### **Guide for External Parties**



#### 1. Introduction

BASF relies heavily on email to interact with a large number 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 contents of the message and that the contents have 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.

### 3. Initiation of secure email communication with BASF

To start a secure email communication 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 Administrator BASF Securemail with the Subject "Registration to receive a secure message" (Fig. 1).

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Registration to receive a secure message
Von: (Administrator BASF Securemail 🕤
P75 smime 🔀 Mehr Speicherplatz für Anhänge
BAOT SCOULEMAN
Hello partner.basf@gmx.de,
@basf.com has sent you a secure BASF securEmail message.
Please reply with a message signed with your S/MIME certificate or with your OpenPGP key attached.
Don't you have a S/MIME certificate or PGP key? Alternatively, you can register for BASF securEmail WebApp.
Request your BASF securEmail WebApp credentials
Contact:
E-Mail: securemail@basf.com
BASF securEmail - Secure Email Communication

Fig. 1: First Notification Email

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#### 4. Possibilities for encrypted email exchange

There are two different possibilities 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 will be validated by the BASF administrator timely and as soon as this has been done you will receive the encrypted email in your mailbox. In the rare case the certificate can't be trusted, you can register for BASF securEmail WebApp (see Option 2).

For BASF employees BASF provides certificates which are signed by the issuer certificates of the BASF PKI. The root certificate and the intermediate certificates can be found at <u>www.basf.com/securemail</u>, 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 <u>www.basf.com/securemail</u>. 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. Via 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; that email is then used to extract the key material and verify its' trustworthiness.

Register for BASF securEmail WebApp by clicking on the link in the notification email to request your credentials (Fig. 1). You will receive an email containing the link to login to BASF securEmail WebApp and a One-Time-Password (Fig. 2).

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### 4.2.1. Registering for BASF securEmail WebApp

Registration for BASF securEma	il WebApp
Von: (Administrator BASF Securemail (	
P75 smime 🗙 Mehr Speicherplatz für Anhä	nge
<b>BASF</b> We create chemistry	ASF securEmail
Hello partner.basf@g You have requested your cr Please login with your One-Way-	gmx.de, edentials for BASF securEmail WebApp. Password and finish the registration process.
8	User ID partner.basf@gmx.de
$\sim$	One-Way-Password
<u></u>	Adbi8yiB
	REGISTER»
Contact:	
E-Mail: securemail@basf.com	
	BASF securEmail - Secure Email Communication

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

By clicking on "REGISTER" you will be directly prompted to insert and confirm a NEW password of your choice. The condition for passwords will be displayed (Fig. 3).

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a Ballona		
Silling S		
User Information		
You have been auto-registered. To ac	cess the secured email that was sent to you, please fill out the fields below and submit	this form.
0.0211		
User ID:	partner.bast@gmx.de	
Full Name:	partner.basf@gmx.de	
New Password:		
Confirm Password:		
Language		
Languago		
The password must contain at least 6	and at maximum 15 characters	
It must contain at least one letter, at le	ast one number and one upper case letter.	
		Submit Cano

Fig. 3: Entering Password of your choice

After inserting your chosen password in the New Password and in the Confirm Password field, press Submit.

### 4.2.2 Login to BASF securEmail WebApp

The Login page of BASF securEmail WebApp then appears (Fig. 4). Here you can login and also 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

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User ID: partner.basf@gmx.de Password:   Cogin  Password? Request a Public Key  Login	Log	gin				
	User Pass	r ID: [ sword: [	partner.basf@gmx.de	♠	Forgot Password?	Request a Public Key



After logging in you will see the Start page of BASF securEmail WebApp (Fig. 5) which shows the Overview.

D - BASF We create chemistry BAS	SF securEmail We	ebApp		RACE
Overview New Messane	Overview (Last Log	in: May 27, 2016 10:28:5	5 AM CEST)	
inclu message				
Inbox Drafts	Subfolders	Emails	New Emails	Size
nbox Drafts Sent Messages	Subfolders	Emails 1	New Emails	Size 7.4 kB
nbox Drafts Sent Messages Trable	Subfolders Inbox Sent Messages	Emails 1 0	New Emails 1 (7.4 kB ) 0 (0 B )	Size 7.4 kB 0 B
nbox Drafts Gent Messages Fushi Preferences	Subfolders Inbox Sent Messages Drafts	Emails 1 0	New Emails 1 (7.4 kB ) 0 (0 B ) 0 (0 B )	Size 7.4 kB 0 B 0 B
nbox phox prafts Sent Messages Trabli references	Subfolders Inbox Sent Messages Drafts Trash	Emails 1 0 0 0	New Emails 1 (7.4 kB ) 0 (0 B ) 0 (0 B ) 0 (0 B )	Size 7.4 kB 0 B 0 B 0 B
Inbox Drafts Sent Messages Trasli Preferences	Subfolders Inbox Sent Messages Drafts Trash Total:	Emails 1 0 0 0 1	New Emails 1 (7.4 kB ) 0 (0 B ) 0 (0 B ) 0 (0 B ) 1	Size 7.4 kB 0 B 0 B 0 B 7.4 kB / 150 MB
Inbox Drafts Sent Messages Trash Preferences	Subfolders Inbox Sent Messages Drafts Trash Total:	Emails 1 0 0 0 1	New Emails 1 (7.4 kB ) 0 (0 B ) 0 (0 B ) 0 (0 B ) 1	Size 7.4 kB 0 B 0 B 0 B 7.4 kB / 150 MB

Fig. 5: Your BASF securEmail WebApp mailbox

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#### 4.2.3. BASF securEmail WebApp mailbox

Select Inbox to show the emails which are stored for you on the secured WebApp server.



Fig. 6: BASF securEmail WebApp Inbox

Your messages are listed in chronological order in your inbox (Fig. 6). By clicking on the subject line or on the envelope icon, you can open the corresponding message. Messages that have not been read are indicated by a closed envelope.

You can now access the securely sent email in the Inbox (Fig. 7).

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C = BASF We create chemistry	BASF securEmail W	/ebApp	Logout
Overview New Message Inbox Drafts Sent Messages	Mail From: Reply Save as html	@basf.com) Delete Save as eml Save as PDF	Printable Version Show Images
Trash	From: To: Subject: Priority: Sent: Dear	<pre></pre>	

Fig. 7: Selected Email in the Inbox

As you can see in the menu you can now reply to this email, delete or save the email in diverse formats on your hard drive. 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).

Please notice that the mail is kept on the server for 30 days. During this period, you can access the emails at any time 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 sender's name. 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.

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#### 4.2.4. BASF securEmail WebApp Preferences

Select the "Preferences" button to change your settings. You can change your password here. By selecting "Certificates" you can upload S/MIME or PGP keys in case you prefer one of those encryption methods. Don't forget to delete outdated keys.

You can also change your User Preferences as shown in Fig. 8.

Overview	User Preferences		Help
New Message Inbox Drafts Sent Messages	Apply Changes		
Trash Preferences User Preferences Change Password Certificates	User ID: Full Name: Security Type:	partner.basf@gmx.de partner.basf@gmx.de BASF securEmail WebApp S/MIME	
	Language	● PGP English ▼	
	Archive sent messages: Receive notifications:	<ul> <li>✓</li> </ul>	

Fig. 8: User Preferences

If you want to change the Security Type to S/MIME or PGP you must have uploaded your certificate before. After changing the Security Type to S/MIME or PGP and clicking on Apply Changes you will receive the next encrypted email from a BASF employee in your mailbox and not in BASF securEmail WebApp. Your login information will still be valid.

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#### 4.2.5 Responding to an email

Overview New Message	Rep	ly																			н	lelp	
Inbox Drafts Sent Messages Trash Preferences	To: Cc: Bcc:	Sen	d Mes	ssage		Sav @basf	e i.com		Attach	nents		Sł	iow In	nages	Pri Re	ority: ad Cor	⊖ L nfirma	Low (	Nor	mal 🤇	Higl	h	
Change Password Certificates	Subje Mess	ect: age:	4	RE:	**Confidenti:	al** Th	is e-mail s	hould	l be sent	encrypt	ed	3 53	A	• A	•								
	B Dea	<i>I</i> Ori ar	<u>U</u>	<del>S</del> Mess	Paragraph	•	Font Famil	у -	Font S	zes	•	F			Ζ <sub>×</sub>							4	

Fig. 9: 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. 9), 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; consequently, any message containing such an address will be rejected.

### 5. Requesting public keys of BASF employees

If you use S/MIME or PGP encryption, you need the public key that your communication partner at BASF uses. This key enables you to establish encrypted communication. You can request the public key from BASF via the following link: URL: <u>https://securemail.basf.com</u>

BASF won't provide S/MIME certificates and PGP keys for all employees here. Only keys of users of the Secure Mail Gateway can be downloaded.

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Therefore BASF recommends to always initiate secure email communication on the BASF side. Please ask your contact person to send you a confidential email. In that way you will always receive his/her certificates automatically or you can reply using BASF securEmail WebApp.

The procedure for requesting a public key is described in the example provided in Fig. 10 below. In the login page (Fig. 4) don't log in but select "Request a Public Key".

Request a Public Key	
To send an encrypted messag key.	ge to a recipient, you require his or her public
Please follow these steps:	
<ul> <li>Enter your email addres</li> <li>Enter the email addres the Key Owner".</li> <li>Click the "Request a P</li> <li>If any keys are found, the second second</li></ul>	ess in the field "Your Email Address". Is of the recipient in the field "Email Address of ublic Key" button. they will be sent to you by mail.
Your Email Address	partner.basf@gmx.de
Email Address of the Key Owne	er vour.contact@basf.com ×
	Request a Public Key Go To Login

Fig. 10: Replying to an email

After entering your own email address and the email address for which you want to request the key, click on "Request a Public Key". The result of your request will be displayed:

Request a Public Key

You will receive the public key per email.

Fig. 11: Result of Requesting a key

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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.12). This is an automated response with the sender address of the person from whom you requested the key.

BASF We create chemistry	BASF securEmail	
Hello partner.ba You have requested t With this email you receiv send encrypted emails to S/MIME or PGP encrypted	sf@gmx.de, he public key of@basf.com. e both the public PGP key, and the X.509 certificate. With the help of these keys yo @basf.com. Below you will be shown what you have to do to send d.	ou are able to I your emails
S/MIME Simply add		ges to him.
PGP Import the attached PGF @basf.c	P key into your PGP plug-in. You are then able to send PGP encrypted messages to com.	)

Fig. 12: Received email with keys

This mail contains the PGP public key as an .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 the messages takes place automatically between your email program and BASF.

To be able to use this option, you must have an S/MIME certificate or a PGP key. To set things up, please respond to the registration email and sign this response with your S/MIME certificate or attach your public PGP key. That enables the exchange of the public keys for both communication partners. The BASF Secure Mail Gateway verifies your signature and your public key. If they are valid, the confidential message is sent to you immediately in the form of an S/MIME encrypted message or a PGP encrypted e-mail.