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1.   Introduction

BASF relies heavily on email to interact with a lot of business partners. Since confidential information is often exchanged, BASF supports the exchange of encrypted and digitally signed emails.

2.   Signing and encrypting

By digitally signing an email, the recipient can verify the integrity of the email message. It proves that the sender signed the content of the message and that the content has not been altered during transition.

BASF supports cryptographically secured external communications using standardized S/MIME and PGP methods.

Encrypting outgoing emails that contain business-critical content is mandatory when the recipient's trustworthy public key is available. In this case, BASF prefers to use the S/MIME method rather than PGP.

If confidential content should be sent, but there is no trustworthy key available for the intended recipient, the information is kept on hold and not sent. Instead, the information is made available for 30 days on BASF's securEmail WebApp, where it can be viewed, downloaded, and replied to.

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3.   Initiation of secure email communication with BASF

To start secure email communications, your BASF contact sends you an email which is classified as "Confidential". If your key is already available on the BASF Secure Mail Gateway, you will immediately receive the secured email in your personal mail client.

Otherwise, BASF will retain the email that is intended for you. You will receive a notification email signed by the sender with the Subject "BASF Securemail: Respond to Receive an Encrypted Email / Antworten Sie zum Empfangen einer verschlüsselten E-mail" (Fig. 1).

Fig. 1: First Notification Email

4.   Possibilities for encrypted email exchange

There are two options available to enable the secure exchange of emails with BASF:

Option 1: S/MIME or PGP

Option 2: BASF securEmail WebApp

4.1.   Option 1: Encryption using S/MIME or PGP

If you are already using **S/MIME**, simply reply to the notification email and sign it with your S/MIME certificate. Your certificate will be trusted if the issuer certificate authority (CA) is available on the BASF Secure Mail Gateway. Otherwise, it must be validated by the BASF administrator promptly. As soon as this has been done, you will receive the encrypted email in your mailbox. In the rare case that the certificate cannot be trusted, you can register for the BASF securEmail WebApp (see Option 2).

For BASF employees, BASF provides certificates signed by the issuer certificates of the BASF PKI (Public Key Infrastructure).

The root certificate and the intermediate certificates can be found at www.basf.com/securemail, where you can download them, install them in your email client and check the fingerprints of the certificates.

If you are already using **PGP**, please reply to the notification email (fig.1) and attach your public PGP key. Once you provide your PGP key with the reply email, it will be automatically stored on the BASF Secure Mail Gateway and become available for future use.

For BASF employees, the BASF Secure Mail Gateway issues PGP keys which have been signed by our Trusted Introducer. You will find the PGP key of the BASF Trusted Introducer at www.basf.com/securemail. You can download the key from there and import it to your PGP client or check the fingerprint.

4.2.   Option 2: BASF securEmail WebApp

To use the BASF securEmail WebApp system, you need Internet access and a browser. Since 2020, the BASF securEmail WebApp is optimized for mobile devices which you can use as well as your PC or notebook.

Using the BASF securEmail WebApp, the recipient can also transfer valid public S/MIME or PGP key material to BASF. Preferably, however, a signed email should be sent in reply to the notification email which is then used to extract the key material and verify its' trustworthiness.

Requesting to register for the BASF securEmail WebApp is done by clicking on the link in the notification email "Request BASF securEmail WebApp registration" (Fig. 1). You will receive an email from the Administrator of BASF Securemail containing the link to "REGISTER" for the BASF securEmail WebApp (Fig. 2).

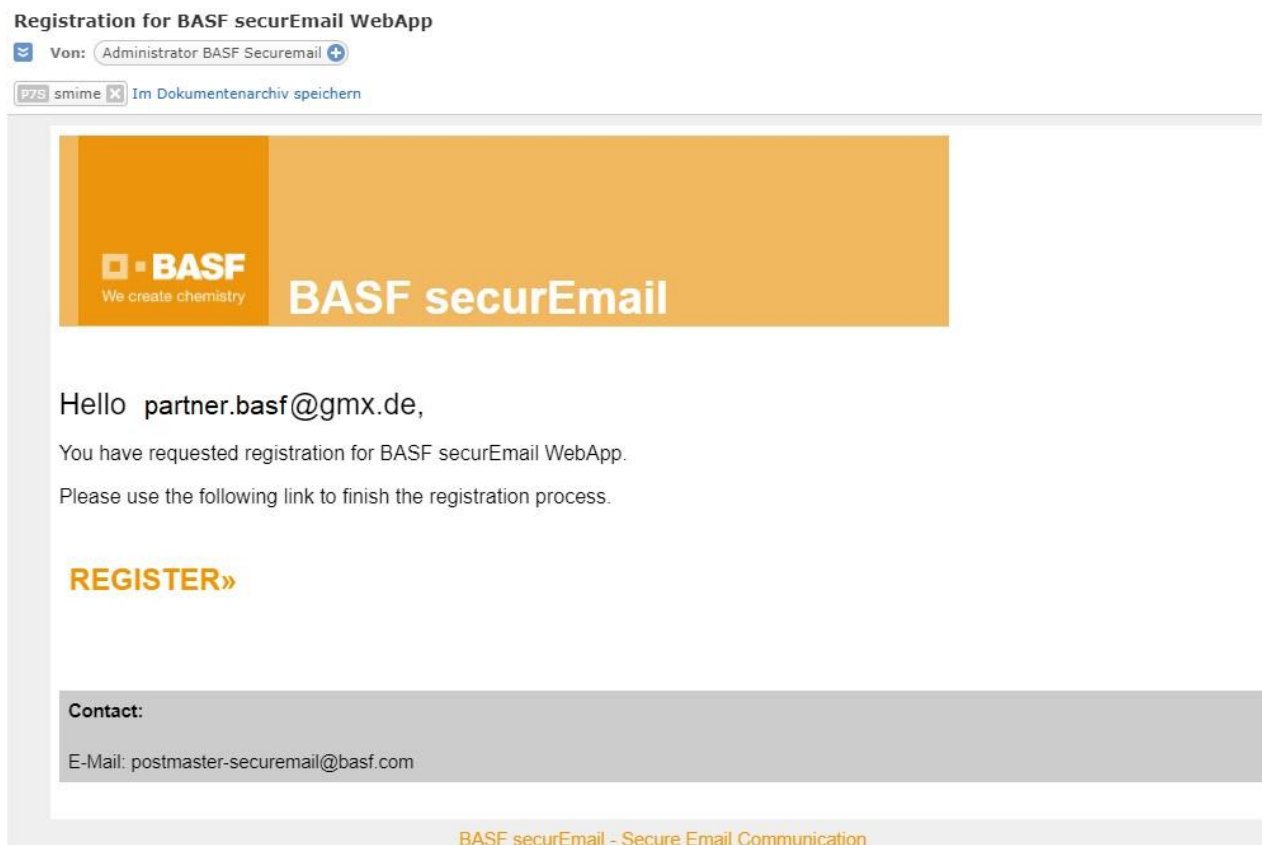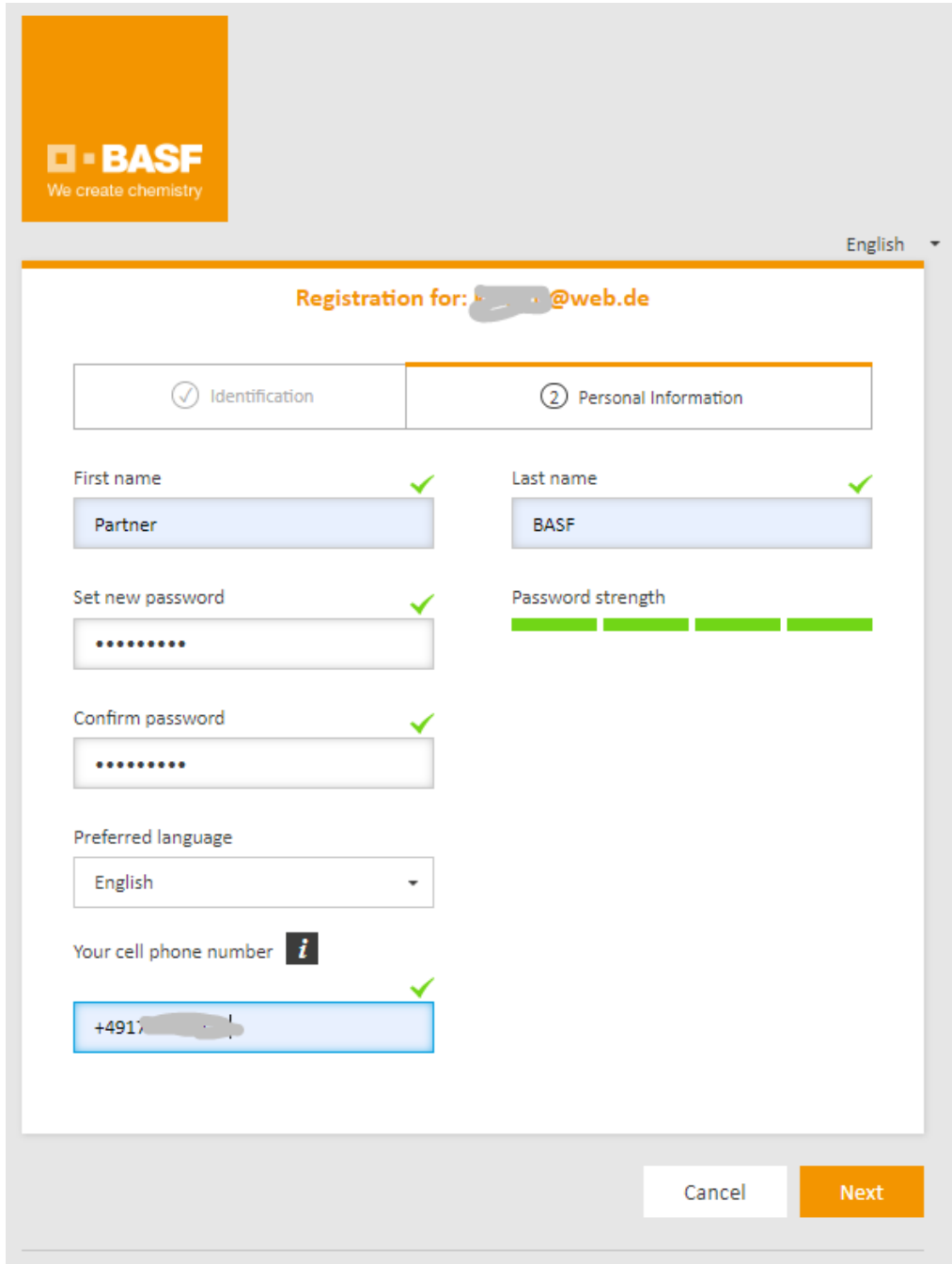### 4.2.1.   Registering for BASF securEmail WebApp

Fig. 2: Notification Email with Register button and One-Time Password

By clicking on "REGISTER", you will be directly prompted to register using your First name, Last name, and to enter and confirm with a password of your choice. The cell phone number is also required to receive a forgotten password by SMS. Also, remember to ensure that your Preferred language is chosen.

Please note that you need to prepend your phone number by your national code (e.g., +1, +49, …) to allow an international connection from Germany.

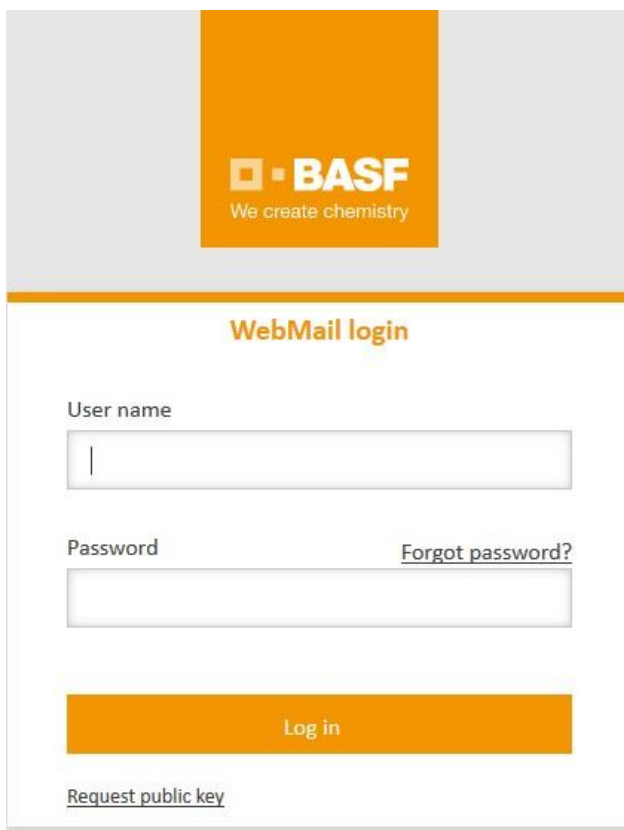The condition for passwords will be displayed (Fig. 3).

Fig. 3: Register with First name, Last name, Password / Cell Phone Number

After filling all required fields, click Next.

4.2.2.   Log in to BASF securEmail WebApp

The login page of the BASF securEmail WebApp then appears (Fig. 4). Here you can log in and download PGP keys or S/MIME certificates of BASF employees.

Please log in with your email address and your chosen password. You can log in anytime using https://securemail.basf.com

Fig. 4: BASF securEmail WebApp Login

After logging in, you will see the Start page of the BASF securEmail WebApp (Fig. 5).
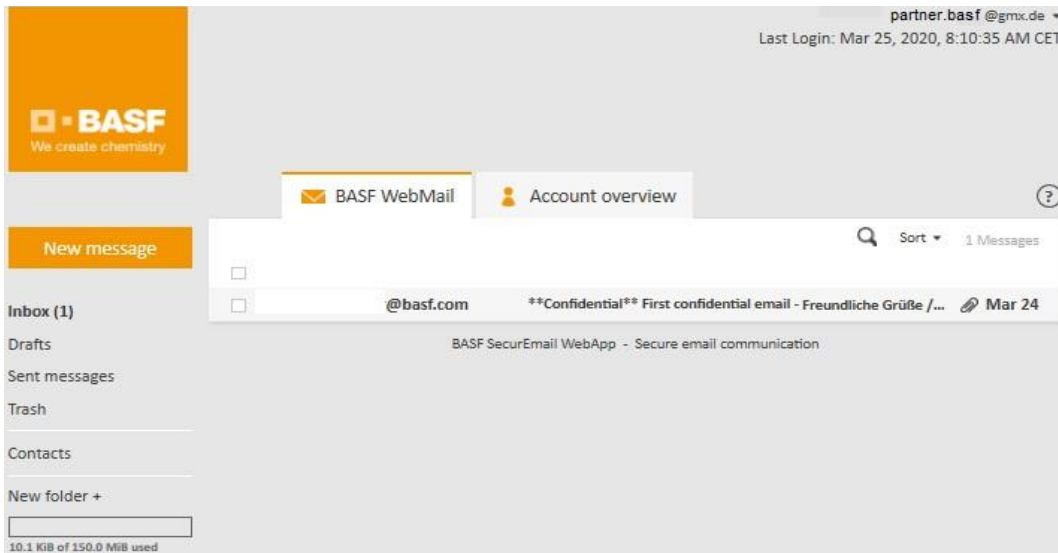
4.2.3. BASF securEmail WebApp mailbox

Fig. 5: BASF securEmail WebApp Inbox

Your messages in the Inbox are listed in chronological order. Messages that have not been read are marked with a closed letter icon

You can access the email from BASF in the Inbox (Fig. 6) by clicking on the email.
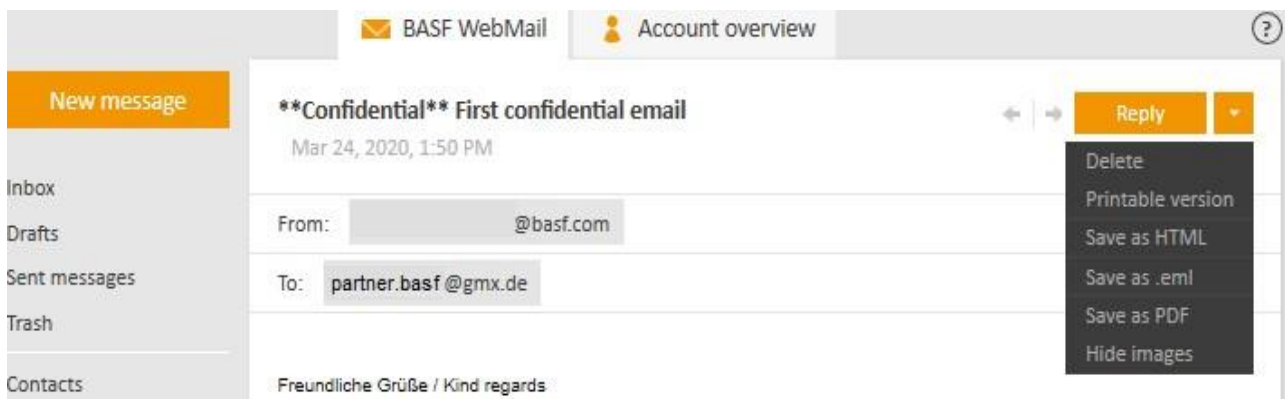

Fig. 6: Selected Email in the Inbox

You can reply, delete, or save the emails in diverse formats on your hard drive by clicking on the drop-down arrow on the right side of your screen. It is also possible to export the emails as an *.eml file so that you can import the emails into your email program (e.g., Microsoft Outlook).

Your emails are kept on the server for 30 days. During this period, you can access the emails via a browser using your user ID (your email address) and password. When a new email arrives in your BASF Secure Email mailbox, you are notified with a message.
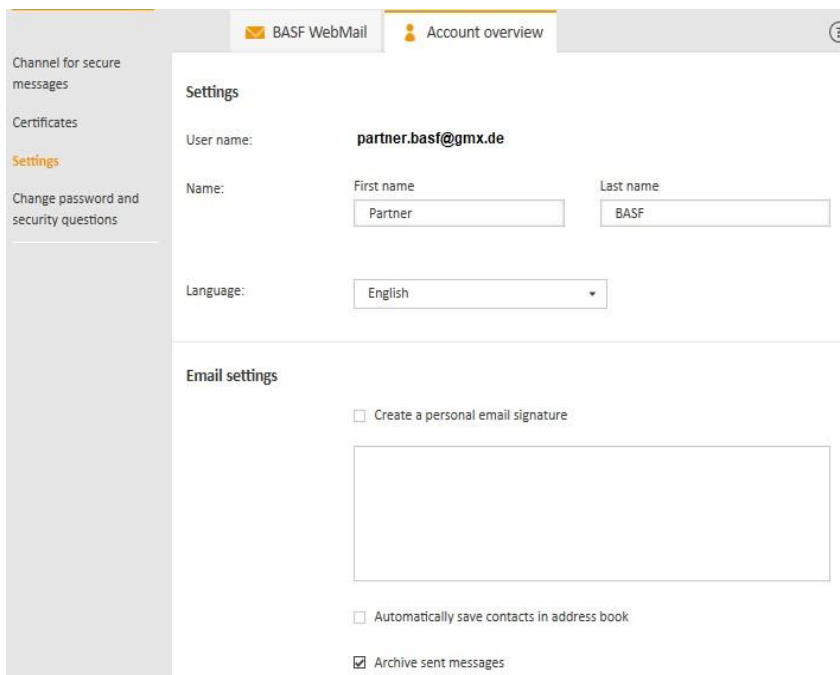
When an email contains an attachment, this is indicated by a paper clip shown next to the email. You can download any file attachments onto your computer.

You can use the "New Message" button to create an email to other BASF employees. This will be sent securely to his/her mailbox.

Use Contacts as a contact list for the BASF employees you communicate with.

4.2.4.   BASF securEmail WebApp Settings

Select the "Account Overview" button to change your settings.

Fig. 7: Account Settings

Here you can, for example, change your password or subsequently upload your S/MIME certificate or your PGP key in the "Certificates" area. Once you have done this you can change the "Security Type" to S/MIME or PGP and you will then receive the next confidential emails encrypted in your mailbox instead of in the BASF securEmail WebApp.After changing the Security Type to S/MIME or PGP, you will receive the next encrypted email from a BASF employee in your mailbox and not in the BASF securEmail WebApp. Your login information will still be valid.

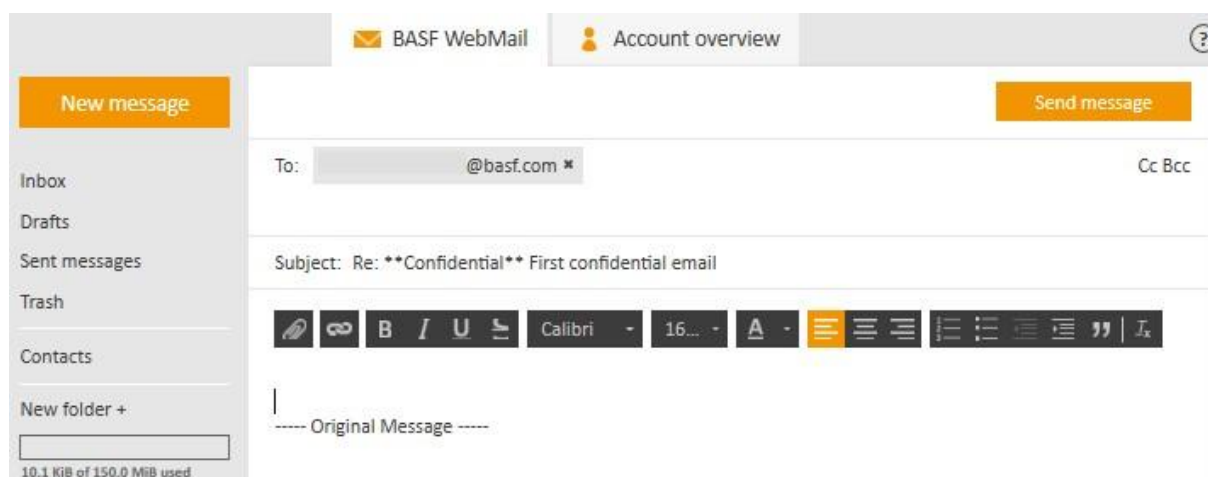## 4.2.5. Responding to an email

Fig. 8: Replying to an email

You can also use the BASF securEmail WebApp interface to send secure messages to BASF. This can be a response to an existing email in your mailbox (Fig. 8), or it can be a new message. You can attach files to any email. The "To:", "Cc:" and "Bcc:" fields only accept valid BASF email addresses. If you want to address multiple people at BASF, their addresses are to be separated by a comma (",") or semicolon (";").

It is not possible to send an email to a non-BASF address. These messages will be rejected.
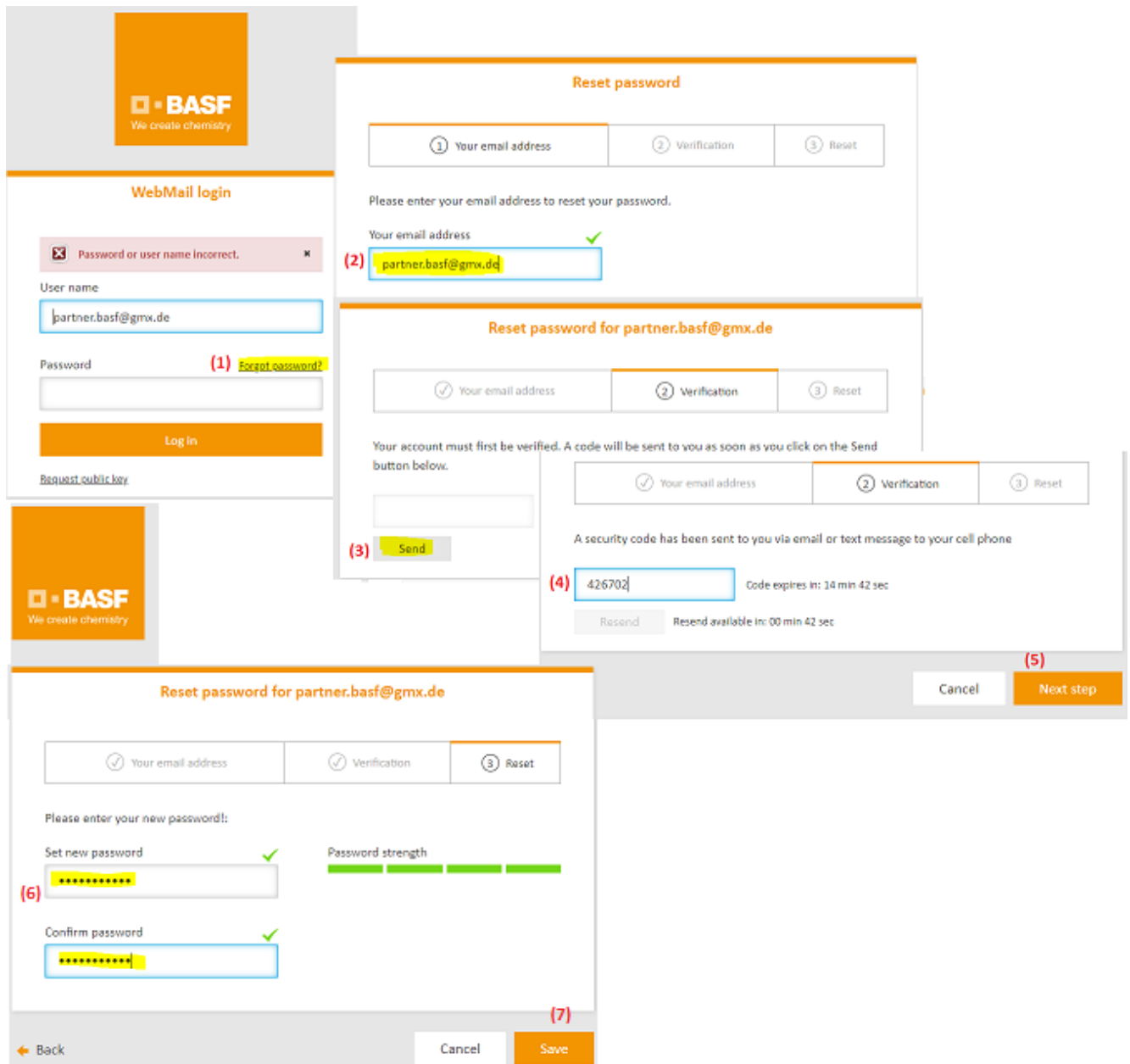
In case you want to send an email to a functional/shared mailbox at BASF, the email will be rejected if there is no S/MIME certificate available for this address. Not all functional/shared mailboxes have S/MIME certificates.

4.2.6. Forgotten Password

In case you have forgotten your password, click on the link below and specify your email address.

You will receive the new password by SMS to the cell phone number you specified during the registration process.

After entering the temporary password, you will be asked to specify a new one.

Fig. 9: Forgot password procedure

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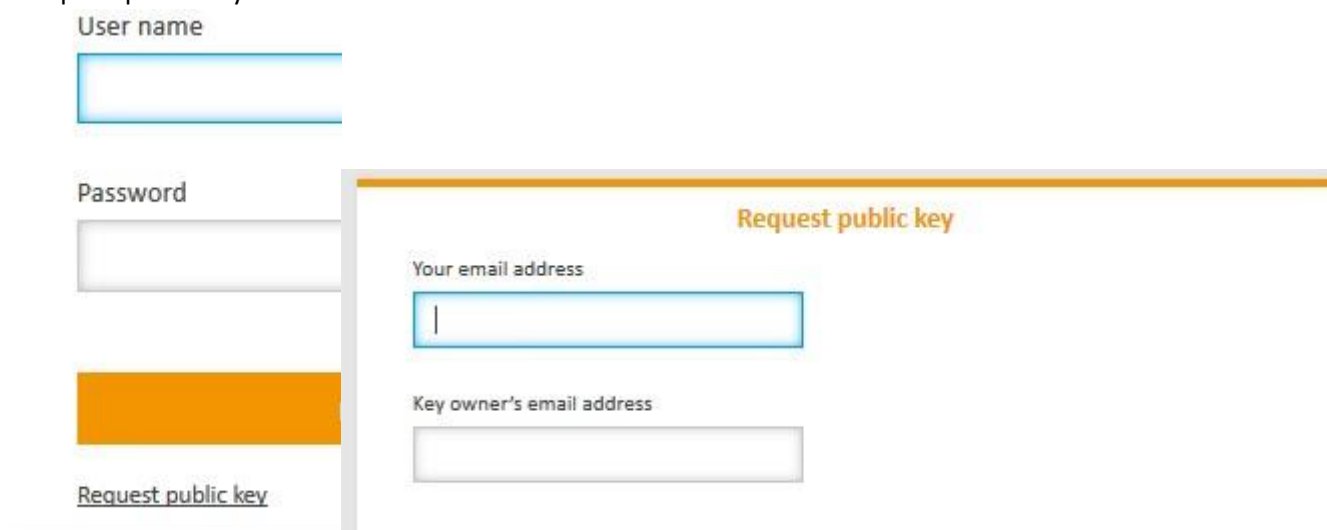
5. Requesting public keys of BASF employees

Secure e-mail communication is normally initiated from BASF. Ask your contact person at BASF to send you a confidential e-mail. This way you will receive his/her certificate automatically.

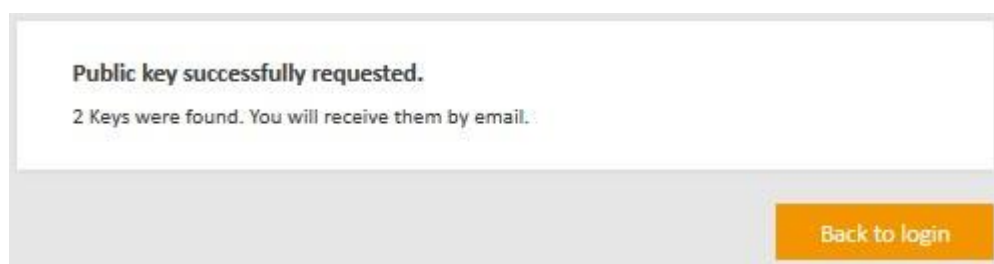However, keys for Secure Mail Gateway users can also be requested manually.

The process is described in the example (Fig. 10). Do not log in on the login page (Fig. 4), but select "Request public key".

Fig. 10: Request public key

After you have entered your own e-mail address and the e-mail address for which you want to request a key, click on "Request Key". The result of your request will be displayed:

Fig. 11: Result of Requesting a key

The S/MIME certificate and the PGP key that you requested for your BASF communication partner is then sent to your personal mailbox (see Fig.11). This is an automated response with the sender address of the person from whom you requested the key.
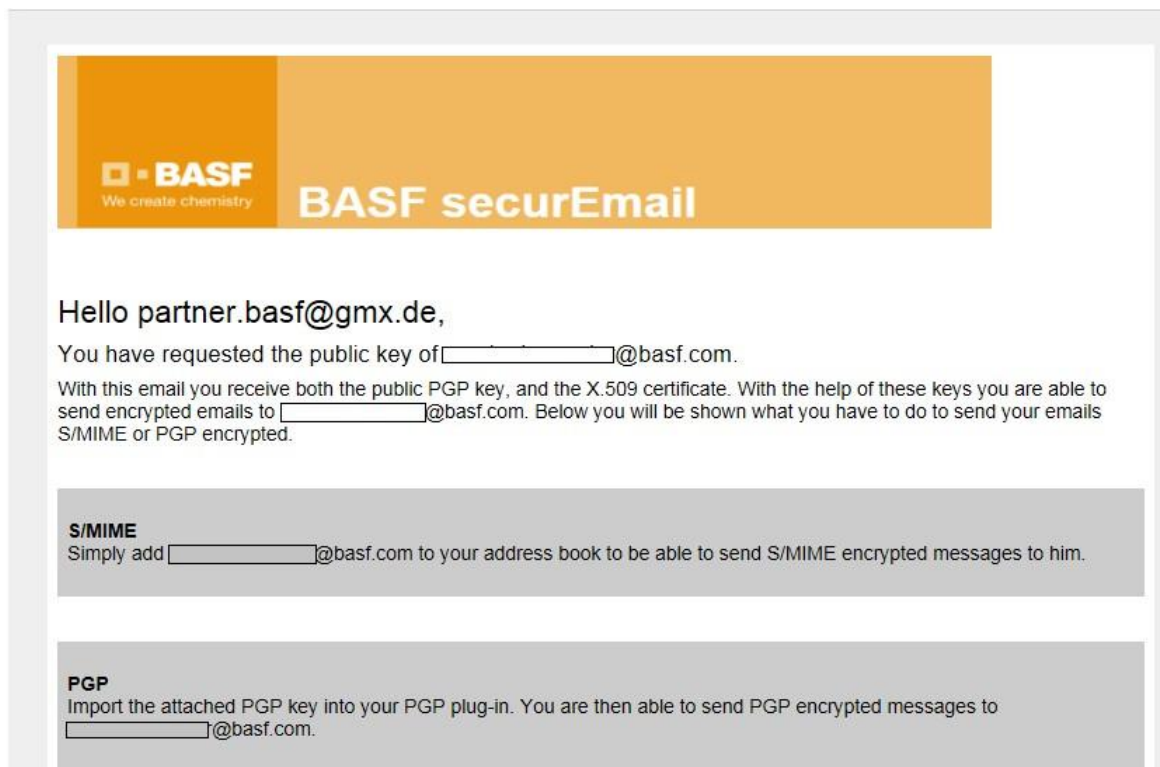
Fig. 12: Received email with keys

This mail contains the PGP public key as a .asc attachment and is S/MIME signed by the sender.

If you use an S/MIME certificate or PGP key for email encryption, you will always receive the emails directly in your personal email client. In this case, the encryption/decryption of messages takes place automatically between your email program and BASF.

In case of problems or questions regarding the BASF Secure Mail service, please contact postmaster-securemail@basf.com