

# Deploy Jitsi with Docker + High Quality

Every `eolab.de` has to be changed to your URL.

## Prerequisites

- Ubuntu Server 20.04
- Docker and Docker-Compose are installed
- Running NGINX Reverse Proxy
- A SSL certificate for the desired url

## Downloading Jitsi

1. `git clone https://github.com/jitsi/docker-jitsi-meet.git`
2. `mv docker-jitsi-meet/ jitsi-meet/`
3. `cd jitsi-meet/`
4. `cp env.example .env`
5. `./gen-passwords.sh`
6. `mkdir -p ~/.jitsi-meet-cfg/{web/letsencrypt,transcripts,prosody,jicofo,jvb,jigasi,jibri}`

## Configuring Jitsi

1. `nano .env`
2. make sure it uses an unused port  
`HTTP_PORT=8000`
3. set timezone  
`TZ=Europe/Berlin`
4. set the later used public URL  
`PUBLIC_URL=https://meet.eolab.de`

## Configuring NGINX

1. `sudo nano /etc/nginx/sites-available/eolab.de`
2. make sure there is a redirect from HTTP to https (port 80 to 443)
3. add this to the top

```
upstream jitsi {
    server localhost:8000;
}
```

change the port if needed

4. add this to the bottom

```
server {
    listen 443 ssl http2;
    listen [::]:443 ssl http2;
    server_name meet.eolab.de;

    ssl_certificate /etc/letsencrypt/live/meet.eolab.de/fullchain.pem;
    ssl_certificate_key /etc/letsencrypt/live/meet.eolab.de/privkey.pem;
    include snippets/ssl-params.conf;

    add_header Strict-Transport-Security "max-age=31536000;
includeSubdomains; preload";
    add_header X-Xss-Protection "1; mode=block";
    add_header X-Content-Type-Options nosniff;
    add_header Referrer-Policy same-origin;
    proxy_cookie_path / "/; HTTPOnly; Secure";
    add_header Expect-CT "enforce, max-age=21600";
    add_header Feature-Policy "payment none";

    keepalive_timeout 70;
    sendfile on;
    client_max_body_size 0;

    gzip on;
    gzip_disable "msie6";
    gzip_vary on;
    gzip_proxied any;
    gzip_comp_level 6;
    gzip_buffers 16 8k;
    gzip_http_version 1.1;
    gzip_types text/plain text/css application/json
application/javascript text/xml application/xml application/xml+rss
text/javascri$

    location / {
        log_not_found off;
```

```
    proxy_cache_valid 200 120m;
    proxy_set_header    Host      $http_host;
    proxy_set_header    X-Real-IP $remote_addr;
    proxy_set_header    X-Forwarded-For
$proxy_add_x_forwarded_for;
    proxy_set_header    X-Scheme $scheme;
    proxy_pass http://jitsi/;
}

location ~ ^/colibri-ws/([a-zA-Z0-9-\.]+)/(.*) {
    tcp_nodelay on;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection "upgrade";
    proxy_pass http://jitsi/colibri-ws/$1/$2$is_args$args;
}

location /xmpp-websocket {
    tcp_nodelay on;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection "upgrade";
    proxy_set_header Host $host;
    proxy_pass http://jitsi/xmpp-websocket;
}
}
```

make sure to change the `server_name`, `ssl_certificate` and `ssl_certificate_key`

5. Save and quit the file

```
6. sudo systemctl restart nginx
```

## Start Jitsi

```
1. docker-compose up -d
```

## Configure Jitsi with internal authentication for creating rooms

1. make sure Jitsi was run at least once
2. stop it if its running

```
docker-compose stop
```

```
3. rm -r ~/.jitsi-meet-cfg
```

4. `mkdir -p ~/.jitsi-meet-cfg/{web/letsencrypt,transcripts,prosody,jicofo,jvb,jigasi,jibri}`
5. `nano .env`
6. `ENABLE_AUTH=1`
7. `ENABLE_GUESTS=1`
8. `AUTH_TYPE=internal`
9. Save and quit the file
10. `docker-compose up -d`
11. find the container id of the `jitsi_prosody` container and copy that

```
docker ps -a
```

12. `docker exec -it CONTAINER-ID-HERE /bin/bash`
13. `su`
14. change the username and password in this command:

```
prosodyctl --config /config/prosody.cfg.lua register username  
meet.jitsi password
```

These credentials are now needed to create a new room

15. `exit`
16. `exit`

## Configure Jitsi for high quality webcams and screenshares

1. make sure Jitsi was run at least once
2. stop it if its running

```
docker-compose stop
```

3. `sudo nano ~/.jitsi-meet-cfg/web/config.js`
4. only the moderator should be starting with audio

```
startAudioMuted: 1,
```

5. resolution: 1080,

```
6. constraints: {
  video: {
    height: {
      ideal: 1080,
      max: 1440,
      min: 480
    }
  }
},
```

7. only the moderator should be starting with video

```
startVideoMuted: 1,
```

```
8. desktopSharingFrameRate: {
  min: 5,
  max: 24
},
```

```
9. videoQuality: {
  // Provides a way to prevent a video codec from being
  negotiated on the JVB connection. The codec specified
  // here will be removed from the list of codecs present in the
  SDP answer generated by the client. If the
  // same codec is specified for both the disabled and preferred
  option, the disable settings will prevail.
  // Note that 'VP8' cannot be disabled since it's a mandatory
  codec, the setting will be ignored in this case.
  //   disabledCodec: 'H264',

  // Provides a way to set a preferred video codec for the JVB
  connection. If 'H264' is specified here,
  // simulcast will be automatically disabled since JVB doesn't
  support H264 simulcast yet. This will only
  // rearrange the the preference order of the codecs in the SDP
  answer generated by the browser only if the
  // preferred codec specified here is present. Please ensure
  that the JVB offers the specified codec for this
  // to take effect.
  //   preferredCodec: 'VP8',

  // Provides a way to configure the maximum bitrates that will
  be enforced on the simulcast streams for
  // video tracks. The keys in the object represent the type of
```

```
the stream (LD, SD or HD) and the values
    // are the max.bitrates to be set on that particular type of
stream. The actual send may vary based on
    // the available bandwidth calculated by the browser, but it
will be capped by the values specified here.
    // This is currently not implemented on app based clients on
mobile.
    maxBitratesVideo: {
        low: 1500000,
        standard: 5000000,
        high: 10000000
    },

    // The options can be used to override default thresholds of
video thumbnail heights corresponding to
    // the video quality levels used in the application. At the
time of this writing the allowed levels are:
    // 'low' - for the low quality level (180p at the time of
this writing)
    // 'standard' - for the medium quality level (360p)
    // 'high' - for the high quality level (720p)
    // The keys should be positive numbers which represent the
minimal thumbnail height for the quality level.
    //
    // With the default config value below the application will use
'low' quality until the thumbnails are
    // at least 360 pixels tall. If the thumbnail height reaches
720 pixels then the application will switch to
    // the high quality.
    // minHeightForQualityLvl: {
    //     360: 'standard',
    //     720: 'high'
    // },

    // Provides a way to resize the desktop track to 720p (if it is
greater than 720p) before creating a canvas
    // for the presenter mode (camera picture-in-picture mode with
screenshare).
    // resizeDesktopForPresenter: false
    },
```

this will set the low bitrate to 1,5Mbit, the standard to 5Mbit and the high to 10Mbit

10. Save and quit the file

11. `docker-compose up -d`

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