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# **KopanoMeet**

*Release 1.0*

**Kopano BV**

**Jan 29, 2019**

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

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# Introduction

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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.

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## Installation

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

- Debian 9.0
- Ubuntu 16.04
- Ubuntu 18.04
- Univention 4.3 (functionality for UCS will be provided through an app later on)

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**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 availability of Python 3 and therefore we cannot deliver these packages at the moment.

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### 2.1 System requirements

- Kopano Grouware Core >=8.7.0

### 2.2 Installation

The packages can either be retrieved 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/](https://download.kopano.io/supported/meet:/final/Ubuntu_18.04/).

Adding the repository for Ubuntu 18.04:

```
URL=https://serial: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
```

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 minimal 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 web-server.

```
# 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 /konnnect/v1/token {
    proxy_pass http://konnnect/konnnect/v1/token ;
}

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

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

location /konnnect/v1/session {
    proxy_pass http://konnnect/konnnect/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://konnnect/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 ap 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://kwmsserver/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://kwmsserver/api/v1/;
}
```

## 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	kwm-serverd.cfg	server.cfg
enable_sso					yes
kcoidc_issuer_identifier					public base url of Konnect. e.g. <a href="https://kopano.domain.com">https://kopano.domain.com</a> 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-kwmsserverd 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-kwmsserverd_
→kopano-kwebd
systemctl start kopano-konnectd kopano-kapid kopano-grapi kopano-kwmsserverd 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-kwmsserverd
- check the dev tools in your browser (Javascript console and Network packages)

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## Frequently asked questions (FAQ)

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### **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 (once it has reached feature parity) 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. Once we have reached feature parity between Meet and Web Meetings we will make an “end of life” announcement that gives admins enough time 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 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.

**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, a separate app is currently not required and not planned.

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