How to quickly establish secure chats with QR codes

Delta Chat has a QR-code based mechanism for inviting people to a chat, without needing to first exchange phone numbers or e-mail addresses. You can use it to establish one-on-one chats or to let people join a group.

You can create and share invite QR codes in messages, on your website, social media platforms or print it on your business card. Other Delta Chat users can then scan or load it and start an end-to-end encrypted conversation quickly and conveniently.

In this document we first explain how to scan QR codes on Android and Desktop, and then explain how to create QR codes for yourself or for a group chat.

Requirements

All chatting parties need Delta Chat installed on their Android, Desktop or iOS device. While this Howto only shows screenshots from Android phones and Desktop, iOS devices support all necessary functionality as well.

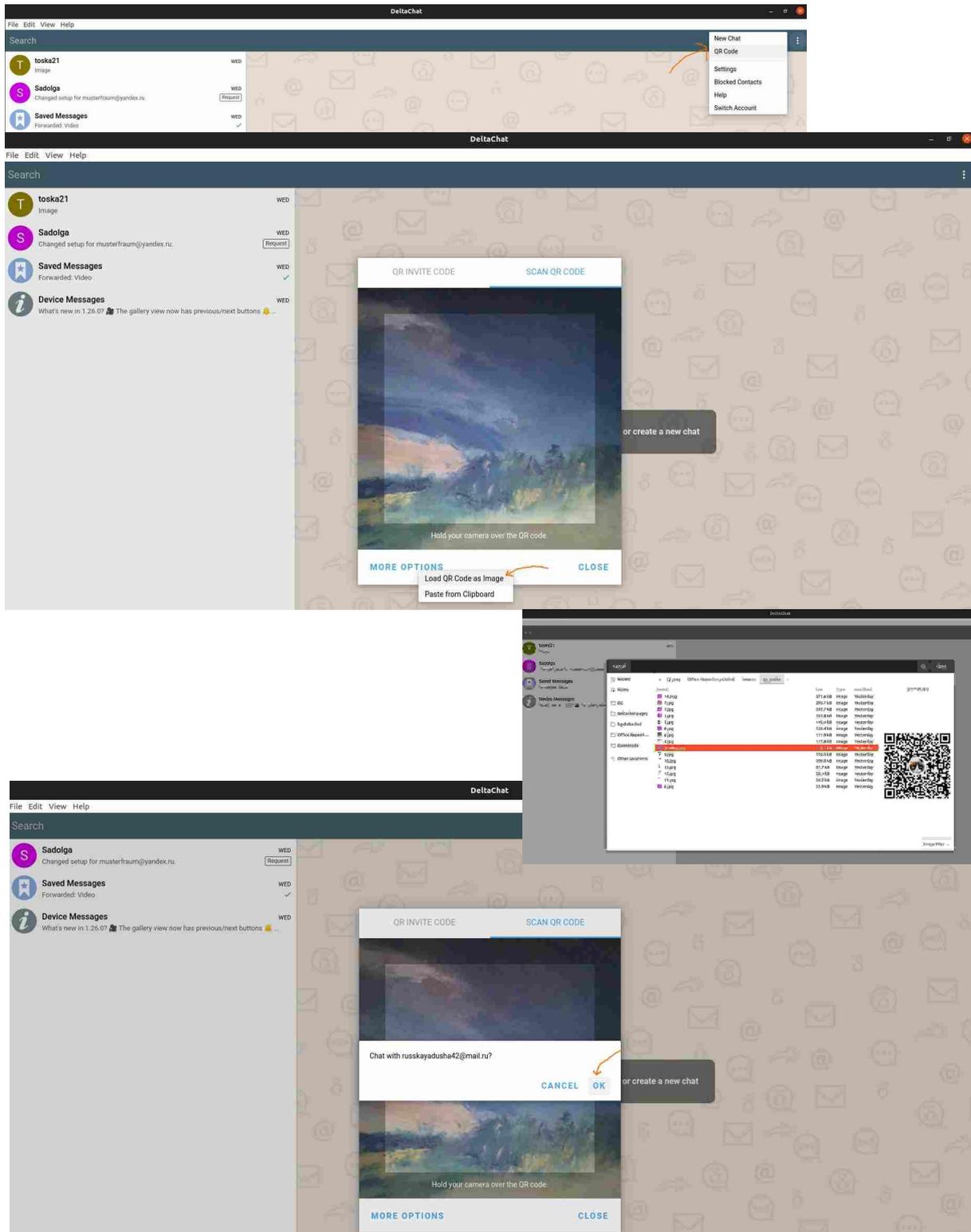## Start a chat by scanning a QR invite code

- tap on the QR Code symbol (upper right corner/ in iOS lower left corner/ menu on Desktop)

- tap on SCAN QR CODE and focus the camera on an QR invitation image ...

- after QR code detection read the message and tap OK to confirm. A new Chat window opens and you can start chatting :)

- if the inviter device is online you should soon see a "toska21 verified" message and a blue check mark indicating communications will be end-to-end encrypted (see the final paragraph at the end of this document on what verification means)
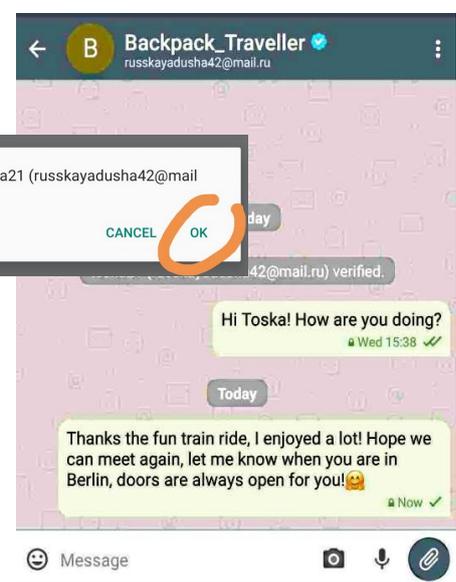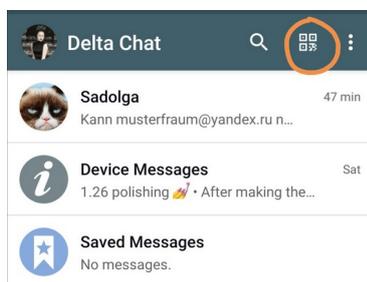
Open Chat via QR Code without camera on your Desktop

- if you have a QR code saved as an image on your computer, you can use the Delta Chat Desktop app to start a chat without needing a camera

- in Delta Chat go to menu, click on *QR Code*, then click on **SCAN** *QR CODE*

- click on *MORE OPTIONS* (lower left corner), click on *Load QR Code as Image*

- a window opens and you can chose and click on the image from your computer

- click *OK* if you want to start a chat

Create an invite code for a personal one-on-one chat

- tap on the QR Code symbol (upper right corner/ in iOS lower left corner/ menu on Desktop)

- tap on QR INVITE CODE and show it to a person next to you who scans it, or take a screenshot yourself and share the invite code on your web page, social media or business card.
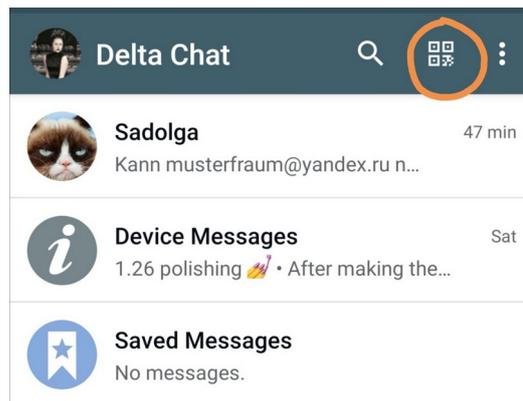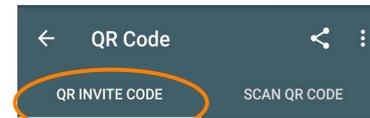
Create and scan invite codes for group chats

- in Delta Chat tap the group chat for which you want to create an invite code

- tap the group's name (at the top, next to the group's picture)

- tap QR Invite Code and share it with someone who wants to join the group by scanning the invite code.
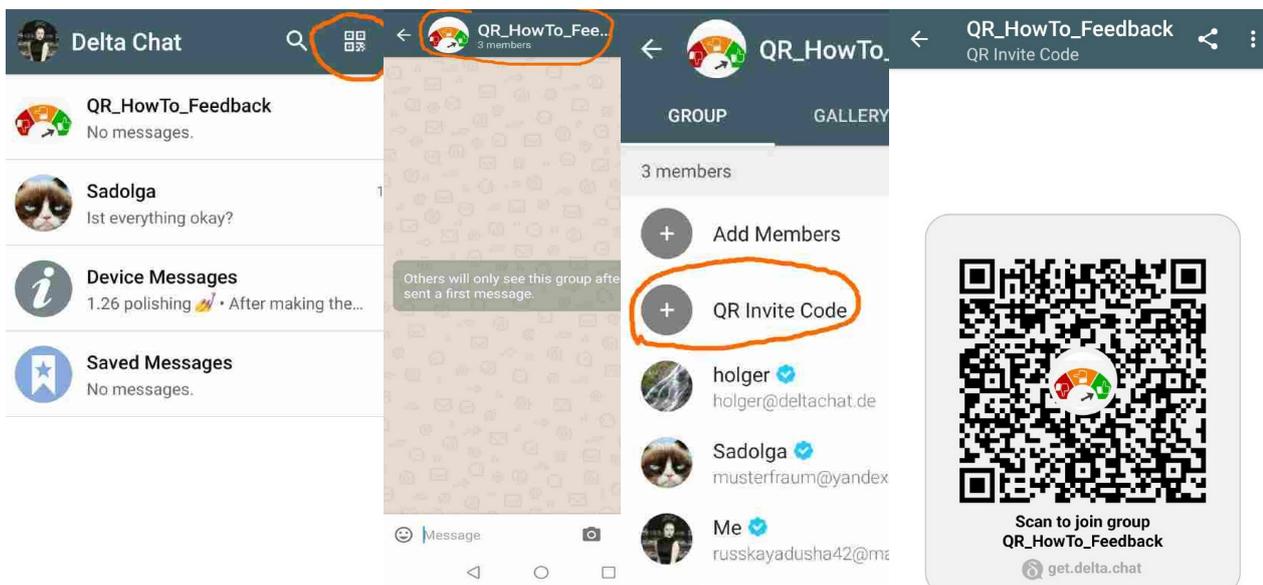
Printing your QR CODE

You may print your QR Invite code on your business card or put it on your car or website – beware that contacting you will only work reliably if you use the device where you created the invite code.

Note your the invitation device needs to be online in order to acknowledge the invitation or group-joining operation. If a device is not online, group join-requests might get lost, in this case just try scanning again later.

Activating invite code on a second device

If you are using additional devices with the same Delta Chat account you need to **scan your Invite code from your print out** with the additional devices. This ensures that only one of the devices needs be online. We are working on improving this process so that this additional scanning will not be needed anymore in the future. (Dec.2021)

Deactivating an (old) invite code

If you shared a QR invite code publicly and are starting to receive unwanted messages you may deactivate invite codes (both personal or group chats) **by scanning the published code** with the same device you used to create the code.

Delta Chat will ask you whether you want to de-activate this QR code. If you later decide you want to re-activate the QR invite code you can scan it again to and confirm re-activation.
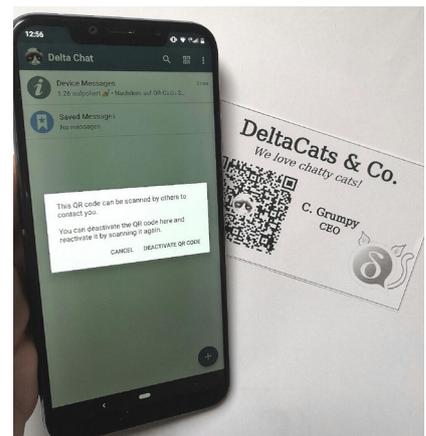
"verified groups" and blue checkmarks

Delta Chat has experimental support for "verified group" chats which always enforce encryption which is even safe against compromised servers and active network attacks. Delta Chat' QR-code scanning executes the COUNTERMITM security protocol that leads to blue check-marks (similar to Twitter) for both the scanning and the inviter side.

Note that blue checkmarks are not a guarantee that the person contacting you is the one who they appear to be. There is a possible attack known as an "impersonation": an attacker might clone an existing Avatar and Display name to try to trick you into into believing to be someone else. While you might know the correct e-mail address and become suspicious it is recommended to only join people into a "verified group" during an online session in a second channel, for example a video chat or an in-person meeting. Delta chat does currently not try to prevent you from "unsafely" scanning QR and accepting invite codes. We hope to do further user testing and gather experiences from issues before improving things further in this area.