KopanoMeet

Release 1.0

Kopano BV

May 01, 2020

Contents

This document, the Kopano Meet manual provides administrators with information on how to install and configure the Kopano Meet for WebRTC calls and conferences.

CHAPTER 1

Introduction

Kopano Meet is the successor of the Spreed based Kopano Web Meetings. It has been newly developed from the ground up to make use of web browser improvements of the last years (better WebRTC connection handling, built as a Progressive Web App in React, mobile support).

This documentation will focus on the most important aspects of getting Kopano Meet up and running.

CHAPTER 2

Installation

The required packages for Kopano Meet are available for the following distributions (some more distributions may be available through the Kopano nightly downloads):

- Debian 9.0
- Ubuntu 16.04
- Ubuntu 18.04
- Univention >=4.3 (through the Kopano Meet app)

Note: Support for rpm based distributions such as SLES 12, SLES 15 and RHEL 7 will be added later on. As some of the components of Meet rely on the availablility of Python 3 and therefore we cannot deliver these packages at the moment.

Note: The below instructions do not apply when installing Meet through the Univention Appcenter.

2.1 System requirements

- Kopano Grouware Core >=8.7.0

2.2 Installation

The packages can either be retreived from the Kopano package repository (available only to customers with a valid Kopano subscription) or downloaded as an archive including the latest development versions from the Kopano Community downloads. The following chapter will explain the installation through the Kopano package repository.

2.2.1 Configuring the Kopano package repositories

The package repository can either be accessed by using a combination of username & password (account can be registered at the Kopano Portal or by using the username `serial` and your Kopano serial (e.g. `Z...`) as the password.

The repository url to be used depends on the release type (final releases and pre-final releases, e.g. beta or rc versions) and the Linux distribution. It is recommended to visit https://download.kopano.io/supported/meet:/ with a webbrowser and navigate to the desired release type and distribution and copy the url. For the final release channel and Ubuntu 18.04 the url will for example be https://download.kopano.io/supported/meet:/final/Ubuntu_18.04/.

Adding the repository for Ubuntu 18.04:

```
URL=https://meetserial:your-serial@download.kopano.io/supported/meet:/final/Ubuntu_
↪18.04/
echo "deb $URL /">> /etc/apt/sources.list.d/kopano-meet.list
curl $URL/Release.key | apt-key add -
apt update
```

Customers that have purchased a Meet subscription key use the username “meetserial” and their subscription key as the password. Customers who have also purchased another Kopano product can use “serial” as the username and their subscription ket as the password.

See the Kopano Core Administrator Manual for more information about our package repositories.

2.2.2 Installing Meet and its dependencies

After the repository has been added Meet can be installed by retrieving the `kopano-meet-packages` meta package with your package manager.

Installing packages on Ubuntu 18.04:

```
apt install kopano-meet-packages
```

2.2.3 Configuring Kopano Meet and its dependencies

To get started with Kopano Meet, a couple of extra services need to be configured. All required configuration for them can be seen further down in this manual. For more information about individual configuration please check the corresponding manual.

- Your webserver (we recommend to use *kopano-kwebd*) provides both external access and helps the individual services talk with each other
- Kopano Konnect manages authentication and authorisation for Meet through OpenID Connect
- Kopano API (together with the *kopano-grapi* package) provides data access to the users address book via a REST API
- Kopano Web Meeting Server provides the signaling server for the WebRTC connections
- Kopano Meet webapp provides the files for the user facing part of Kopano Meet
- Kopano Server needs to be configured to support login via Konnect

The webserver (as well as the used ssl certificate) play an important role in this setup, since the individual services need to be able to talk with each other over http(s). For this both the hostname needs to resolve to the local system (and not be `localhost`), as well the used ssl certificates need to be trusted by the local system.

2.2.4 Webserver configuration

The preferred and fully supported way to install Kopano Meet is by utilising the new "Kopano Web" server. This webserver will automatically create a secure (SSL via Let's Encrypt) and performant setup for most scenarios. For special environment it is also possible to use another webserver like Nginx or Apache. For such environment configuration examples have been added below. Using Kopano Meet with Apache, Nginx or another webserver only has limited support coverage.

Kopano Web

Using Kopano Web is the recommended way to run Kopano Meet. Kopano Web is a minimal self contained webserver, apart from drastically reducing complexity for the initial configuration, it also improves security by automatically handling SSL/TLS certificates, managing security and performance related webserver settings (like HSTS, HTTP/2).

When installing Meet via the `kopano-meet-packages` meta package, Kopano Web is already installed and just needs to be configured and started.

Configuration is done through `/etc/kopano/kwebd.cfg` and in a mimal setup the only values that need to be modified are `hostname` (which needs to match the hostname the system should be accessible from) and `tls_acme_email` which needs to be a valid email. This email is required by Let's Encrypt for creation of your personal ssl certificate.

```
systemctl enable kopano-kwebd
systemctl start kopano-kwebd
```

I already have a valid SSL certificate that I want to use for Kopano Web

Kopano Web can easily be configured to use a pre-existing ssl certificate by configuring the options `tls_cert` and `tls_key` within `/etc/kopano/kwebd.cfg`. As Kopano Web by default runs as the user and group `www-data` you have to make sure that this user can read these files.

```
# TLS certificate bundle.
# Path to a TLS certificate bundle (concatenation of the server's  certificate
# followed by the CA's certificate chain). If set, the TLS listener will use
# that certificate instead of trying automatic TLS.
#tls_cert =

# TLS private key.
# Path to the server's private key file which matches the certificate bundle. It
# must match the certificate in tls_cert.
#tls_key =
```

I have only one public IP, how can I integrate Kopano Web with my existing Apache/Nginx setup?

Kopano Web has a special mode, where it can proxy requests to `/webapp/`, `/Microsoft-Server-ActiveSync` and `/AutoDiscover/AutoDiscover.xml` to another webserver.

```
# Legacy support.
# To make integration into existing environments easier kwebd can act as a
# reverse proxy to allow serving requests Kopano WebApp and Z-Push running e.g.
# in Apache or Nginx. Set the address to the legacy web server here. Not set by
# default.
#legacy_reverse_proxy = 127.0.0.1:8000
```

Nginx

Outside of the `server` block:

```
upstream konnect {
        server 127.0.0.1:8777;
}

upstream kapi {
        server 127.0.0.1:8039;
}

upstream kwmserver {
        server 127.0.0.1:8778;
}
```

inside the `server` block:

```
location /.well-known/openid-configuration {
        proxy_pass http://konnect/.well-known/openid-configuration;
}

location /konnect/v1/jwks.json {
        proxy_pass http://konnect/konnect/v1/jwks.json;
}

location /konnect/v1/token {
        proxy_pass http://konnect/konnect/v1/token ;
}

location /konnect/v1/userinfo {
        proxy_pass http://konnect/konnect/v1/userinfo;
}

location /konnect/v1/static {
        proxy_pass http://konnect/konnect/v1/static;
}

location /konnect/v1/session {
        proxy_pass http://konnect/konnect/v1/session;
}

location /signin/ {
        proxy_set_header Host $host;
        proxy_set_header X-Forwarded-Proto $scheme;
        proxy_set_header X-Forwarded-Port $server_port;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_pass http://konnect/signin/;
}

location /api/gc/ {
        proxy_pass http://kapi/api/gc/;
}

# kapi pubs
location /api/pubs/ {
        proxy_pass http://kapi/api/pubs;
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "Upgrade";
}

# disable caching for the service-worker
location /meet/service-worker.js {
        expires -1;
}
```

```
location /meet {
        rewrite ^/meet/r/(.*)$ /meet last;
        alias /usr/share/kopano-meet/meet-webapp;
}

location /api/config/v1/kopano/meet/config.json {
        # When using default values this setting can be kept as it is
        # please adapt the next line and copy config.json to
        # /etc/kopano if user modifications are needed
        alias /usr/share/doc/kopano-meet-webapp/config.json.in;
}

location /api/v1/websocket/ {
        proxy_pass http://kwmserver/api/v1/websocket/;
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "Upgrade";
}

location /api/v1/ {
        proxy_pass http://kwmserver/api/v1/;
}

location /api/kwm/v2/ {
        proxy_pass http://kwmserver/api/kwm/v2/;
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "Upgrade";
}

location /api/kvs/v1/ {
        proxy_pass http://kapi/api/kvs/v1/;
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "Upgrade";
}
```

2.2.5 Kopano configuration

The below table illustrates the required configuration changes and the files that need to be updated:

configuration file / configuration value	grapi.cfg	kapid.cfg	konnectd.cfg	kwmserverd.cfg	server.cfg
`enable_sso`					`yes`
`kcoidc_issuer_identifier`					public base url of Konnect. e.g. `https://kopano.domain.com` without a trailing slash (/)
`oidc_issuer_identifier`		same value as `kcoidc_issuer_identifier`			
`turn_uris`				Turn server to be used	
`turn_server_shared_secret`				Shared secret with Turn server	

In addition to this `kopano-kapid`, `kopano-konnectd` and `kopano-kwmserverd` each need individual key files to operate securely. These are automatically generated when the services starts the first time through systemd (by calling each service with a `setup` argument).

```
systemctl enable kopano-konnectd kopano-kapid kopano-grapi kopano-kwmserverd kopano-kwebd
systemctl start kopano-konnectd kopano-kapid kopano-grapi kopano-kwmserverd kopano-kwebd
systemctl restart kopano-server
```

2.2.6 Using Meet

After Kopano Meet has been setup you can navigate to `https://your-domain/meet` to use the Meet web client.

2.2.7 Debugging

The following things should be checked in case you run into errors. The individual services by default log to `journald`.

- check logging of kopano-grapi
- check logging of kopano-kapid
- check logging of kopano-konnectd
- check logging of kopano-kwmserverd
- check the dev tools in your browser (Javascript console and Network packages)

CHAPTER 3

Special configuration

Kopano Meet configuration is done via REST config API. An example what this API needs to provide can be found in the config.json.in example which you find in the sources if Kopano Meet. Kopano Meet loads the config endpoint on startup from `/api/config/v1/kopano/meet/config.json`. The location on disk Kopano Web serves this file is `/usr/share/kopano-kweb/www/config/kopano/meet.json`.

3.1 Configuring the applications grid in Kopano Meet

By default Kopano Meet shows all applications known to the Kopano REACT UI component library, which currently also includes unreleased applications, not yet available to the public. Below are the currently possible values, to hide one of the entries simply remove the line from the file.

```
..
"apps": {
  "enabled": [
    "kopano-calendar",
    "kopano-contacts",
    "kopano-meet",
    "kopano-mail",
    "kopano-konnect",
    "kopano-webapp"
  ]
}
..
```

3.2 Enabling guest users for Meeting rooms

Available starting with Kopano Meet 0.18.0.

Kopano Meet supports the possibility to invite external users (which do not have a user account of their own and therefore can't login through Konnect) into dedicated Meeting rooms. These rooms can be identified by their url.

The following components need to be available and configured to allow external users:

- Kopano Konnect (minimal required version >=0.20.0)
- Kopano Kwmserver (minimal required version >=0.15.1)

- Kopano Meet (minimal required version >=0.18.0)

3.2.1 Configuring Konnect for guest users

For the guest mode to work the administrator has to register Meet as a client inside of Kopano Konnect. This registration is necessary since guests require additional scopes as well has a JSON Web Key (JWK) so that Konnect can perform the actual login for the guests.

Generating Keys

Before adding the key to the client registry a new ECDSA key needs to be generated.

```
$ openssl ecparam -name prime256v1 -genkey -noout -out ecparam.pem
$ openssl ec -in ecparam.pem -out meet-kwmserver.pem
```

The pem encoded `EC PRIVATE KEY` part from `meet-kwmserver.pem` now needs to be converted into a JSON Web Key (JWK). For convenience a helper utility is included for this within Kopano Konnect.

```
$ kopano-konnectd utils jwk-from-pem --yaml meet-kwmserver.pem
crv: P-256
d: mr9hsFCC8q4v4I4Yv1HHSUoU2ax4X_vRKm60CkLb8XE
kid: meet-kwmserver
kty: EC
use: sig
x: 3h9BEMjO0CSP1vILZrT8ALN1XLp3B4F9q26HKghiqns
"y": pBnvjxvEFIymNB82xeQFNkpo01jxEprEPmxxdx1DS74
```

Note: When running kwmserver and konnect on different systems or when the principle of least knowledge should be applied, then two "registration.yml" should be created. One with the private key for kwmserver and one with the public key for konnect. A public key can be generated by running `openssl ec -in ecparam.pem -pubout -out meet-kwmserver-public.pem`

Konnect Client Registry

In below example registration file (expected location for this file is `/etc/kopano/konnectd-identifier-registration.yaml`, does not exist by default) the value `kopano.dev` needs to be replaced with the actual FQDN. Additionally the value below `keys:` needs to be replaced with the locally generated JWK.

```
clients:
- id: kpop-https://kopano.dev/meet/
  name: Kopano Meet
  application_type: web
  trusted: true
  redirect_uris:
  - https://kopano.dev/meet/
  trusted_scopes:
  - konnect/guestok
  - kopano/kwm
  jwks:
    keys:
    - kty: EC
      use: sig
      crv: P-256
      d: mr9hsFCC8q4v4I4Yv1HHSUoU2ax4X_vRKm60CkLb8XE
      kid: meet-kwmserver
      x: 3h9BEMjO0CSP1vILZrT8ALN1XLp3B4F9q26HKghiqns
    y: pBnvjxvEFIymNB82xeQFNkpo01jxEprEPmxxdx1DS74
  request_object_signing_alg: ES256
```

Konnect configuration

Now that we have generated our client registry we can configure Konnect to use it, as well as make the other required changes for the guest mode.

The following values need to be adapted in `/etc/kopano/konnectd.cfg`:

- Uncomment `identifier_registration_conf` and make sure it points to the registry created above, e.g.: - `identifier_registration_conf = /etc/kopano/konnectd-identifier-registration.yaml`
- uncomment and switch `allow_client_guests` to yes - `allow_client_guests = yes`

On restart of Konnect the following log line will indicate that Konnect is now configured to enable guest users for Meet:

`time="2019-03-28T09:29:14Z" level=info msg="identity guest manager set up"`

3.2.2 Configuring Kwmserver for guest users

Kwmserver also needs to be made aware the guest mode and Meet as a registered client. Luckily the same file already configured in Konnect can simply be reused in Kwmserver.

The following values need to be adapted in `/etc/kopano/kwmserverd.cfg`:

- uncomment and switch `enable_guest_api` to `yes`: - `enable_guest_api = yes`
- uncomment `registration_conf` and point it to the same file as previously done in Konnect: - `registration_conf = /etc/kopano/konnectd-identifier-registration.yaml`
- uncomment and configure the name prefix for guest channels. The below setting will make all rooms starting with `group/public` rooms that guests can join: - `public_guest_access_regexp = ^group/public/.*`

3.2.3 Configuring Meet for guest users

Last but not least we need to make Meet aware of the guest functionality as well. This happens in the `config.json` files that is loaded at startup by Meet.

As previously explained Kopano Web serves this file from `/usr/share/kopano-kweb/www/config/kopano/meet.json` (if it does not yet exist it can be copied from the example directory at `/usr/share/doc/kopano-meet-webapp/config.json.in`). To enable the guest mode modify the below block so that it reads `"enabled": "true"`:

```
..
  "guests": {
    "enabled": "true"
  },
..
```

3.2.4 Using the guest mode

With the above configuration users can now create rooms where external users can join existing calls. To create such a room the user has to:

- click on the "new call button"

- in the dialogue followed by this click on “new public group”
- choose a name that starts with “public/”, like for example “public/customer-a”
- after the groups has been entered, click on “share group”

3.3 Enabling screensharing

Available starting with Kopano Meet 0.19.0.

Screensharing is automatically enabled once a browser with support for the “Screen Capture API” is detected.

Supported browsers include:

- Google Chrome >=72
- Mozilla Firefox >= 66
- Kopano DeskApp >=2.2.3

CHAPTER 4

Advanced Settings

4.1 Influencing Meet behaviour through URL fragments

Users are able to fine tune how other users will join a meeting by modifying the url they send to other participants.

The following examples use the url `https://kopano.dev/meet/` as a base.

4.1.1 Allow guest users to join meetings

By default only users that are able to log into Meet can join a call. Administrators are able to configure Meet to make it possible to invite external users. At this moment before sharing such a guest enabled room with external participants the fragment `guest=1` needs to be added to the url.

Setting/Value	Explanation
guest=0	Disallow joining by guests
guest=1	Allow guests to join

Example: `https://kopano.dev/meet/r/group/public/customer#guest=1`

By default when a guest joins a meeting a randon generated name (using a combination of a random adjective and noun) is assigned to them. When inviting guests user could already provide a (real) name for the guest.

Setting/Value	Explanation
name=John%20Doe	Guest will be shown with the Name “John Doe” within the meeting

Example: `https://kopano.dev/meet/r/group/public/customer#guest=1&name=John%20Doe`

4.1.2 Automatically join meetings

By default users will first be presented with a “landing page” when joining a room where they can quickly check if their camera is working. By adding the following to the url users will automatically join a meeting.

Setting/Value	Explanation
auto=1	Automactially join with audio only
auto=2	Automcaticlly join with audo & video enabled

Example: `https://kopano.dev/meet/r/group/meeting#auto=1`

4.1.3 Disable camera or microphone for participants

By default users joining a meeting will have their microphone and camera enabled (or just microphone enabled when just joining via audio). By adding the following to the url uses will join a meeting e.g. with their microphone "muted" by default (so they have to unmute it before speaking).

Setting/Value	Explanation
mute=1	"Mute" microphone for user
mute=2	"Mute" video for user
mute=3	"Mute" microphone and video for user

Example: `https://kopano.dev/meet/r/group/meeting#mute=1`

4.1.4 Combining multiple settings

Multiple of the above settings can easily be combined by chaining them with the `&` symbol.

The following example will auto join a guest with the name "John Doe" into a meeting with the microphone of John muted by default.

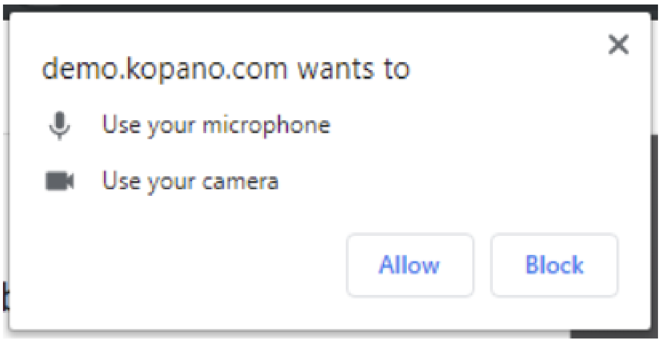
Example: `https://kopano.dev/meet/r/group/public/customer#guest=1&name=John%20Doe&auto=2&mu`

CHAPTER 5

User manual

Kopano Meet can be used both as a desktop app and a mobile app from the same URL. All you need is a browser to get started - and a link to ‘your meet’, received from your system administrator or by someone that wants to meet with you.

5.1 First steps



demo.kopano.com wants to

Use your microphone

Use your camera

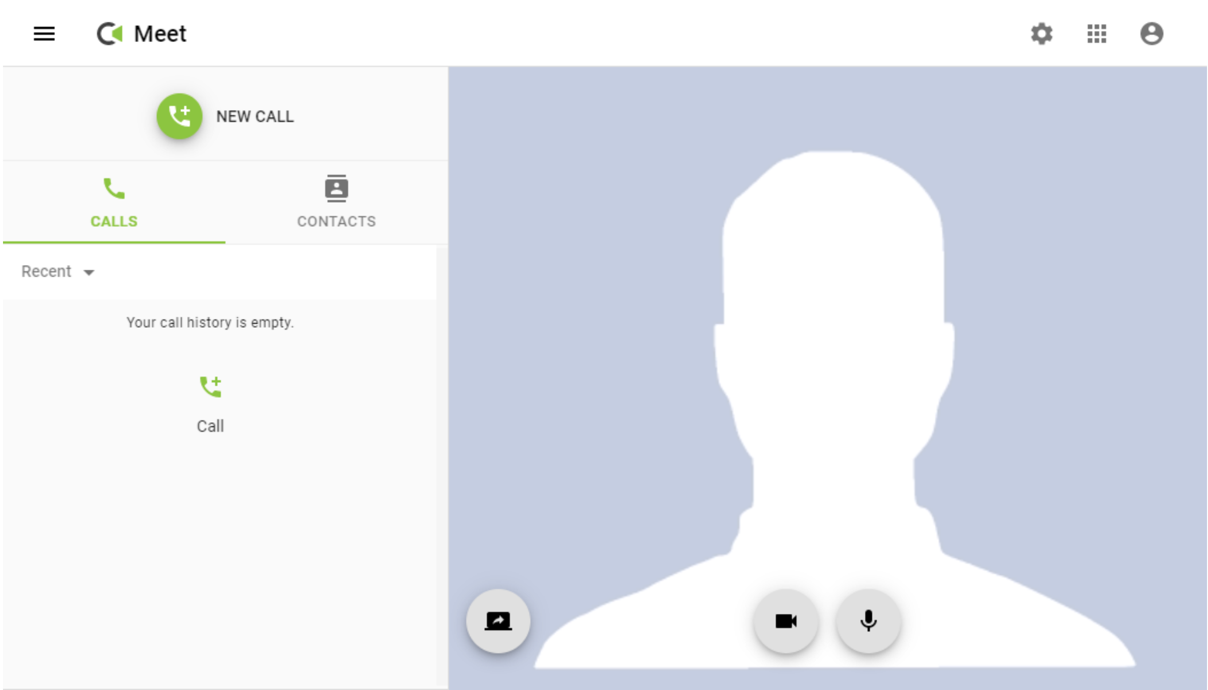
Fig. 5.1: Permission Pop-up of Google Chrome

If you’re using Meet on that system for the first time, your browser will ask you if you allow access to the microphone and camera.

Note: Meet will only work if you allow the microphone and camera to be used.

5.2 General overview

When logging in, you will brought to the main screen. On the right hand side the the video of the currently selected webcam is shown. On the left hand side you have the ability to start a new call or to scroll through past calls.



Your call history is empty.

Fig. 5.2: The main screen in Kopano Meet

5.3 Joining a meeting

Joining a meeting is easy! You received a link via an email, or perhaps a meeting request or a chat message. All you need to do is click it! Afterwards Meet will open in your favorite browser and show you the group welcome screen from where you can "Call" into the meeting.

5.4 One-to-one calls

One-to-one calls can be done as follows:

1. Click on "Contacts" to search and browse through users
2. select on a contact to open his detailed view and get the option to call them.

While a call is being established you will see a grey background with a hourglass animation and a moving bar. Your video is moved to the bottom right of the screen.

Once the other side has picked up their video will fill the screen.

Note: The call controls (hang up button, as well as video and microphone indicator) are only visible when there is mouse movement in the window. If there is no activity the controls will fade out of view.

When receiving a call yourself you can either accept, decline or ignore a call. Accepting will result in the call being connected with the same audio and camera settings you previously used on the main screen. Declining a call will result in a message to the caller that their call was rejected. Ignoring a call will make the call incoming call windows go away without notifying the calling user about it.

5.5 Groups, public vs. private

Kopano Meet currently knows two different kinds of groups.

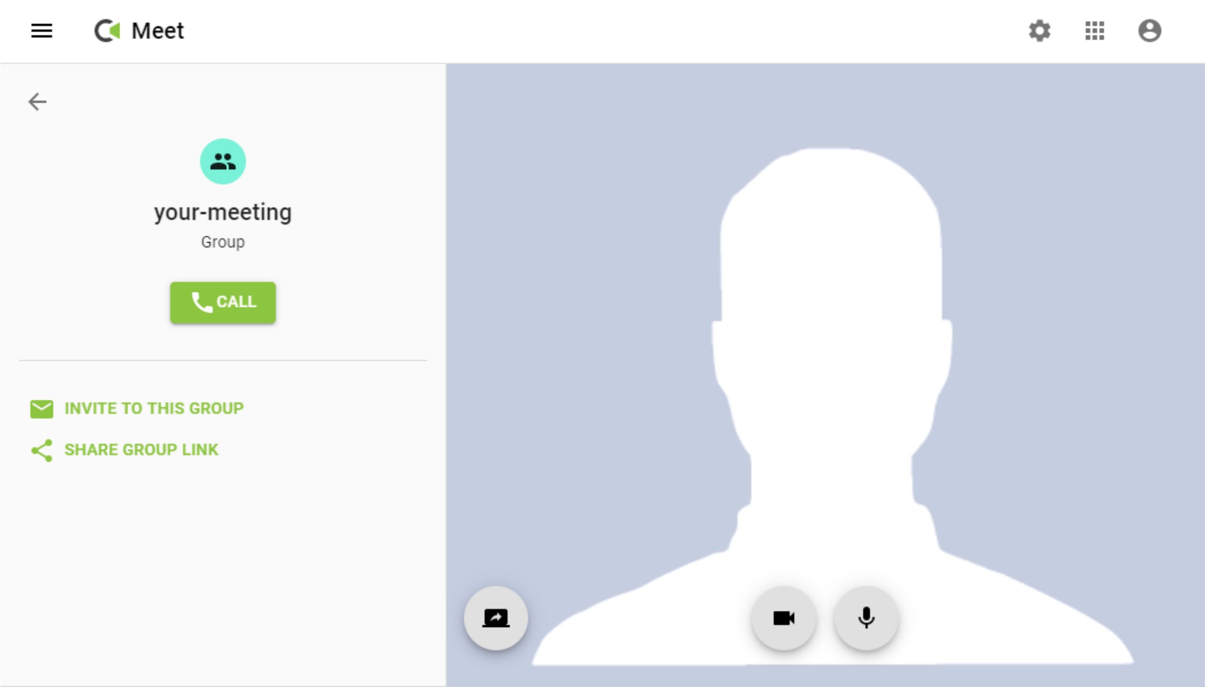
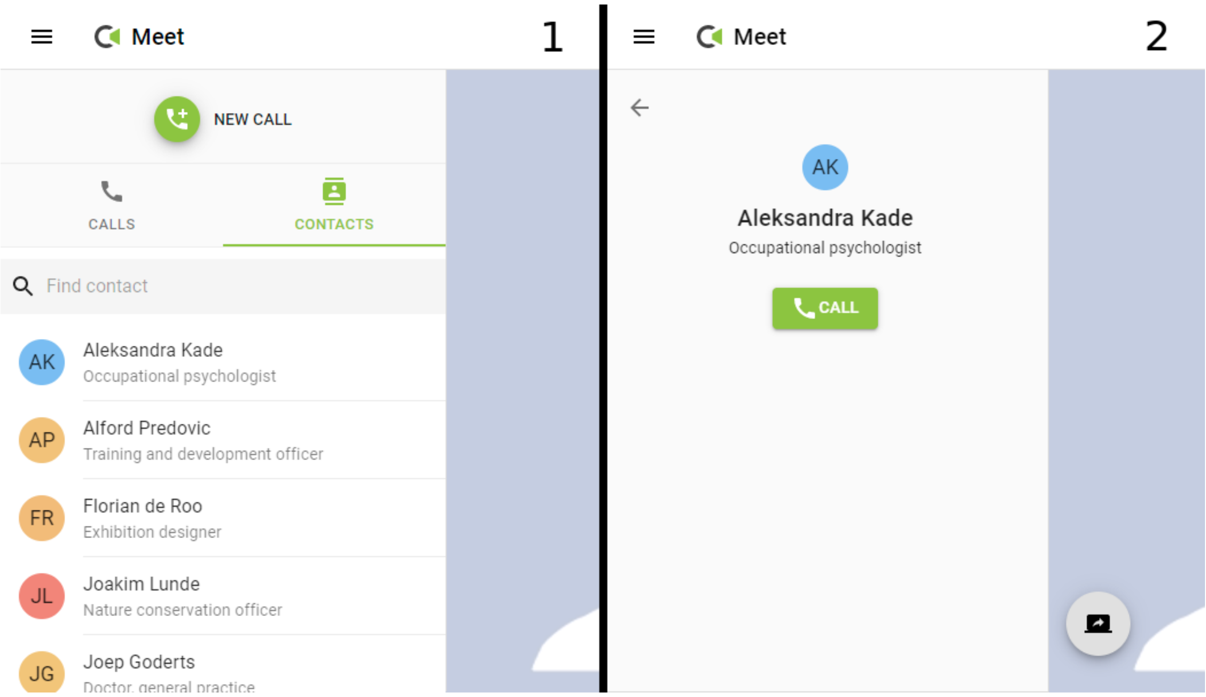


Fig. 5.3: The group landing page.



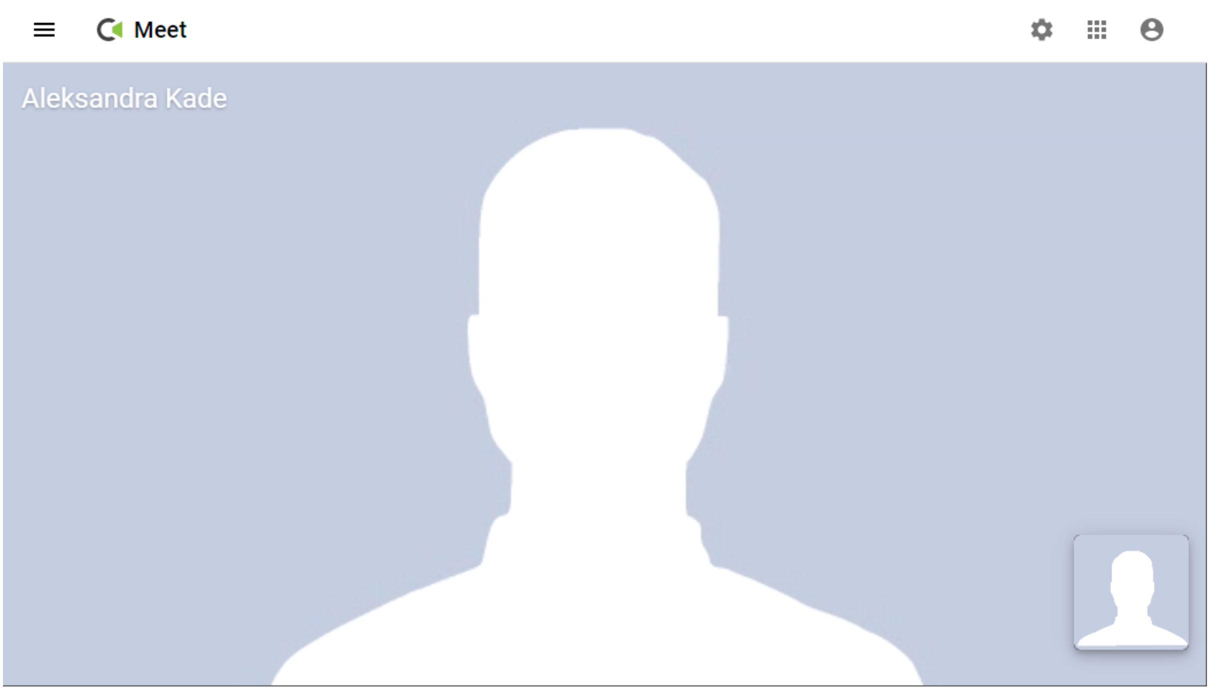


Fig. 5.4: The other side has picked up

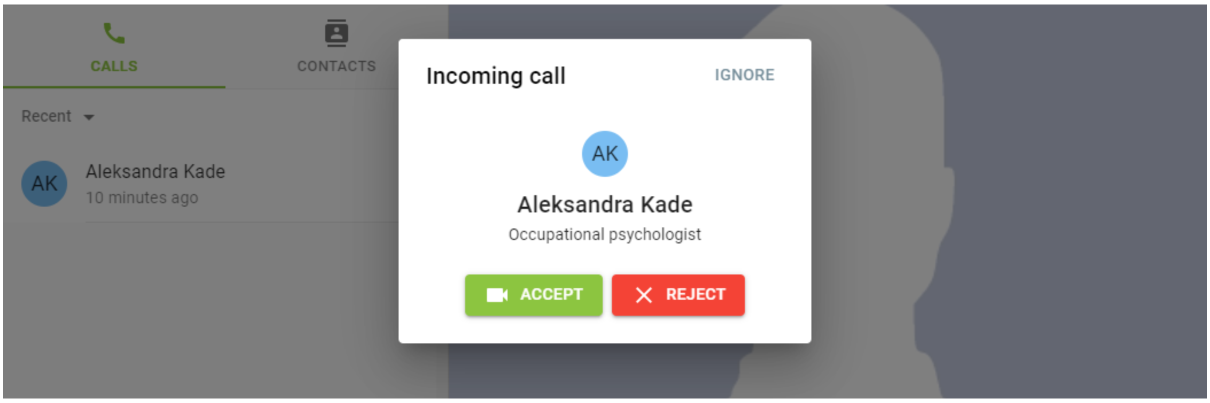


Fig. 5.5: The screen of an incoming call

- Public groups are groups that can be joined by external guests/users as long as they know the exact url. These groups are recognizable with the common namespace, by default `/public`. Depending on the configuration guests will only be able to join a group meeting once a registered user has joined it.
- Private groups are groups that can only be joined by registered users. Users joining this group still need to know the exact url.

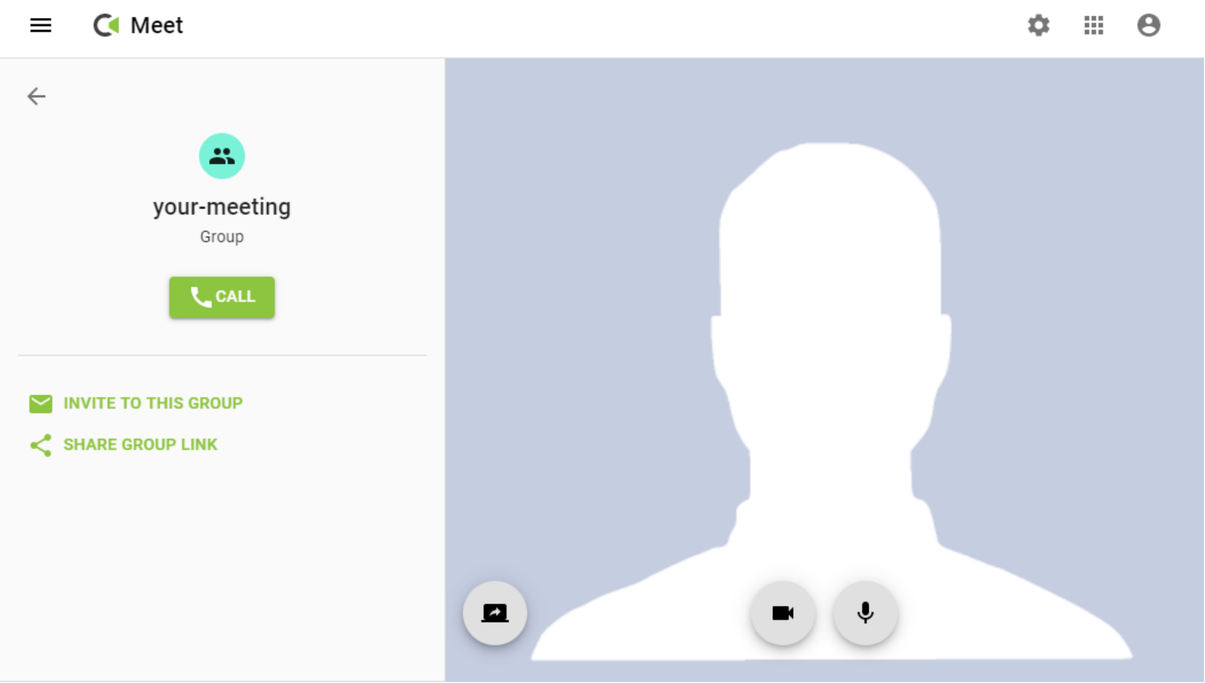


Fig. 5.6: The detail view of a group in Kopano Meet

Note: Rather than have your guests and colleagues type the url, you can share them the link beforehand through invitations.

5.6 Inviting users and guests to a group

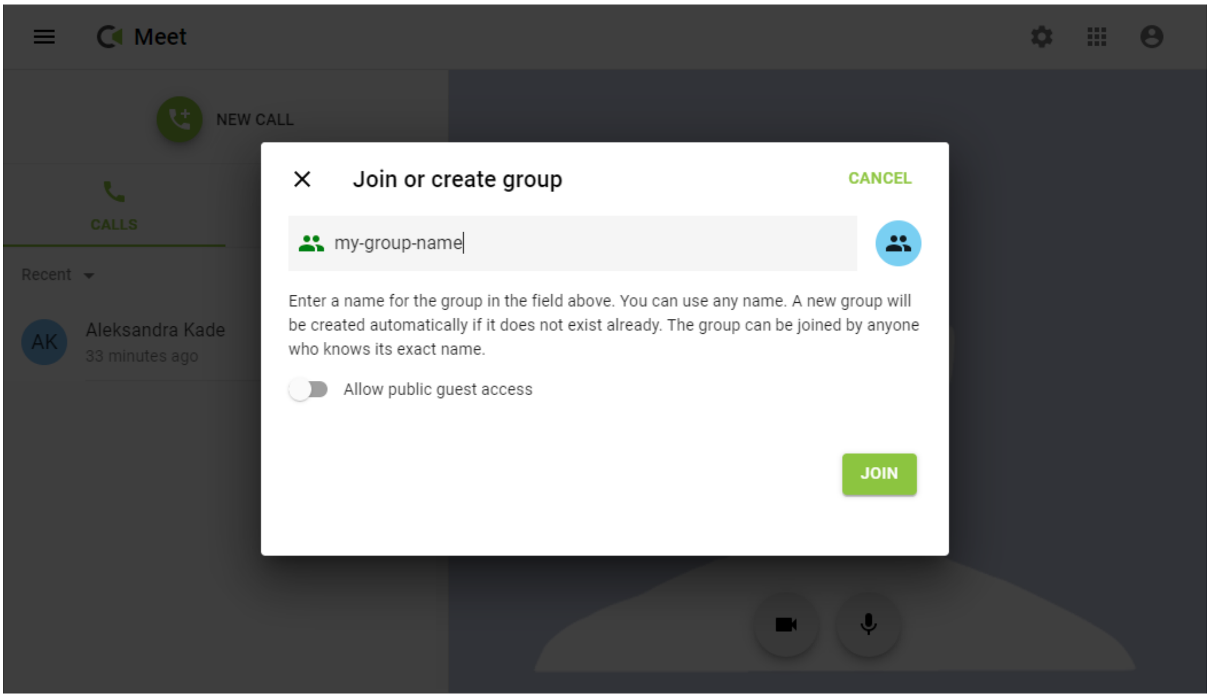
From the “New call” screen, you have the possibility to join an existing group or create a new one:

1. From the Main Screen, click on “NEW CALL”.
2. Click on “JOIN OR CREATE GROUP”.
3. Enter the name of the group. If that doesn’t exist, a new one will be created. The “JOIN” button will become active.
4. Press on “JOIN”.

Note: Toggling the “Allow public guest access” switch will add the `public/` prefix to the chosen name.

Afterwards you can easily invite additional users by clicking on either “INVITE TO THIS GROUP” or “SHARE GROUP LINK”.

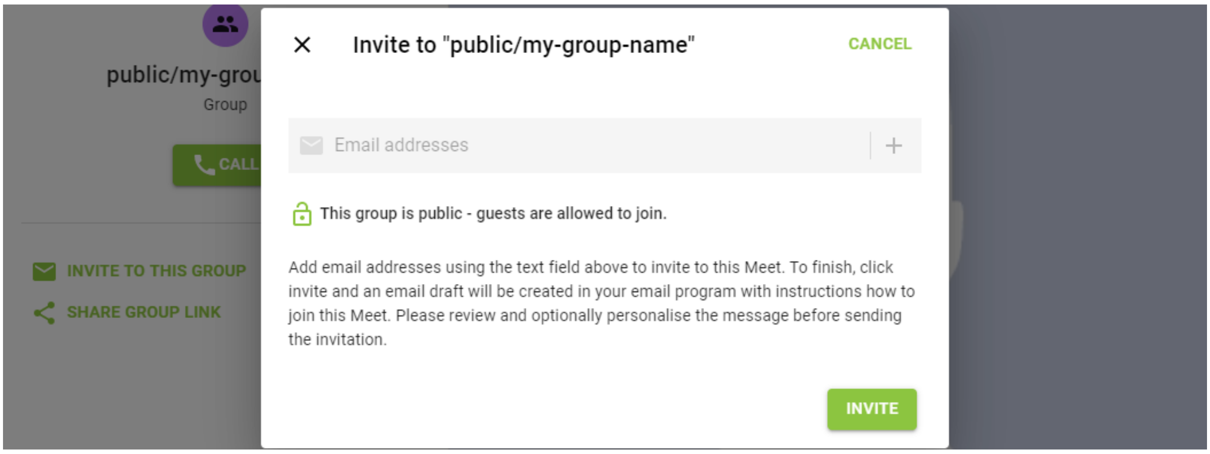
For invitations via E-Mail Kopano Meet performs basic sanity checks on entered email addresses. If a mail address is invalid, Meet will show a red envelope and block the “INVITE” button.



my-group-name

Enter a name for the group in the field above. You can use any name. A new group will be created automatically if it does not exist already. The group can be joined by anyone who knows its exact name.

Allow public guest access

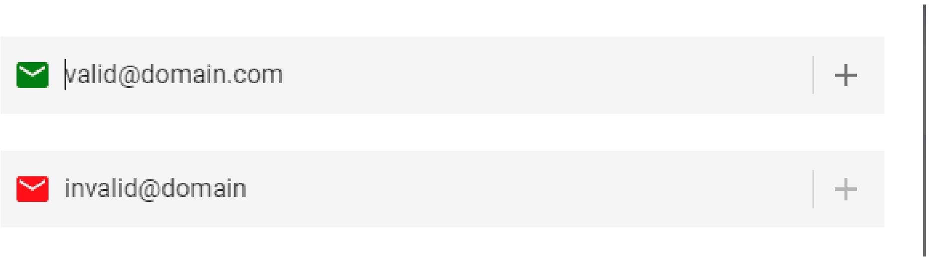


Invite to "public/my-group-name"

Email addresses

This group is public - guests are allowed to join.

Add email addresses using the text field above to invite to this Meet. To finish, click invite and an email draft will be created in your email program with instructions how to join this Meet. Please review and optionally personalise the message before sending the invitation.



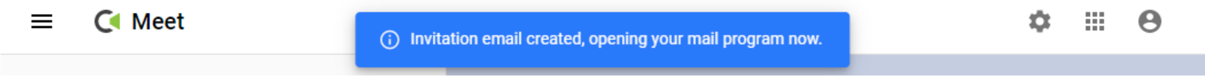
valid@domain.com

invalid@domain

Fig. 5.7: Meeting invite screen: valid vs invalid address

Note: Power/advanced users can also directly click on "INVITE" to have recipients completed by their preferred mail client.

Kopano Meet will show a notification in the upper side of the screen once the mail has been handed over to default the mail client of the user.



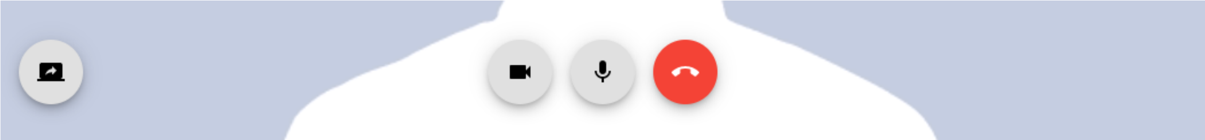
Invitation email created, opening your mail program now.

To invite more users the email invite flow can be restarted by clicking on "INVITE TO THIS GROUP". To simply include a link the user can also click on "SHARE GROUP LINK" which will put the group link into the clipboard.

Note: If the device of the user supports Web Share API (like mobile devices), then instead of putting the link in the clipboard this will actually open the share menu of the device.

5.7 Sharing your screen

Kopano Meet also has the builtin ability to share your screen with other participants. This functionality is available for one to one calls, as well as group calls. Screensharing works without needed to install any plugins or extensions and is available in Google Chrome >= 72 and Mozilla Firefox >= 66.



The screensharing indicator can be found in the bottom left corner.

Note: In case a browser does not support screensharing (like a mobile device), the screensharing indicator will not be visible.

Once you have enabled screensharing, your browser will ask which desktop/window/application you want to share. Once this dialogue is closed, the screensharing indicator will turn green.

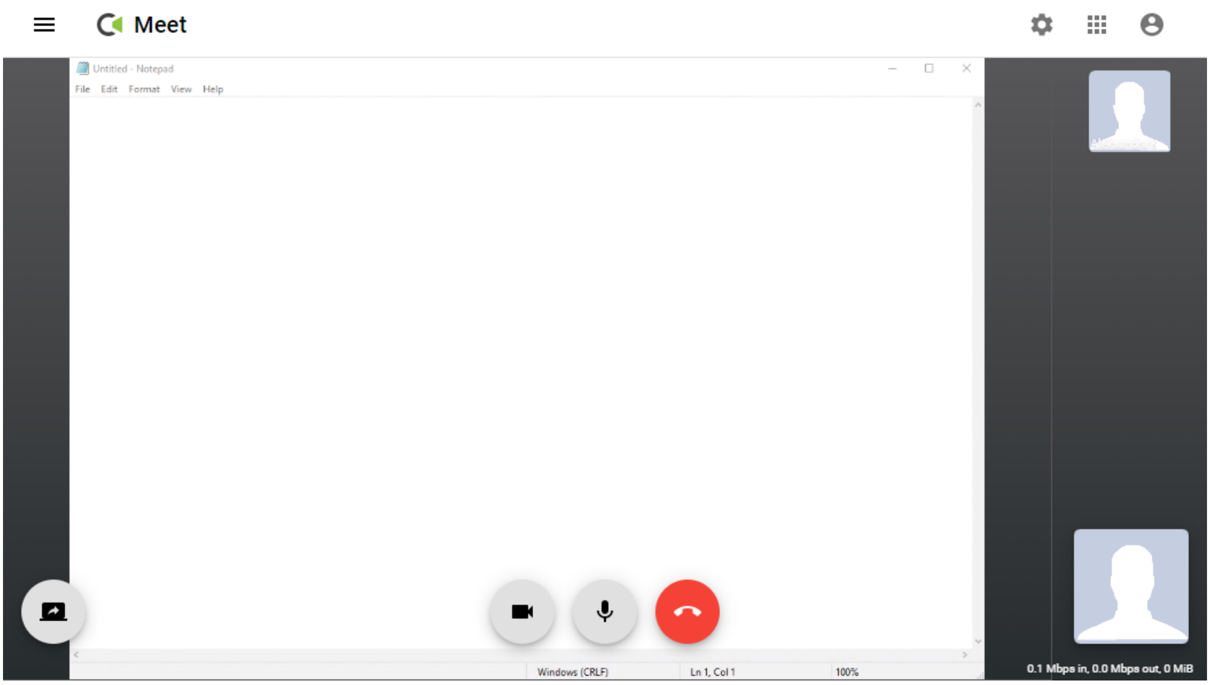
For meeting participants receiving a screen, the individual videos of the participants will be moved to the right side and the shared screen will consume most of the Meet application.

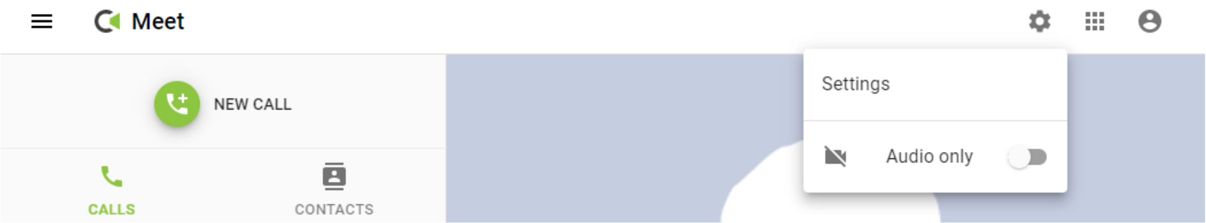
5.8 Doing an "audio only" meeting

Meet has a special "audio only" mode that can be used to preserve bandwidth with calling in from a metered connection.

The "audio only" mode can be enabled from the settings menu at the top of the screen.

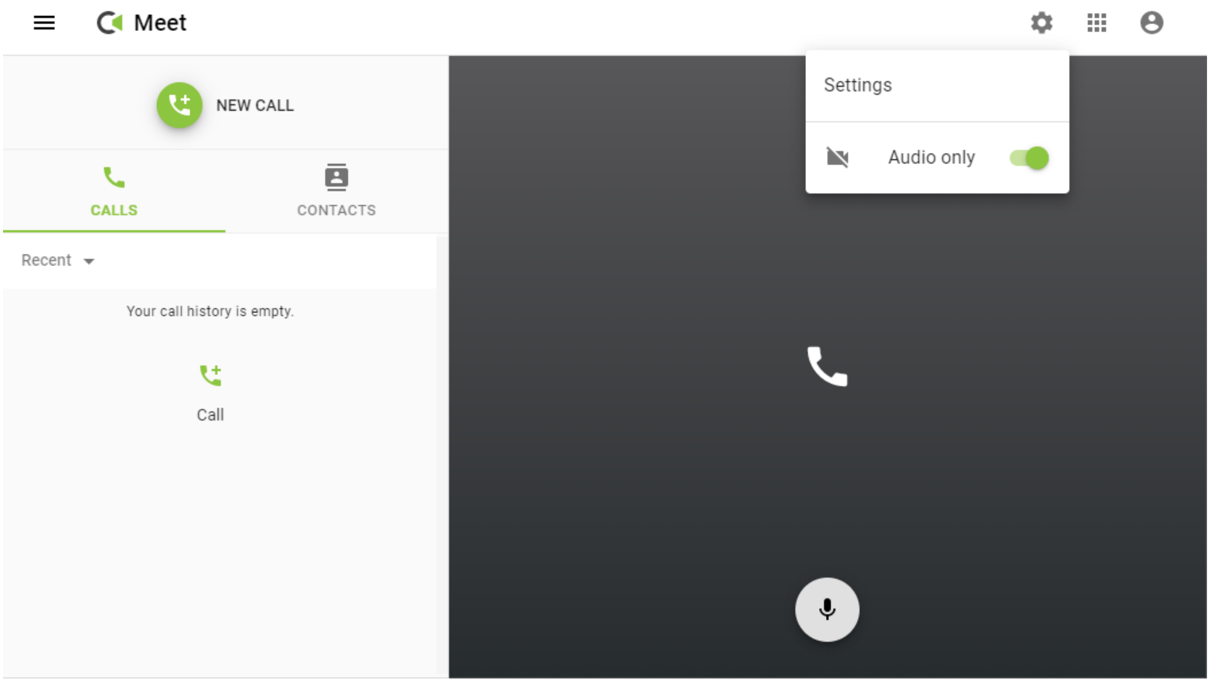
Note: Toggling the switch into the "on" position will disable both incoming and outgoing video stream and also disabled the screensharing button.





Settings

Audio only ○

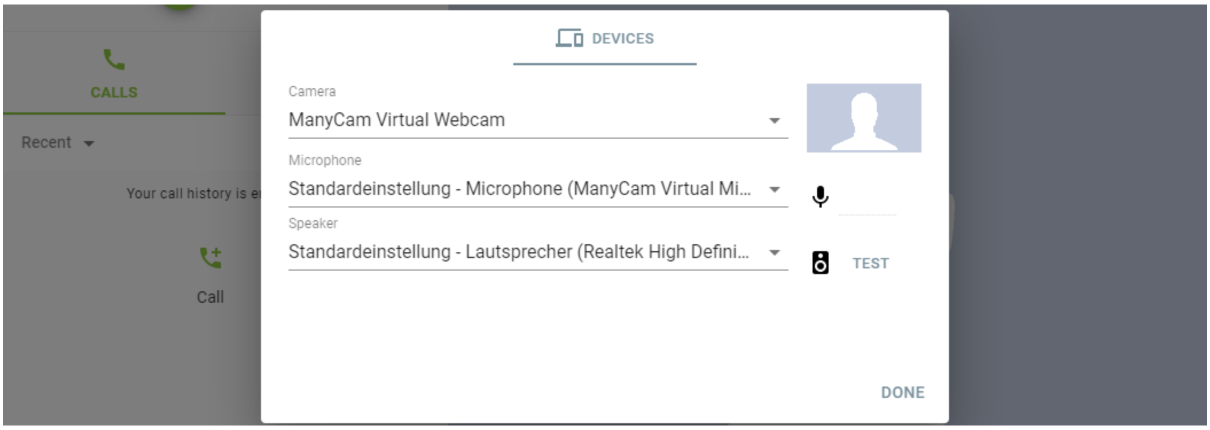


Settings

Audio only ●

Your call history is empty.

5.9 Selecting the right Camera/Microphone/Speaker



Camera: ManyCam Virtual Webcam

Microphone: Standardeinstellung - Microphone (ManyCam Virtual Mi...

Speaker: Standardeinstellung - Lautsprecher (Realtek High Defini...

Kopano Meet will use the default devices for your microphone and speakers and the “front facing” camera automatically. If you want to use a different device you can switch this from the settings screen.

Warning: Changes to devices will only be put into effect after confirming the dialog via the “DONE” button.

CHAPTER 6

Frequently asked questions (FAQ)

Is Meet a new product or is just the next release of Web Meetings? In this regard: does it produce extra-costs?

Kopano Meet is a completely new piece of software, redesigned from the ground up. In our product overview Kopano Meet will replace the old Spreed based Web Meetings implementation. If you have bought a support subscription for the old Web Meetings product you can just use Meet instead in the future.

What is the difference between Meet and Web Meetings? Especially: Are there features missing? Which "problems" were solved?

Kopano Meet has been redeveloped to benefit from advancements that were made in browsers, development languages and the WebRTC technology. One of the most noticeable things is while disabling video in the old WebMeetings still transferred a blacked out video, it is nowadays possible to completely disable the video (and audio) data streams conserving more bandwidth. One other benefit of starting from scratch is that the new product is now also capable of natively running on mobile devices (just within the default browser, no app installation required). Starting from scratch also means that not all feature that were available in the old Web Meetings will be available in Kopano Meet from the start. For the beginning we have focussed on one to one and group calls. The ability the invite external users to a call will be ready at product launch as well. Additional features like screensharing or a visual integration into WebApp/DeskApp are on our agenda and will be added later on. Feature such as uploading of files and presentation, or a built in chat will not be implemented.

How do I migrate from Web Meetings to Meet?

Neither Kopano Web Meetings nor Kopano Meet store data of their own on the server. To make use of Meet you simply have to install and configure it.

How long may I work with Web Meetings? When do I need to migrate to Meet?

Both solutions will exist side by side for a bit longer. We plan to make an "end of life" announcement for the old Web Meetings with enough time for admins to update their installation (or decide to stay on the old software, but not receive further updates and support).

How does Meet integrate with Kopano? Especially: DeskApp/WebApp, address book, . . .

Kopano Meet uses the new RestAPI in Kopano Groupware Core 8.7 to get access to the GAB. Authentication is handled by Kopano Konnect (also introduced with Kopano Groupware Core 8.7). There is at this moment no functional integration with Kopano WebApp/DeskApp.

While a functional integration would be nice, can I at least visually include Meet into Kopano WebApp?

Yes, this works out if the box with the so called "Intranet" plugin and as long as Meet and WebApp are hosted on the same domain. Please be aware that with the default WebApp configuration users will need to sign separately into Meet. Starting with version 3.5.5 Kopano WebApp can be configured to authenticate via OpenID Connect/Kopano Konnect to avoid the need to login twice.

I heard that you can install Kopano Meet on your mobile phone or desktop, where can I download this app?

Kopano Meet is designed as a so called "Progressive Web App (PWA)" which means that browsers supporting this standard (Chrome, Chromium, Edge, Firefox) will show the user a notification enabling to "install" itself to the list of apps on the device in question. If you want to install Meet for faster local access then you can do so by visiting your local installation of Meet, without the need to rely on external app stores. A separate app is currently not required and not planned.

Do I need to open special ports on my firewall to use Meet?

No, the only port that is required to use Meet is port 443 (for the https connection). As long as users can reach this port (and a turn service is configured) they will be able to hold calls.

What do I need a turn service for?

A Turn service is required for the initial connection between callers. In case a direct connection fails the Turn service will also be used to relay communication between callers.

Can I run my own Turn service?

CoTurn is a popular open source Turn service. Since setting up an iron clad turn service (for maximum availability for callers) is a somehow difficult task, we decided to make this available as a service to Kopano customers.

Do I need to install a browser extension (for example for screensharing)?

No, Kopano Meet works on top of native browser functionality. For sharing your screen Meet uses the "Screen Capture API" (available in Google Chrome >= 72 and Mozilla Firefox >= 66), which also means that while you can receive a shared screen on Android and iOS, you cannot share your screen yourself from these devices. Yes, this works out if the box with the so called "Intranet" plugin and as long as Meet and WebApp are hosted on the same domain. Please be aware that users will need to sign separately into Meet. This requirement will be obsolete once it is possible to sign into Kopano WebApp with Kopano Konnect as well.

What browsers are supported for Meet in general?

Kopano Meet is designed to run on on any browser that supports WebRTC peer to peer connections. See Can I use.. (search for "webrtc") for an always up to date version of WebRTC availability for browsers.

Which browsers are supported for screensharing?

For Screensharing to work the browser needs to support the "Screen Capture API" this is for example available in Google Chrome >= 72 and Mozilla Firefox >= 66.

Can Meet be used for controlling a remote desktop?

No, Kopano Meet cannot be used to control a remote desktop. Security measures of the web browser (such as sandboxing) prevent web applications from taking over control.

What kind of internet connection do I need for Meet?

The connections within Meet are limited to a maximum of 1 Mbit for video and audio per participant and 2,5 Mbit for a screen sharing session.

Kopano is using the Opus codec for audio transmissions and VP8 for video transmissions. Both codecs compress very well and still provide good results at low bandwidth. Opus for example can still delivery acceptable audio quality at just 8 Kbps.

In low bandwidth situations the browser actively reduces the quality of the transmission and in the worst case may even decide to disable outgoing video.

If you actively want to preserve data, then by switching into the "only audio" mode will disable all outgoing and incoming video (including screensharing).

Why does my call end after a while, when I put it in the background on my mobile phone?

Mobile platforms only offer limited abilities to prevent an app from getting stopped while running in the background. While the app will continue to work for a few minutes (in tests up two two minutes). In the future the Wake Lock API could be use to prevent Meet getting stopped, but this api still needs to be implemented and supported by browsers.

Why can't I enable my camera/microphone or start sharing my screen?

Some Operating Systems implement an additional layer of security and may prevent the browser running Meet to access these devices.

- On Microsoft Windows 10 please check your "Privacy Settings", which has separate entries for camera and microphone access.
- On Apple MacOS please check "Security & Privacy, which has separate entries for camera and microphone access, as well as as setting for "Screen Recording".

Why am I getting a "Failed to connect to server - please check your internet connection message"? Even though I other parts of Meet work just fine?

This error message is triggered when Meet cannot establish a websocket connection to Kwmserver. If you are using a webserver other than Kweb make sure that it properly handles websocket connections. The Sophos WAF is for example known to break websocket connections when web filtering is enabled.

6.1 Known Issues

Meet does not use my camera/microphone on my iPhone/iPad

Starting with iOS 13.4 PWAs can now access the camera/microphone. If you are running an older version please update. If you can't upgrade then Kopano Meet must be used in Safari directly.

In older version of iOS PWAs were not allowed to access the microphone or camera. For that reason, if you cannot upgrade, Meet should be used in the browser and not as an app.

Interacting with the Meet app will shortly freeze Safari in iOS

Safari will continue working shortly after (could take up to two seconds on an old phone).

Why do I get the message access to my camera was denied when switching cameras from the settings?

Some driver implementations (e.g. on tablets with a front and back facing camera) use the same hardware address for both cameras. Since the original camera is still showing in the back its not possible to preview the newly selected camera. When pressing "done" the new camera setting will be applied, but you still need to enable it (will be shown deactivated by default).

CHAPTER 7

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