lib/sendmail -i -f<SENDER_ADDRESS>] :
Codepage [ISO-8859-1] :
Trace Level (Outbound) [0] : 1
Trace File (Outbound) [/tmp/traceout.txt] :

Update file XXX? [Y]

The new parameters have been saved.
```

3. If you do **not** use the proposed path and file name `/usr/sap/C11/Sys/profile/Mailgw.ini` for the configuration profile, you have to set the [environment variable GWCONFIG \[Page 33\]](#).

Setting Environment Variable GWCONFIG

Use

Path and file names of the configuration profile are specified in the environment variable GWCONFIG so that program Mlunxsnd can access the profile.

Prerequisites

You only have to set the environment variable GWCONFIG under the following conditions:

You have **not** stored the configuration profile under the name Mailgw.ini in the directory /usr/sap/C11/SYS/profile or in the directory in which the program Mlunxsnd is located.

Procedure

Windows NT

Call up the system control, select the file *System* and the tab page *Environment* and under *System variables* enter the names of the variable and the corresponding value.



Variable	Value
GWCONFIG	C:\sendmail\SIMG\C11_mailconfig

Unix

Write a shell script in which you set the environment variable GWCONFIG and start program Mlunxsnd, and assign the shell script execute rights. The variable must be set in the Mlunxsnd environment.



Example of the script if Mlunxsnd is activated via **start**:

```
#!/bin/csh
setenv GWCONFIG /local/bin/C11_mailconfig
/local/bin/mlunxsnd $*
```

Example of the script if Mlunxsnd **registration** is activated:

```
#!/bin/csh
setenv GWCONFIG /local/bin/C11_mailconfig
/local/bin/mlunxsnd -ahs3333.mlunxsnd.c11001
-ghs3333 -xsapgw00
```

Setting Environment Variable GWCONFIG

Note that the option \$* must be set behind the path and file specification of Mlunxsnd so that the program parameter can be transferred.

OS/400

Write a CL program (CL stands for control language) in which you set the environment variable GWCONFIG and start program Mlunxsnd.



Example if Mlunxsnd is activated via registration:

```
ADDENVVAR ENVVAR(GWCONFIG) VALUE('<Configuration file>')
SBMJOB CMD(CALL MLUNXSND PARM('-a' <RFC_Program_ID>' '-g' '<Host>' '-x'
'<sapgwnn>')) JOB(MLUNXSND) CPYENVVAR(*YES)
```

<Host> is the host from which the R/3 Gateway runs, <RFC_Program_ID> is the program name that you have defined via transaction SM59, and <sapgwnn> is the gateway service of the R/3 instance (nn stands for the instance number).

The Configuration File (Sendmail)

Use

Incoming messages are received from the mailing program and then forwarded to a mailer. The mailer then distributes each message to the system which matches the specified recipient address.

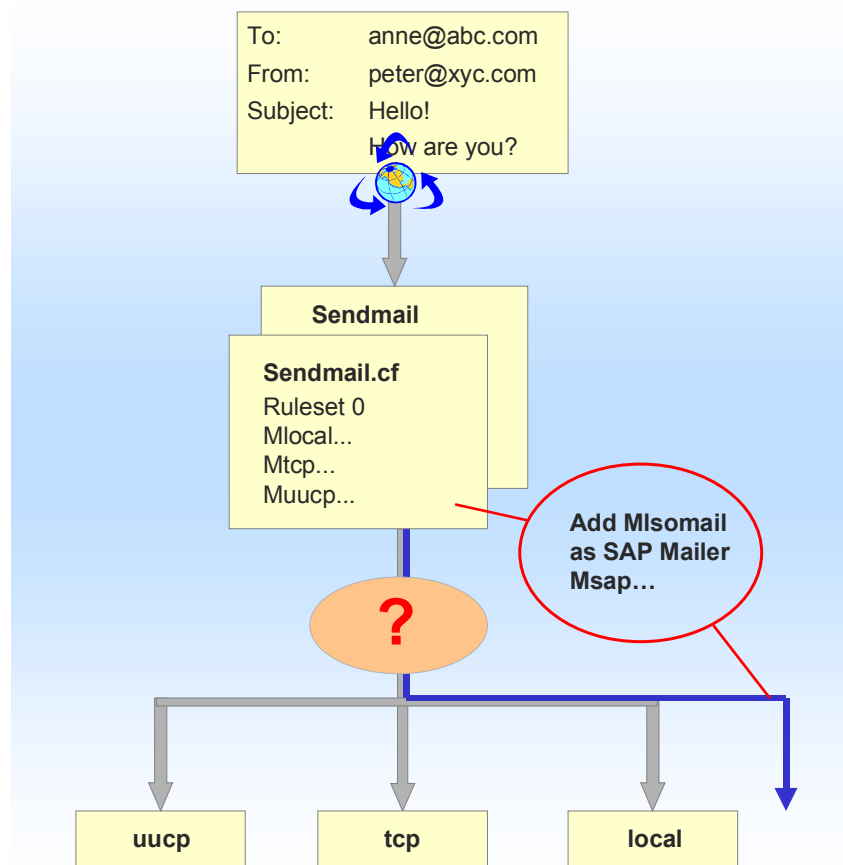


Generally under Unix and Windows NT, the mailing program sendmail is used. Under OS/400 the IBM product AnyMail/400 is used instead of sendmail. For further information on how you configure AnyMail/400 for the SAP Internet Mail Gateway, see the IBM documentation *AnyMail/400 Mail Server Framework Support V4 (SC41-5411)*. For background information, see the IBM documentation *AS/400 Electronic Mail Capabilities (SG24-4703)*.

The mailer that the messages are transferred to is determined when using mailing program **Sendmail** in the configuration file **Sendmail.cf**. The following mailers are predefined there:

- **a local mailer**
The message is sent to a local user on the same machine.
- **a TCP mailer**
The message is sent to a machine which is connected via TCP/IP (Transmission Control Protocol / Internet Protocol)
- **a UUCP mailer**
The message is sent to another UNIX machine via a modem (UUCP is the abbreviation for UNIX to UNIX Copy Protocol).

The Configuration File (Sendmail)



The SAP Internet Mail Gateway contains the SAP mailer which takes the Internet messages from the mailing program and forwards them to the R/3 System. The SAP mailer must therefore be added to the configuration file and the information regarding which Internet messages should be transferred to the SAP mailer must be entered.

Outgoing messages are forwarded by the SAP Internet Mail Gateway to the mailing program. The sender is the user under whom the SAP Internet Mail Gateway runs. If the mailing program then transfers the message to the Internet, it is not this user but rather the user who originally sent the message from the R/3 System that is specified as the sender address.

Activities

In order to adapt the mailing program configuration file to the SAP Internet Mail Gateway, you must make the following changes in the file:

- Enter the SAP mailer definition.
- Establish the rules regarding which messages are transferred to the SAP mailer.
- Specify that it is not the user under whom the SAP Internet Mail Gateway runs who is entered as the sender of the Internet messages but rather the relevant R/3 users.

The Configuration File (Sendmail)

For further information, see the [procedure \[Page 38\]](#) for adapting the configuration file and the corresponding [example \[Page 39\]](#).

Adapt the Configuration File

Adapt the Configuration File

Use

Adapt the mailing program configuration file to your network structure so that the message transfer between the mailing program and the SAP Internet Mail Gateway works. This procedure shows you which steps you take for this adaptation. For a full definition see the relevant [example \[Page 39\]](#).

Prerequisites

You need superuser authorization for the SAP Internet Mail Gateway server.

You have made a backup copy of the configuration file.

Procedure

1. Load, on the SAP Internet Mail Gateway server, the configuration file of your mailing program in a text editor.
2. Add the SAP mailer in the section in which the mailers are defined.
In order to simplify this operation, you can copy the address of the local mailer and adapt correspondingly. The following information must be entered:
 - Path to file **Mlsomail**
 - Path to the configuration profile of the SAP Internet Mail Gateway.
3. Add a rule in the section in which the rules for the distribution of messages to the mailers are determined. Enter the domain of the recipient addresses which should be forwarded to the SAP mailer .
4. Define the user under which program **Mlunxsnd** runs as the “trusted user”, so that the user sets the relevant R/3 user as sender for each Internet message. The user at the activation type is
 - **Start:** the user, under whom the application server runs,
 - **Registration:** the Unix administrator who started **Mlunxsnd**.



Step 4. does not apply to Windows NT. Because a different user- and authorization concept is used there, a “trusted user” is not required.

5. Save your changes and restart the mailing program daemon process.

Result

The configuration file is adapted for your network structure. Internet messages addressed to R/3 Users are forwarded to the SAP mailer of the SAP Internet Mail Gateway.

Example for Adapting Sendmail.cf

The following example illustrates the procedure for the adaptation of configuration file **Sendmail.cf** to an HP UX system.



Note that the file is set up in a different way according to the network structure. Your file will perhaps look different if you are working on an HP UX system.

Procedure

1. Load, on the SAP Internet Mail Gateway server, the file **Sendmail.cf** in a text editor, for example Vi or Emacs.
- 2.a) Call the section in which the mailers are defined by searching for a line which begins with **Mlocal**, **Mtcp** or **Mether**:

```
Mlocal, P=/bin/rmail, F=DFP1ms, S=10, R=20, A=rmail -d $u
Mprog, P=/bin/sh, F=DFMP1shu, S=10, R=20, A=sh -c $u
Mtty, P=/bin/false, F=Plnrs, S=10, R=20, A=to $u, M=5000
Mtcp, P=[IPC], F=CDFMmsu, S=11, R=21, A=IPC $h
Muucp, P=/usr/bin/uux, F=DFMUshu, S=13, R=23, A=uux - $h!rmail ($u)
Mdumbuucp, P=/usr/bin/uux, F=DMUshux, R=23, A=uux - $h!rmail ($u)
```

- 2.b) Copy the line which begins with **Mlocal** and replace:

Deleting	Replace with	Note
Mlocal	Msap	
P=/bin/rmail	P=<Path and name of file Mlsomail>	
F=DFP1ms	F=DFMP1Lms, L=990	The letter L and not the number 1 comes after DFMP . L is an indicator that the structure of the message determines and specifies that the program Mlsomail is present l ocally on the machine. The host name is therefore ignored when the rules are entered.
A=rmail -d \$u	A=mlsomail config_file \$u	Config_file is the complete path to the configuration profile. You do not have to specify the complete path to file Mlsomail in A=...

Example for Adapting Sendmail.cf

After you have carried out the changes, the section of the mailer definition could be as follows:

```
Mlocal, P=/bin/rmail, F=DFPPlms, S=10, R=20, A=rmail -d $u
Mprog, P=/bin/sh, F=DFMPlshu, S=10, R=20, A=sh -c $u
Mtty, P=/bin/false, F=Plnrs, S=10, R=20, A=to $u, M=5000
Mtcp, P=[IPC], F=CDFMmsu, S=11, R=21, A=IPC $h
Muucp, P=/usr/bin/uux, F=DFMUshu, S=13, R=23, A=uux - $h!rmail
($u)
Mdumbuucp, P=/usr/bin/uux, F=DMUshux, R=23, A=uux - $h!rmail ($u)
Msap, P=/usr/sap/SYS/C11/exe/run/mlsomail, F=DFMPlLms, L=990,
S=10, R=20, A=mlsomail /usr/sap/SYS/C11/profile/Mailgw.ini $u
```



Under **Windows NT with Metainfo Sendmail**, no path specifications are possible for the mailer definition. Therefore, the mailer program Mlsomail must be located in the same directory as the mailing program sendmail. The backslashes in the path details for the configuration file must be masked. This is done through doubling: \\. In this case, a mailer definition could appear as follows:

```
Msap, P=mlsomail.exe, F=DPF1Ls, L=990, s= 10, R=20,
A=mlsomail.exe d:\\Sendmail\\SIMG\\mailgw.ini $u
```

3.a) Call section **Ruleset 0** in which the rules for the distribution of incoming Internet messages to the mailer are described.

```
### Ruleset 0 - {Delivery_Agent, host, user} Resolution ###

S0
# recognize local host
R$+ $:>6$1 anything to ruleset 6 once

# mail to domain-literals (numeric internet addresses)
R$*<@[ $+ ]> $#tcp$@[ $2 ]$:$1@[ $2 ] user@internet address
R<@[ $+ ]>:$* $#tcp$@[ $1 ]$:@[ $1 ]:$2 internet address in source route

# resolve SMTP mail to hosts in class S
# R$+<@$=S> $#tcp$@$2$:$1<@ $2 > user@host
# R<@$=S>:$+ $#tcp$@$1$:<@ $1 >:$2 source route
```

Sendmail rules have the following structure:

Address part <tab> mailer part <tab> optional comment



Example for Adapting Sendmail.cf

Note the following conventions when entering sendmail rules:

A rule always begins in the first column; continuation lines are started with a blank character or a tabulator.

The parts of a sendmail rule **must** always be separated by tabulators.

3.b) Make a new rule which specifies that Internet messages addressed to users of R/3 System **C11** are transferred to the SAP mailer:

```
### Ruleset 0 - {Delivery_Agent, host, user} Resolution ###
S0
# recognize local host
R$+  $:>6$1  anything to ruleset 6 once

# mail to domain-literals (numeric internet addresses)
R$*<@[$+]>  $#tcp$@[ $2]$: $1@[ $2]  user@internet address
R<@[$+]>:$*  $#tcp$@[ $1]$: @[$1]:$2  internet address in source route

# resolve SMTP mail to hosts in class S
# R$+<@$=S>  $#tcp$@[ $2]$: $1<@$2>  user@host
# R<@$=S>:$+  $#tcp$@[ $1]$: <@$1>:$2  source route

# pass SAP mail to mlsomail
R$+<@C11.firma.de>  $#sap$: $1@firma.de  Internetmails to R/3
R$+<@C11>  $#sap$: $1@unsere.firma.de  Internetmails to R/3
```

The general rule is that each address which ends with either **@C11 . company . com** or **@c11** is distributed to the SAP mailer. You can use **\$1@company . com** to specify that the address **user@company . com** is forwarded as user argument **\$u** to the mailer.

4.a) Call the section which contains the “trusted user” (user name with prefix **T**):

```
Troot
Tdaemon
Tuucp
```

4.b) Add the user, under which the program **Mlunxsnd** runs. In our example this is the R/3 User **C11adm**:

```
Troot
Tdaemon
Tuucp
Tc11adm
```



Step 4 does not apply to Windows NT. Because a different user and authorization concept is used there, a “trusted user” is not required.

Example for Adapting Sendmail.cf



The following steps are also necessary for **Windows NT** with Metainfo sendmail:

a) Call Ruleset 96:

```
### Ruleset 96 -- bottom half of ruleset 3 ###

S96

# handle special cases for local names
R$<@localhost>$*   $:$1<@$j. >$2
R$<@localhost.$m>$*   $:$1<@$j. >$2
R$<@localhost.UUCP>$*   $:$1<@$j. >$2
R$<@[+]>$*   $:$1<@[2]>$3
```

b) Add an additional line at the start so that a DNS lookup of the R/3 system name is prevented:

```
### Ruleset 96 -- bottom half of ruleset 3 ###

S96
# handle SAPoffice Internet gateway destinations
R$*<@c11$*>   @$1<c11$2>

# handle special cases for local names
R$<@localhost>$*   $:$1<@$j. >$2
R$<@localhost.$m>$*   $:$1<@$j. >$2
R$<@localhost.UUCP>$*   $:$1<@$j. >$2
R$<@[+]>$*   $:$1<@[2]>$3
```

5.a) Save your changes.

In order for your changes to take effect, you must [cancel and restart the sendmail daemon \[Page 43\]](#).

Result

The configuration file **Sendmail.cf** is adapted for your network structure. Internet messages addressed to R/3 users are forwarded to the SAP mailer of the SAP Internet Mail Gateway.

Sendmail Daemon Cancel and Restart

1. Determine the sendmail daemon process using the `ps` command:

```
host% ps -aef | grep sendmail
daemon 143 1 0 Sep 26 ? 0:02 sendmail -bd -q30m
rout 15639 15621 1 06:35:17 tty3 0:00 grep sendmail
```

2. Check - for example by looking at the initialization files (startup files) - how the sendmail daemon runs. On HP UX machines, the initialization files are usually under `/etc/netbsdsrc`.
3. Terminate the sendmail daemon process with the command `kill` and start the process in the same way as before.

```
host% kill 143
Killed!
host% /usr/lib/sendmail -bd -q30m
host%
```

Configuration for AS/400

Configuration for AS/400

Purpose

Before e-mails can be sent or received via the Internet, every SAPoffice user who wants to use this function must have a user for AS/400. This user must be created on the AS/400 computer, on which the SAP Internet Mail Gateway runs. In addition, some AnyMail/400-specific settings must be made, so that messages can be exchanged between SAPoffice and AnyMail/400.

Process Flow

- [Making entries in the system distribution directory \[Page 45\]](#)
- [Make AnyMail/400-specific settings \[Page 47\]](#)

Making Entries in the System Distribution Directory

Use

A user who wants to use SAPoffice Internet mail must have a corresponding user in the AS/400 system. The user must not necessarily have the same name - aliases can also be created.

Under OS/400 the user is entered in the system distribution directory. You must insert a comment which states that Internet mails are handled by SAPoffice. This is necessary to distinguish between users who use SAPoffice as a primary mail system and users who only process mails at an AS/400 level.

The SMTP name is the mail address of a SAPoffice user who wants to use Internet mail (SMTP stands for Simple Mail Transfer Protocol). The entry in the system distribution directory must therefore contain both the SNADS address (SNADS stands for SNA distribution services) and the SMTP address. In order to distinguish a SAPoffice user from other users at an AS/400 level, you must use the user-defined fields.

Procedure

1. In order to add an additional user to the system distribution directory, execute the command **WRKDIR**.
2. Enter in field *User ID/Address* the SNADS address in the form of User ID/Address. (This information is required by the AS/400 system administration)
3. So that AnyMail/400 mails for users who want to use SAPoffice can be correctly forwarded, enter the value 9 (*other mail service*) in field *Mail service level*.
4. Set the next fields to **R3INTMAIL** and ***NONE**
5. Enter the value 9 (*other preferred address*) in the field *Preferred address*.
6. Enter **R3INTADR** in the fields *Address type* and *Field name*. The following screen shows how this entry should look:

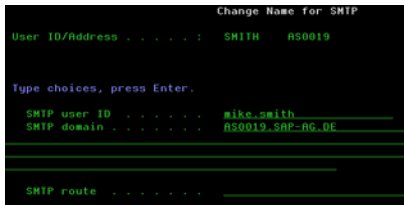
```

Change Directory Entry
User ID/Address . . . . : SMITH  AS0019
Type changes, press Enter.
Mail service level . . . 9                1=User index
                                           2=System message store
                                           4=Lotus Domino
                                           9=Other mail service
For choice 9=Other mail service:
Field name . . . . . R3INTMAIL           F4 for list
Preferred address . . . . 9                1=User ID/Address
                                           2=SR name
                                           3=SMTP name
                                           9=Other preferred address
                                           F4 for list
Address type . . . . . R3INTADR           F4 for list
For choice 9=Other preferred address:
Field name . . . . . R3INTADR           F4 for list
More...
F9=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F18=Display location details
F19=Change name for SMTP  F20=Specify user-defined fields  F24=More keys

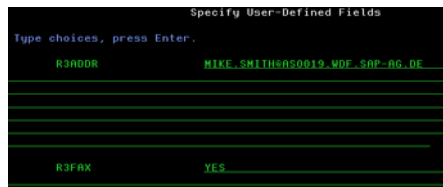
```

7. To enter the SAPoffice user Internet address, choose *Change Directory Entry* F19 (change name for SMTP) from the screen. The address entered here must agree with the address entered in the R/3 System. The following screen is displayed:

Making Entries in the System Distribution Directory



8. Choose **F20** (Specify user-defined fields) to make entries in the user-defined fields.
9. Enter the value entered in the previous screen and in R/3 for the SMTP address in field *R3INTADR*
10. Enter **YES** in field *R3INTMAIL*.



Making AnyMail/400 Specific Settings

Use

Before messages can be exchanged between SAPoffice and AnyMail/400, directories must be created in the stream file system, in which the messages can be temporarily saved. The configuration program MLMSFCFG creates these directories and makes the AnyMail/400-specific settings:

- It creates the configuration file /R3INTMAIL/R3CONFIG.
- It registers the outbound programs.
- It changes the authorizations for the mail programs and the RFC library.
- It defines message types R3INTMSG and R3INTADR.

Prerequisites

You have *SECOFR authorizations.

Procedure



To display possible call parameters for MLMSFCFG, call the program with the option `-h: CALL MLMSFCFG PARM('-h')`

1. In order to generate the configuration for AnyMail/400, call program MLMSFCFG with the following parameters:

```
CALL MLMSFCFG PARM('-a' '-l<R3<REL>IMG>' '-c<ConfigFile>' '-e<Path_to_MLSOMAIL>')
```



The parameters have the following meaning:

<R3<REL>IMG>

Name of the SAP Internet Gateway library. This library must contain all the programs of the SAP Internet Gateway and of the RFC library.

<ConfigFile>

Complete configuration file path for the SAP Internet Mail Gateway, for example `/tmp/r3mgconfig`

<Path_to_MLSOMAIL>

Complete path to MLSOMAIL. As the program MLSOMAIL is found in the kernel library, the path entry appears as follows:

```
/QSYS.LIB/<R3<REL>IMG>.LIB/MLSOMAIL.PGM
```

2. Check whether program MLMSFCFG has been successfully executed by seeing the error messages (for example in the job log) and correcting possible errors.
3. Program MLMSFCFG registers the outbound programs MLADDRSLN and MLLCLDELV:

Making AnyMail/400 Specific Settings

```
QIBM_QZMFMSF_ADR_RSL: MLADDRSLN
```

```
QIBM_QZMFMSF_LCL_DEL: MLLCLDELV
```

In order to check whether the outbound programs have been correctly installed, enter the command **WRKREGINF**.

4. Scroll further until QIBM_QZMFMSF_ADR_RSL or QIBM_QZMFMSF_LCL_DEL is displayed.
5. If you have chosen option 8, you can determine whether the outbound programs are called from the required library.

Options '-p' and '-d' from the configuration program MLMSFCFG enable you to delete the configuration. When you have executed MLMSFCFG with the option '-p', you must manually delete directory /R3INTMAIL.

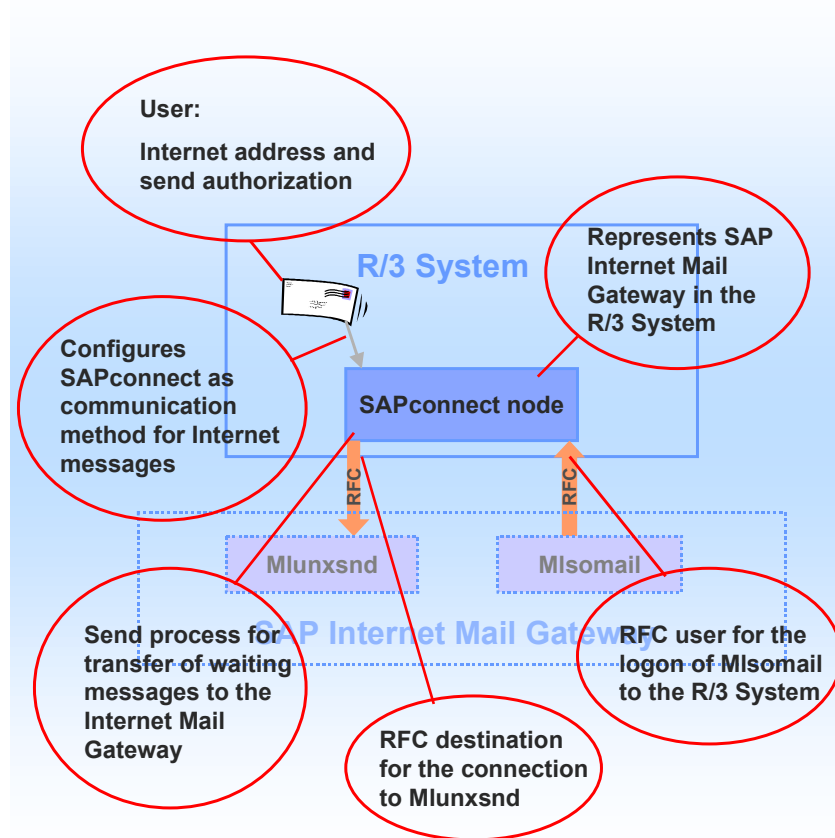
Make Settings in the R/3 System

Purpose

Various settings are made in the R/3 System, which are divided into two groups:

- The system settings for the connection to the SAP Internet Mail Gateway
- The user settings which are the prerequisite for every R/3 user in order to send and receive Internet messages.

The following graphic shows what purpose the individual settings have:



Process Flow

Next make the system settings:

1. [Create RFC user for Mlsomail \[Page 51\]](#)
2. [Create RFC destination for Mlunxsnd \[Page 52\]](#)
3. [Make settings in SAPconnect \[Page 56\]](#)

Make Settings in the R/3 System4. [Make user settings \[Page 61\]](#)

The user settings are prerequisites so that R/3 users can send and receive Internet messages. You can make these settings at any time - even during the production operation. They must however be made for all test users.

Creating an RFC User in the R/3 System

Use

The program **Mlsomail** uses Remote Function Calls (RFC) to access SAPconnect. In order for the program to be able to use the RFC functions, it must next log on to the R/3 System. In this step, you create a user whose information is used for the logon.

You store this data later and the program Mlsomail accesses it when logging on to the R/3 System.

Activities

Create an [RFC user \[Ext.\]](#) with the information which you have entered in the [configuration profile \[Page 28\]](#).



Example of entries for creating the RFC user **mIsomail_rfc**.

Tab page	Field	Example
Address	Last name	mIsomail_rfc
Logon data	Initial password	init/init
	User type	CPIC
Profile	Profile	S_A.SCON

Creating RFC Destinations for Mlunxsnd

Creating RFC Destinations for Mlunxsnd

The entries in this example refer to a fictitious network environment. You must adjust the entries to your environment. For more information on [creating RFC destinations \[Ext.\]](#), see the documentation BC - RFC Programming.

General information

Field	Example entry
RFC destination	SIMG_Mlunxsnd
Connection type	T
Trace	
Description	RFC destination for outgoing Internet messages
Language	
Client	
User	
Password	
Current user	
Unencrypted password (2.0)	

SAP gateway information

If the SAP Gateway is not running on the current application server, you must also specify (by choosing *Destination* → *Gateway options*) the SAP Gateway via which the connection to the Internet Mail Gateway server should be made:

Field	Example entry
Gateway host	hs3333
Gateway service	sapgw00

Further information

If you support *Secure Network Communications*, you can activate this:

Field	Example entry
SNC	inactive

Further information varies depending on which activation type has been selected:

b) Start on an explicit host (recommended)

Field	Example entry
Program	/usr/sap/C11/SYS/exe/run/Mlunxsnd
Target machine	rz0233

Creating RFC Destinations for Mlunxsnd

Store as	IP address
----------	------------



Also choose *Start on an explicit host* if you want to start the SAP Internet Mail Gateway on the local application server. In this case, enter the local host name under Target system.



If you use the [environment variable GWCONFIG \[Page 33\]](#), specify, under Program, the name of the shell script in which you set the variable.

a) Registration

Field	Example entry
Program ID	hs3333.mlunxsnd.c11001



In this case, you must [register \[Ext.\]](#) the program with the SAP Gateway.

After you have entered and saved the information, you can *test the link* .

Registering the Mlunxsnd Program

Registering the Mlunxsnd Program

Use

If you have created an RFC destination with the activation type **registration** for program Mlunxsnd in the R/3 System, you must register the program to an R/3 gateway. The program is then used as the RFC server.


An RFC server registered in the R/3 System maintains a constant connection to an R/3 gateway, which forwards all outgoing RFC calls. The RFC server registers for the R/3 Gateway with a unique program ID, via which the RFC link is identified in R/3.

Activities

You have two possibilities for registering the RFC destination for the SAP Gateway:

- in the file Saprfc.ini
- directly in the command line when [starting program mlunxsnd \[Page 57\]](#).

The following information is specified at registration:

Parameters in the file saprfc.ini	Option when called up directly	Description	Example
DEST		Name of RFC connection	SIMG_Mlunxsnd
TYPE		The connection type is registration R at the activation type.	R
PROGID	-a	User defined name, for example, <host name>.<program name>.<system name><client>	hs3333.mlunxsnd.c11001
GWHOST	-g	R/3 Gateway host name	hs3333
GWSERV	-x	The Gateway service port is usually specified in the form sapgw<system number>.	sapgw00
RFC_TRACE	-t	Specifies whether a trace of RFC connections should be written to the file Dev_rfc.  This file can be very large.	0



Example for the entry in file **Saprfc.ini**:

Registering the Mlunxsnd Program

```
DEST=SIMG_MLUNXSND
TYPE=R
PROGID=hs3333.mlunxsnd.c11001
GWHOST=hs3333
GWSERV=sapgw00
RFC_TRACE=0
```

The file **Saprfc.ini** must be located in the work directory of the program **Mlunxsnd**. Under Windows NT, this is usually the directory in which the program itself is located.

Information on registration via file [Saprfc.ini \[Ext.\]](#) can be found in the documentation BC - The RFC API.

Settings in SAPconnect

Settings in SAPconnect

Purpose

You must specify in the R/3 System that the SAP Internet Mail Gateway should be used for sending Internet messages. At the same time, the communication method Internet is assigned the means of communication SAPconnect.

Every external communication system is represented in SAPconnect with a node. A node must also be put into operation for the SAP Internet Mail Gateway. When the system is in operation, regular send processes must be included which transfer the waiting messages to the SAP Internet Mail Gateway.

For further information, see [Administration of SAPconnect \[Ext.\]](#).

Prerequisites

You have authorization for SAPconnect administration and for maintaining customizing tables.

Process Flow

1. Check whether the means of communication SAPCONNECT is selected in the customizing table *means of communication* for the communication method INT. For further information, see [Sending in the R/3 System \[Ext.\]](#).
2. Create a [node \[Ext.\]](#) for the communication method INT and enter the [RFC destination \[Page 52\]](#) which you have created for program Mlunxsnd (in our example the destination had the name SIMG_Mlunxsnd).
3. Include send processes for address type INT. As a rule, the send processes are created as background jobs. You can also trigger a send process directly in SAPconnect administration during the test phase.

Starting the SAP Internet Mail Gateway

Purpose

In order to put the SAP Internet Mail Gateway into operation, you must start the mailing program. If the activation type *Registration* is used, you must also start the program Mlunxsnd. If you have installed an R/3 stand alone gateway, you must start this. In all other cases, SAP Internet Mail Gateway programs are started automatically.

Prerequisites

If necessary, [set the environment variable GWCONFIG \[Page 33\]](#).

Process Flow

Start mailing program

Unix and Windows NT

The Unix Mailing Program Sendmail is usually started automatically when the system is started. For further information, see your Unix Mailing Program documentation.

OS/400

For information on how you start AnyMail/400, see [Starting AnyMail/400 \[Page 59\]](#).

Start Mlunxsnd (only for registration)

If the program Mlunxsnd is to run with the activation type Registration, it has to be started. The program Mlunxsnd must then register with the SAP Gateway and run constantly.

Registration of Mlunxsnd

Unix and Windows NT

The entry you use to start Mlunxsnd depends on how you [register \[Page 54\]](#) the program:

Registering	Entry	Example
Via the Saprfc.ini	mlunxsnd -D<RFC-Dest.>	mlunxsnd -dSIMG_Mlunxsnd
direct	mlunxsnd -a<ProgramID> -g<Gateway Host> -x<Gateway Service>	mlunxsnd -ahs3333.mlunxsnd.c11001 -ghs3333 -xsapgw00

If you start Mlunxsnd via the shell script in which you set the variable GWCONFIG, the [shell script \[Page 33\]](#) must contain this entry.

OS/400

For information on which entries you use to start program Mlunxsnd under OS/400, see [Starting Mlunxsnd under OS/400 \[Page 60\]](#).

Options for starting Mlunxsnd

The program can be started in the following ways:

Manually

Starting the SAP Internet Mail Gateway

Enter the entry directly in the command line of the SAP Internet Mail Gateway Server. You should only start the program Mlunxsnd manually for test purposes. In production operation it is preferable for the operating system to perform the start.

By the operating system

In production operation, you should let the operating system start program Mlunxsnd . If you register Mlunxsnd via file Saprfc.ini, this file must be in the current directory of Mlunxsnd. In order for Mlunxsnd to be started by the operating system, you must carry out the following activities depending on your operating system:

- **Windows NT:**

You must configure a service which will automatically start program Mlunxsnd. You can set up the service with the help program Srvany, which is contained in the Windows NT Resource Kit. For further information, see the relevant documentation.

- **Unix:**

Start the program Mlunxsnd in the background, for example via /etc/inittab or in the system startup scripts. For further information, see your system documentation.

- **OS/400:**

You can include the Mlunxsnd call in your R/3 start profile. Important: The R/3 System must be running before the commands can be executed.

Start R/3 stand alone gateway (only for Windows NT with start on an explicit host without remote shell)

There are several possible ways of starting the gateway:

Via the SAP service manager

For information, see the SAP service manager documentation.

With direct command entry

Enter: **gwrdr pf=<complete path to gateway profile>**

Start AnyMail/400

Use

The IBM product AnyMail/400 is used to link the SAP Internet Mail Gateway with the IBM AS/400 mail administration.

Procedure

1. Make sure that subsystems `QSYSWRK` and `QSNADS` are active.
2. If this is not the case, start these as follows:
`STRSBS SBS (QSYSWRK)`
`STRSBS SBS (QSNADS)`
3. Check whether the jobs for POP3 and the SMTP mail server are active.
4. Start AnyMail/400 with the following command:
`STRMSF`

Select `F4` to display possible input parameters.

Starting Mlunxsnd under OS/400

Starting Mlunxsnd under OS/400

1. In order to add library QTCP to the library list, make the following entry:
`ADDLIBLE LIB (QTCP)`
2. In order to set the environment variable GWCONFIG, make the following entry:
`ADDENVVAR ENVVAR (GWCONFIG) VALUE ('<configuration file>')`

Enter the file names for the configuration file, which have already been entered as parameters for program Mlsomadm.

3. The entry you use to start program Mlunxsnd depends on how you register the program:

Registering	Entry
Via the Saprfc.ini	<code>SBMJOB CMD (CALL MLUNXSND PARM ('-D' '<RFC-Destination>')) JOB (MLUNXSND) CPYENVVAR (*YES)</code>
direct	<code>SBMJOB CMD (CALL MLUNXSND PARM ('-a' '<RFC_Programm_ID>' '- g' '<Host>' '-x' '<sapgwnn>')) JOB (MLUNXSND) CPYENVVAR (*YES)</code>



<Host> is the host from which the R/3 Gateway runs, <RFC_Program_ID> is the program name that you have defined via transaction SM59, and <sapgwnn> is the gateway service of the R/3 instance (nn stands for the instance number).

3. In order to check whether program Mlunxsnd has been correctly started, execute the following command:
`WRKACTJOB`

Internet Addresses

Use

Internet messages can only be sent with unique addresses which have the following form:

local.part@domain

Messages can only be sent over the Internet if they contain a sender address. Therefore an Internet address must be maintained in the R/3 System address management for all R/3 users who want to receive or send Internet messages.

It is not always the case that the name of the recipient should be identifiable from the Internet address. For example, information can often be requested via the Internet from an address that has the following format:

info@our.company.com

Or the sales department can be reached via an address of the following format:

sales@our.company.com

You can determine which user ultimately receives the messages which are sent to these addresses in [inbound distribution \[Ext.\]](#).



The Internet address is one of the user related settings which is a prerequisite for sending and receiving Internet messages. The other is that the [authorization \[Ext.\]](#) for sending with the communication type *Internet* must be assigned to the users.

Activities

You can maintain the addresses in [user master data \[Ext.\]](#) or in the [Business Workplace \[Ext.\]](#). R/3 users can maintain their own addresses, whereas maintenance of other addresses requires administrator authorization. The addresses must correspond with the form that you gave in the Domain Name System (DNS). For more information, also see the [Notes on addressing mails \[Page 18\]](#).

Testing the Installation

Testing the Installation

Use

Before you put the SAP Internet Mail Gateway into operation, you should test whether or not the installation was successful.

Prerequisite

You have installed the SAP Internet Mail Gateway and the mailing program and adapted them to your network structure.

Procedure



For information on creating, processing and sending documents, see the documentation [BC - Business Workplace \[Ext.\]](#).

Outgoing Internet Messages

Testing the connection R/3→Gateway

First check whether program Mlunxsnd was accessed by the R/3 System, that is, whether the connection via the RFC destination works. Note that program Mlunxsnd must be started and registered for the activation type *Registration*. Proceed as follows:

Choose *Test connection* in the RFC destination display for program Mlunxsnd.

If errors occur, you should check the following settings:

- Is the [RFC destination \[Page 52\]](#) to Mlunxsnd correctly created?
- Is Mlunxsnd running and is it [registered \[Page 54\]](#) to an SAP Gateway of the R/3 System?

Testing the connection Gateway→Mailing

In order to check whether the correct parameters are transferred to the program Mlunxsnd and that the program forwards the messages to the mailing program, proceed as follows:

Set the [trace \[Page 64\]](#) for outgoing messages to level 1. Send a message from the R/3 System via the Internet, for example to an Internet address on your Internet Mail Gateway server.

If errors occur, you should check the following settings:

- If you are using the [environment variable GWCONFIG \[Page 33\]](#): Is the variable defined correctly?
- Is the command for calling the mailing system correctly specified in the [configuration profile \[Page 28\]](#)?
- Is the R/3 user [sender address \[Page 61\]](#) maintained in the address management?
- Has an [SAPconnect send process \[Page 56\]](#) run?

Incoming Internet Messages

Set the [trace \[Page 64\]](#) for incoming messages to level 1. Then send a message to the Internet address of an R/3 user.

If a trace is written, this shows that the mailing program has successfully started the SAP mailer Mlsomail. Check with the help of the Trace file whether Mlsomail contains the following parameters: Path and name of the configuration profile and the recipient address.

If program Mlsomail has not been started, you should check the mailing program [configuration file \[Page 35\]](#).

If the connection to the R/3 System cannot be made, you should check the SAP Internet Mail Gateway [configuration profile \[Page 28\]](#).

Error Analysis

Error Analysis

Use

If faults occur when sending or receiving Internet messages via the SAP Internet Mail Gateway, you should run a trace for error analysis. The trace outputs are written in separate files for incoming and outgoing messages.

The trace outputs are always inserted at the end of the trace files. The files are never made smaller, deleted or archived automatically. This has to be done manually. We therefore recommend that you only set the trace temporarily for error analysis. Do not let it run permanently in productive environments.

Activities

Set the trace in the [configuration profile \[Page 28\]](#). How to call the profile using the program Mlsomadm and change the parameters is described in the procedure [Creating Configuration Profiles \[Page 31\]](#).

Call Up Trace For Inbound Messages

This example refers to the configuration file Sendmail.cf on a HP-UX computer.

1. Load, on the SAP Internet-Mail-Gateway-Server, the file **Sendmail.cf** in a text editor, for example Vi or Emacs.
2. Call up the section in which the SAP mailer is defined and search for a row that begins with **Msap**:

```
Msap, P=/usr/sap/SYS/C11/exe/run/mlsomail,  
F=DFP1Ls, L=990, S=10, R=10, A=mlsomail  
/usr/sap/SYS/C11/profiles/C11_mailconfig $u
```

3. Replace the Mlsomail program call up by calling the shellsript. After the change the section could be as follows:

```
Msap, P=/usr/sap/SYS/C11/exe/run/mlsoscept,  
F=DFP1Ls, L=990, S=10, R=10, A=mlsomail  
/usr/sap/SYS/C11/profiles/C11_mailconfig $u
```

4. Save your changes.

In order for your changes to take effect, you must [cancel and restart the sendmail daemon \[Page 43\]](#).

Error Analysis Measures under OS/400

Error Analysis Measures under OS/400

Use

If you come across errors when sending or receiving messages, you can search for the causes of these errors at OS/400 level.

Activities

Enter the following command in order to display the error messages in the `QSYSOPR` message queue:

```
DSPMSG QSYSOPR
```

In the `QSYSOPR` message queue you find error messages which refer directly to AnyMail/400.

Enter the following command in order to check whether errors occurred during the transfer of a mail from AS/400 to R/3:

```
WRKSPLF QMSF
```



Spool files are not only generated if errors occur, but also every time a message is received in the R/3 System. SAP therefore recommends that you regularly delete the spool files from user `QMSF`.

The `QMSF` jobs run in subsystem `QSYSWRK`. Further information relating to AnyMail/400 can be found in the log files assigned to these jobs.

The spool files for `MLUNXSND` are moved to the spool system of the user who started the program.

If AnyMail/400 cannot call the outbound programs it is possibly due to an authorization problem. The authorization of user `QMSF` must be set to `*USE` in the following programs:

- `MLSOMADM` (SAP Internet Gateway configuration)
- `MLSOMAIL` (processing incoming mails)
- `MLUNXSND` (processing outgoing mails)
- `MLMSFCFG` (configuration of AnyMail/400)
- `MLADDRSLN` (outbound program for AnyMail/400)