Jitsi

Aplicativo de colaboração web conferência

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Instalação Jitsi Docker

Procedimentos de instalação do Jitsi em docker

Repositório Jitsi Docker

Link: https://github.com/jitsi/docker-jitsi-meet?tab=readme-ov-file

git clone https://github.com/jitsi/docker-jitsi-meet.git

Jitsi-contrib: https://github.com/jitsi-contrib

Jitsi Meet on Docker

Jitsi is a set of Open Source projects that allows you to easily build and deploy secure videoconferencing solutions.

Jitsi Meet is a fully encrypted, 100% Open Source video conferencing solution that you can use all day, every day, for free — with no account needed.

This repository contains the necessary tools to run a Jitsi Meet stack on Docker using Docker Compose.

All our images are published on DockerHub.

Supported architectures

Starting with `stable-7439` the published images are available for `amd64` and `arm64`.

Tags

These are the currently published tags for all our images:

Tag	Description

`stable`	Points to the latest stable release
`stable-NNNN-X`	A stable release
`unstable`	Points to the latest unstable release
`unstable-YYYY-MM-DD`	Daily unstable release
`latest`	Deprecated, no longer updated (will be removed)

Installation

The installation manual is available here.

Kubernetes

If you plan to install the jitsi-meet stack on a Kubernetes cluster you can find tools and tutorials in the project Jitsi on Kubernetes.

TODO

- Builtin TURN server.

Self-Hosting Guide - Docker Installation

Link: https://jitsi.github.io/handbook/docs/devops-guide/devops-guide-docker/

Update 04/07/2024

Quick start

In order to quickly run Jitsi Meet on a machine running Docker and Docker Compose, follow these steps:

1. Download and extract the latest release. **DO NOT** clone the git repository. See below if you are interested in running test images:

   ```
   wget $(curl -s https://api.github.com/repos/jitsi/docker-jitsi-meet/releases/latest | grep 'zip' | cut -d\" -f4)
   ```

2. Unzip the package:

   ```
   unzip <filename>
   ```

3. Create a `.env` file by copying and adjusting `env.example`:

   ```
   cp env.example .env
   ```

4. Set strong passwords in the security section options of `.env` file by running the following bash script

   ```
   ./gen-passwords.sh
   ```

5. Create required `CONFIG` directories
   - For linux:

```
mkdir -p ~/.jitsi-meet-cfg/{web,transcripts,prosody/config,prosody/prosody-plugins-custom,jicofo,jvb,jigasi,jibri}
```

- For Windows:

```
echo web,transcripts,prosody/config,prosody/prosody-plugins-custom,jicofo,jvb,jigasi,jibri | % { mkdir "~/.jitsi-meet-cfg/$_" }
```

6. Run `docker compose up -d`
7. Access the web UI at `https://localhost:8443` (or a different port, in case you edited the `.env` file).

NOTE
HTTP (not HTTPS) is also available (on port 8000, by default), but that's e.g. for a reverse proxy setup; direct access via HTTP instead HTTPS leads to WebRTC errors such as *Failed to access your microphone/camera: Cannot use microphone/camera for an unknown reason. Cannot read property '*getUserMedia*' of undefined* or *navigator.mediaDevices is undefined*.

If you want to use jigasi too, first configure your env file with SIP credentials and then run Docker Compose as follows:

```
docker compose -f docker-compose.yml -f jigasi.yml up
```

If you want to enable document sharing via Etherpad, configure it and run Docker Compose as follows:

```
docker compose -f docker-compose.yml -f etherpad.yml up
```

If you want to use jibri too, first configure a host as described in Jitsi Broadcasting Infrastructure configuration section and then run Docker Compose as follows:

```
docker compose -f docker-compose.yml -f jibri.yml up -d
```

or to use jigasi too:

```
docker compose -f docker-compose.yml -f jigasi.yml -f jibri.yml up -d
```

Updating

If you want to update, simply run

```
wget $(curl -s https://api.github.com/repos/jitsi/docker-jitsi-meet/releases/latest | grep 'zip' | cut -d\" -f4)
```

again (just like how you initially downloaded Jitsi). Then unzip and overwrite all when being asked:

```
unzip <filename>
```

Testing development / unstable builds

Download the latest code:

git clone https://github.com/jitsi/docker-jitsi-meet && cd docker-jitsi-meet

NOTE

The code in `master` is designed to work with the unstable images. Do not run it with release images.

Run `docker compose up` as usual.

Every day a new "unstable" image build is uploaded.

Building your own images

Download the latest code:

git clone https://github.com/jitsi/docker-jitsi-meet && cd docker-jitsi-meet

The provided `Makefile` provides a comprehensive way of building the whole stack or individual images.

To build all images:

make

To build a specific image (the web image for example):

make build_web

Once your local build is ready make sure to add `JITSI_IMAGE_VERSION=latest` to your `.env` file.

Security note

This setup used to have default passwords for internal accounts used across components. In order to make the default setup secure by default these have been removed and the respective containers won't start without having a password set.

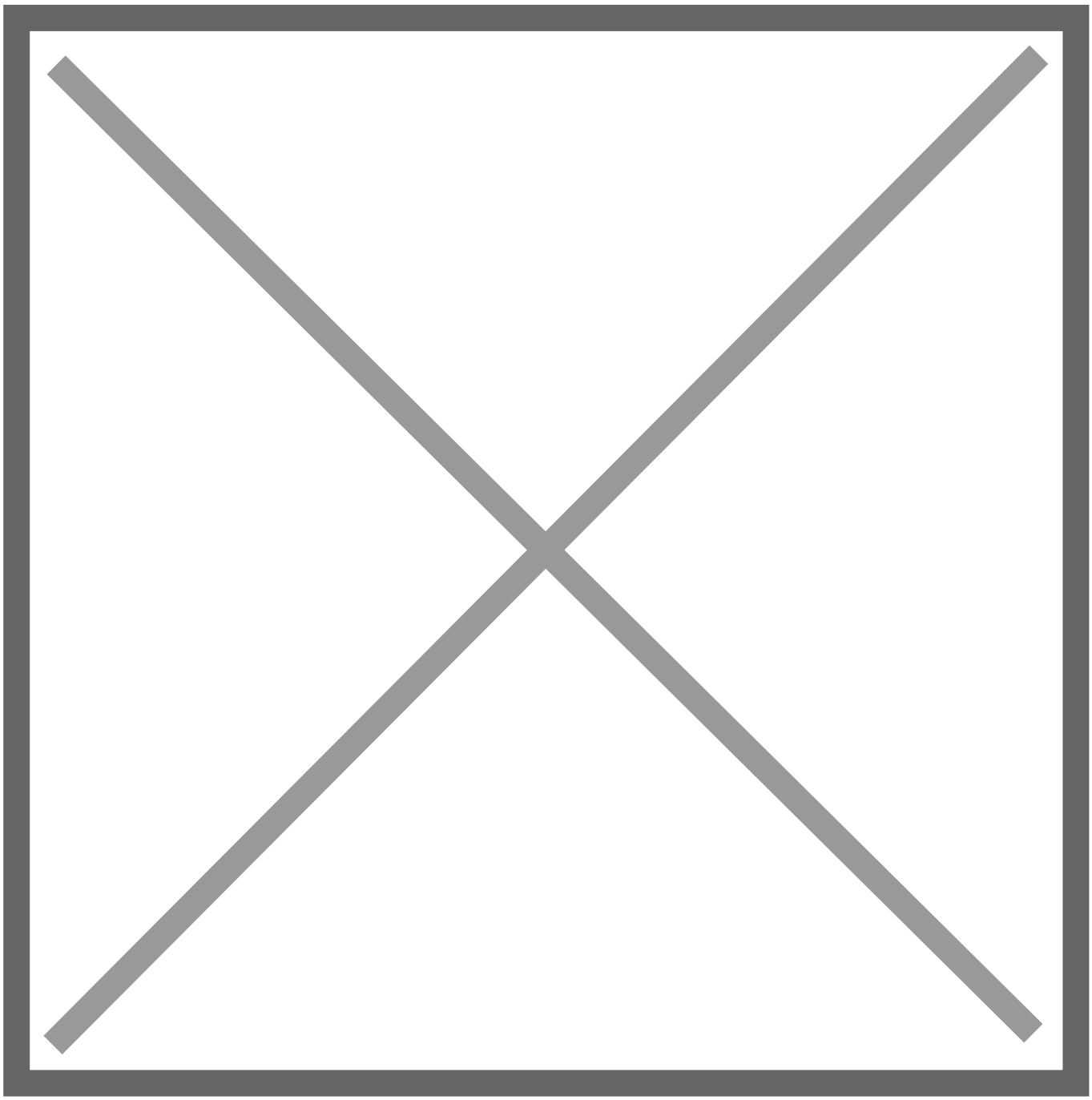
Strong passwords may be generated as follows: `./gen-passwords.sh` This will modify your `.env` file (a backup is saved in `.env.bak`) and set strong passwords for each of the required options. Passwords are generated using `openssl rand -hex 16` .

DO NOT reuse any of the passwords.

Architecture

A Jitsi Meet installation can be broken down into the following components:

- A web interface
- An XMPP server
- A conference focus component
- A video router (could be more than one)
- A SIP gateway for audio calls
- A Broadcasting Infrastructure for recording or streaming a conference.



The diagram shows a typical deployment in a host running Docker. This project separates each of the components above into interlinked containers. To this end, several container images are provided.

External Ports

The following external ports must be opened on a firewall:

- `80/tcp` for Web UI HTTP (really just to redirect, after uncommenting `ENABLE_HTTP_REDIRECT=1` in `.env`)
- `443/tcp` for Web UI HTTPS

- `10000/udp` for RTP media over UDP

Also `20000-20050/udp` for jigasi, in case you choose to deploy that to facilitate SIP access.

E.g. on a CentOS/Fedora server this would be done like this (without SIP access):

```
sudo firewall-cmd --permanent --add-port=80/tcp
sudo firewall-cmd --permanent --add-port=443/tcp
sudo firewall-cmd --permanent --add-port=10000/udp
sudo firewall-cmd --reload
```

See the corresponding section in the debian/ubuntu setup guide.

Images

- **base**: Debian stable base image with the S6 Overlay for process control and the Jitsi repositories enabled. All other images are based on this one.
- **base-java**: Same as the above, plus Java (OpenJDK).
- **web**: Jitsi Meet web UI, served with nginx.
- **prosody**: Prosody, the XMPP server.
- **jicofo**: Jicofo, the XMPP focus component.
- **jvb**: Jitsi Videobridge, the video router.
- **jigasi**: Jigasi, the SIP (audio only) gateway.
- **jibri**: Jibri, the broadcasting infrastructure.

Design considerations

Jitsi Meet uses XMPP for signaling, thus the need for the XMPP server. The setup provided by these containers does not expose the XMPP server to the outside world. Instead, it's kept completely sealed, and routing of XMPP traffic only happens on a user-defined network.

The XMPP server can be exposed to the outside world, but that's out of the scope of this project.

Configuration

The configuration is performed via environment variables contained in a `.env` file. You can copy the provided `env.example` file as a reference.

Variable	Description	Example
`CONFIG`	Directory where all configuration will be stored	/opt/jitsi-meet-cfg
`TZ`	System Time Zone	Europe/Amsterdam
`HTTP_PORT`	Exposed port for HTTP traffic	8000
`HTTPS_PORT`	Exposed port for HTTPS traffic	8443
`JVB_ADVERTISE_IPS`	IP addresses of the Docker host (comma separated), needed for LAN environments	192.168.1.1
`PUBLIC_URL`	Public URL for the web service	https://meet.example.com

NOTE

The mobile apps won't work with self-signed certificates (the default). See below for instructions on how to obtain a proper certificate with Let's Encrypt.

TLS Configuration

Let's Encrypt configuration

If you want to expose your Jitsi Meet instance to the outside traffic directly, but don't own a proper TLS certificate, you are in luck because Let's Encrypt support is built right in. Here are the required options:

Variable	Description	Example
`ENABLE_LETSENCRYPT`	Enable Let's Encrypt certificate generation	1
`LETSENCRYPT_DOMAIN`	Domain for which to generate the certificate	meet.example.com
`LETSENCRYPT_EMAIL`	E-Mail for receiving important account notifications (mandatory)	alice@atlanta.net

In addition, you will need to set `HTTP_PORT` to 80 and `HTTPS_PORT` to 443 and PUBLIC_URL to your domain. You might also consider to redirect HTTP traffic to HTTPS by setting `ENABLE_HTTP_REDIRECT=1`.

Let's Encrypt rate limit warning: Let's Encrypt has a limit to how many times you can submit a request for a new certificate for your domain name. At the time of writing, the current limit is five new (duplicate) certificates for the same domain name every seven days. Because of this, it is recommended that you disable the Let's Encrypt environment variables from `.env` if you plan on

deleting the `.jitsi-meet-cfg` folder. Otherwise, you might want to consider moving the `.jitsi-meet-cfg` folder to a different location so you have a safe place to find the certificate that already Let's Encrypt issued. Or do initial testing with Let's Encrypt disabled, then re-enable Let's Encrypt once you are done testing.

NOTE

When you move away from `LETSENCRYPT_USE_STAGING`, you will have to manually clear the certificates from `.jitsi-meet-cfg/web`.

For more information on Let's Encrypt's rate limits, visit: https://letsencrypt.org/docs/rate-limits/

Using existing TLS certificate and key

If you own a proper TLS certificate and don't need a Let's Encrypt certificate, you can configure Jitsi Meet container to use it.

Unlike Let's Encrypt certificates, this is not configured through the `.env` file, but by telling Jitsi Meet's `web` service to mount the following two volumes:

- mount `/path/to/your/cert.key` file to `/config/keys/cert.key` mount point
- mount `/path/to/your/cert.fullchain` file to the `/config/keys/cert.crt` mount point.

Doing it in `docker-compose.yml` file should look like this:

```
services:
  web:
    ...
    volumes:
      ...
      - /path/to/your/cert.fullchain:/config/keys/cert.crt
      - /path/to/your/cert.key:/config/keys/cert.key
```

Features configuration (config.js)

Variable	Description	Example
`TOOLBAR_BUTTONS`	Configure toolbar buttons. Add the buttons name separated with comma(no spaces between comma)	
`HIDE_PREMEETING_BUTTONS`	Hide the buttons at pre-join screen. Add the buttons name separated with comma	

Variable	Description	Example
ENABLE_LOBBY	Control whether the lobby feature should be enabled or not	1
ENABLE_AV_MODERATION	Control whether the A/V moderation should be enabled or not	1
ENABLE_PREJOIN_PAGE	Show a prejoin page before entering a conference	1
ENABLE_WELCOME_PAGE	Enable the welcome page	1
ENABLE_CLOSE_PAGE	Enable the close page	0
DISABLE_AUDIO_LEVELS	Disable measuring of audio levels	0
ENABLE_NOISY_MIC_DETECTION	Enable noisy mic detection	1
ENABLE_BREAKOUT_ROOMS	Enable breakout rooms	1

Jigasi SIP gateway (audio only) configuration

If you want to enable the SIP gateway, these options are required:

Variable	Description	Example
JIGASI_SIP_URI	SIP URI for incoming / outgoing calls	test@sip2sip.info
JIGASI_SIP_PASSWORD	Password for the specified SIP account	<unset>
JIGASI_SIP_SERVER	SIP server (use the SIP account domain if in doubt)	sip2sip.info
JIGASI_SIP_PORT	SIP server port	5060
JIGASI_SIP_TRANSPORT	SIP transport	UDP

Display Dial-In information

Variable	Description	Example
DIALIN_NUMBERS_URL	URL to the JSON with all Dial-In numbers	https://meet.example.com/dialin.json
CONFCODE_URL	URL to the API for checking/generating Dial-In codes	https://jitsi-api.jitsi.net/conferenceMapper

The JSON with the Dial-In numbers should look like this:

```
{"message":"Dial-In numbers:","numbers":{"DE": ["+49-721-0000-0000"]},"numbersEnabled":true}
```

Recording / live streaming configuration with Jibri

If you are using a release older than 7439 some extra setup is necessary.

If you want to enable Jibri these options are required:

Variable	Description	Example
ENABLE_RECORDING	Enable recording / live streaming	1

Extended Jibri configuration:

Variable	Description	Example
JIBRI_RECORDER_USER	Internal recorder user for Jibri client connections	recorder
JIBRI_RECORDER_PASSWORD	Internal recorder password for Jibri client connections	<unset>
JIBRI_RECORDING_DIR	Directory for recordings inside Jibri container	/config/recordings
JIBRI_FINALIZE_RECORDING_SCRIPT_PATH	The finalizing script. Will run after recording is complete	/config/finalize.sh
JIBRI_XMPP_USER	Internal user for Jibri client connections.	jibri
JIBRI_STRIP_DOMAIN_JID	Prefix domain for strip inside Jibri (please see env.example for details)	muc
JIBRI_BREWERY_MUC	MUC name for the Jibri pool	jibribrewery
JIBRI_PENDING_TIMEOUT	MUC connection timeout	90

Jitsi Meet configuration

Jitsi-Meet uses two configuration files for changing default settings within the web interface: config.js and interface_config.js. The files are located within the CONFIG/web/ directory configured within your environment file.

These files are re-created on every container restart. If you'd like to provide your own settings, create your own config files: custom-config.js and custom-interface_config.js.

It's enough to provide your relevant settings only, the docker scripts will append your custom files to the default ones!

Authentication

Authentication can be controlled with the environment variables below. If guest access is enabled, unauthenticated users will need to wait until a user authenticates before they can join a room. If guest access is not enabled, every user will need to authenticate before they can join.

If authentication is enabled, once an authenticated user logged in, it is always logged in before the session timeout. You can set `ENABLE_AUTO_LOGIN=0` to disable this default auto login feature or you can set `JICOFO_AUTH_LIFETIME` to limit the session lifetime.

Variable	Description	Example
`ENABLE_AUTH`	Enable authentication	1
`ENABLE_GUESTS`	Enable guest access	1
`AUTH_TYPE`	Select authentication type (internal, jwt or ldap)	internal
`ENABLE_AUTO_LOGIN`	Enable auto login	1
`JICOFO_AUTH_LIFETIME`	Select session timeout value for an authenticated user	3 hours

Internal authentication

The default authentication mode (`internal`) uses XMPP credentials to authenticate users. To enable it you have to enable authentication with `ENABLE_AUTH` and set `AUTH_TYPE` to `internal`, then configure the settings you can see below.

Internal users must be created with the `prosodyctl` utility in the `prosody` container. In order to do that, first, execute a shell in the corresponding container:

```
docker compose exec prosody /bin/bash
```

Once in the container, run the following command to create a user:

```
prosodyctl --config /config/prosody.cfg.lua register TheDesiredUsername meet.jitsi TheDesiredPassword
```

Note that the command produces no output.

To delete a user, run the following command in the container:

```
prosodyctl --config /config/prosody.cfg.lua unregister TheDesiredUsername meet.jitsi
```

To list all users, run the following command in the container:

```
find /config/data/meet%2ejitsi/accounts -type f -exec basename {} .dat \;
```

Authentication using LDAP

You can use LDAP to authenticate users. To enable it you have to enable authentication with `ENABLE_AUTH` and set `AUTH_TYPE` to `ldap`, then configure the settings you can see below.

Variable	Description	Example
`LDAP_URL`	URL for ldap connection	ldaps://ldap.domain.com/
`LDAP_BASE`	LDAP base DN. Can be empty.	DC=example,DC=domain,DC=com
`LDAP_BINDDN`	LDAP user DN. Do not specify this parameter for the anonymous bind.	CN=binduser,OU=users,DC=example,DC=domain,DC=com
`LDAP_BINDPW`	LDAP user password. Do not specify this parameter for the anonymous bind.	LdapUserPassw0rd
`LDAP_FILTER`	LDAP filter.	(sAMAccountName=%u)
`LDAP_AUTH_METHOD`	LDAP authentication method.	bind
`LDAP_VERSION`	LDAP protocol version	3
`LDAP_USE_TLS`	Enable LDAP TLS	1
`LDAP_TLS_CIPHERS`	Set TLS ciphers list to allow	SECURE256:SECURE128
`LDAP_TLS_CHECK_PEER`	Require and verify LDAP server certificate	1
`LDAP_TLS_CACERT_FILE`	Path to CA cert file. Used when server certificate verification is enabled	/etc/ssl/certs/ca-certificates.crt
`LDAP_TLS_CACERT_DIR`	Path to CA certs directory. Used when server certificate verification is enabled.	/etc/ssl/certs
`LDAP_START_TLS`	Enable START_TLS, requires LDAPv3, URL must be ldap:// not ldaps://	0

Authentication using JWT tokens

You can use JWT tokens to authenticate users. To enable it you have to enable authentication with `ENABLE_AUTH` and set `AUTH_TYPE` to `jwt`, then configure the settings you can see below.

Variable	Description	Example
JWT_APP_ID	Application identifier	my_jitsi_app_id
JWT_APP_SECRET	Application secret known only to your token	my_jitsi_app_secret
JWT_ACCEPTED_ISSUERS	(Optional) Set asap_accepted_issuers as a comma separated list	my_web_client,my_app_client
JWT_ACCEPTED_AUDIENCES	(Optional) Set asap_accepted_audiences as a comma separated list	my_server1,my_server2
JWT_ASAP_KEYSERVER	(Optional) Set asap_keyserver to a url where public keys can be found	https://example.com/asap>
JWT_ALLOW_EMPTY	(Optional) Allow anonymous users with no JWT while validating JWTs when provided	0
JWT_AUTH_TYPE	(Optional) Controls which module is used for processing incoming JWTs	token
JWT_TOKEN_AUTH_MODULE	(Optional) Controls which module is used for validating JWTs	token_verification

This can be tested using the jwt.io debugger. Use the following sample payload:

```
{
  "context": {
    "user": {
      "avatar": "https://robohash.org/john-doe",
      "name": "John Doe",
      "email": "jdoe@example.com"
    }
  },
  "aud": "my_jitsi_app_id",
  "iss": "my_jitsi_app_id",
  "sub": "meet.jitsi",
  "room": "*"
}
```

Authentication using Matrix

For more information see the documentation of the "Prosody Auth Matrix User Verification" here.

Variable	Description	Example
MATRIX_UVS_URL	Base URL to the matrix user verification service (without ending slash)	https://uvs.example.com:3000>

Variable	Description	Example
`MATRIX_UVS_ISSUER`	(optional) The issuer of the auth token to be passed through. Must match what is being set as `iss` in the JWT.	issuer (default)
`MATRIX_UVS_AUTH_TOKEN`	(optional) user verification service auth token, if authentication enabled	changeme
`MATRIX_UVS_SYNC_POWER_LEVELS`	(optional) Make Matrix room moderators owners of the Prosody room.	1

Authentication using Hybrid Matrix Token

You can use `Hybrid Matrix Token` to authenticate users. It supports `Matrix` and `JWT Token` authentications on the same setup. To enable it you have to enable authentication with `ENABLE_AUTH` and set `AUTH_TYPE` to `hybrid_matrix_token`, then configure the settings you can see below.

For more information see the documentation of the "Hybrid Matrix Token" here.

Variable	Description	Example
`MATRIX_UVS_URL`	Base URL to the matrix user verification service (without ending slash)	https://uvs.example.com:3000>
`MATRIX_UVS_ISSUER`	(optional) The issuer of the auth token to be passed through. Must match what is being set as `iss` in the JWT. It allows all issuers (`*`) by default.	my_issuer
`MATRIX_UVS_AUTH_TOKEN`	(optional) user verification service auth token, if authentication enabled	my_matrix_secret
`MATRIX_UVS_SYNC_POWER_LEVELS`	(optional) Make Matrix room moderators owners of the Prosody room.	1
`MATRIX_LOBBY_BYPASS`	(optional) Allow Matrix room members to bypass Jitsi lobby check.	1
`JWT_APP_ID`	Application identifier	my_jitsi_app_id
`JWT_APP_SECRET`	Application secret known only to your token	my_jitsi_app_secret
`JWT_ALLOW_EMPTY`	(Optional) Allow anonymous users with no JWT while validating JWTs when provided	0

External authentication

Variable	Description	Example

`TOKEN_AUTH_URL`	Authenticate using external service or just focus external auth window if there is one already.	https://auth.meet.example.com/{room}>

Shared document editing using Etherpad

You can collaboratively edit a document via Etherpad. In order to enable it, set the config options below and run Docker Compose with the additional config file `etherpad.yml`.

Here are the required options:

Variable	Description	Example
`ETHERPAD_URL_BASE`	Set etherpad-lite URL	http://etherpad.meet.jitsi:9001>

Transcription configuration

If you want to enable the Transcribing function, these options are required:

Variable	Description	Example
`ENABLE_TRANSCRIPTIONS`	Enable Jigasi transcription in a conference	1
`GC_PROJECT_ID`	`project_id` from Google Cloud Credentials	
`GC_PRIVATE_KEY_ID`	`private_key_id` from Google Cloud Credentials	
`GC_PRIVATE_KEY`	`private_key` from Google Cloud Credentials	
`GC_CLIENT_EMAIL`	`client_email` from Google Cloud Credentials	
`GC_CLIENT_ID`	`client_id` from Google Cloud Credentials	
`GC_CLIENT_CERT_URL`	`client_x509_cert_url` from Google Cloud Credentials	
`JIGASI_TRANSCRIBER_RECORD_AUDIO`	Jigasi will record audio when transcriber is on	true
`JIGASI_TRANSCRIBER_SEND_TXT`	Jigasi will send transcribed text to the chat when transcriber is on	true
`JIGASI_TRANSCRIBER_ADVERTISE_URL`	Jigasi will post an url to the chat with transcription file	true

For setting the Google Cloud Credentials please read https://cloud.google.com/text-to-speech/docs/quickstart-protocol> section "Before you begin" paragraph 1 to 5.

Sentry logging configuration

Variable	Description	Default value
JVB_SENTRY_DSN	Sentry Data Source Name (Endpoint for Sentry project)	https://public:private@host:port/1>
JICOFO_SENTRY_DSN	Sentry Data Source Name (Endpoint for Sentry project)	https://public:private@host:port/1>
JIGASI_SENTRY_DSN	Sentry Data Source Name (Endpoint for Sentry project)	https://public:private@host:port/1>
SENTRY_ENVIRONMENT	Optional environment info to filter events	production
SENTRY_RELEASE	Optional release info to filter events	1.0.0

TURN server configuration

Configure external TURN servers.

Variable	Description	Default value
TURN_CREDENTIALS	Credentials for TURN servers	
TURN_HOST	TURN server hostnames as a comma separated list (UDP or TCP transport)	
TURN_PORT	TURN server port (UDP or TCP transport)	443
TURN_TRANSPORT	TURN server protocols as a comma separated list (UDP or TCP or both)	tcp
TURNS_HOST	TURN server hostnames as a comma separated list (TLS transport)	
TURNS_PORT	TURN server port (TLS transport)	443

Advanced configuration

These configuration options are already set and generally don't need to be changed.

Variable	Description	Default value
`XMPP_DOMAIN`	Internal XMPP domain	meet.jitsi
`XMPP_AUTH_DOMAIN`	Internal XMPP domain for authenticated services	auth.meet.jitsi
`XMPP_SERVER`	Internal XMPP server name xmpp.meet.jitsi	xmpp.meet.jitsi
`XMPP_BOSH_URL_BASE`	Internal XMPP server URL for BOSH module	http://xmpp.meet.jitsi:5280>
`XMPP_MUC_DOMAIN`	XMPP domain for the MUC	muc.meet.jitsi
`XMPP_INTERNAL_MUC_DOMAIN`	XMPP domain for the internal MUC	internal-muc.meet.jitsi
`XMPP_GUEST_DOMAIN`	XMPP domain for unauthenticated users	guest.meet.jitsi
`XMPP_RECORDER_DOMAIN`	Domain for the jibri recorder	recorder.meet.jitsi
`XMPP_MODULES`	Custom Prosody modules for XMPP_DOMAIN (comma separated)	info,alert
`XMPP_MUC_MODULES`	Custom Prosody modules for MUC component (comma separated)	info,alert
`XMPP_INTERNAL_MUC_MODULES`	Custom Prosody modules for internal MUC component (comma separated)	info,alert
`GLOBAL_MODULES`	Custom prosody modules to load in global configuration (comma separated)	statistics,alert
`GLOBAL_CONFIG`	Custom configuration string with escaped newlines	foo = bar;\nkey = val;
`RESTART_POLICY`	Container restart policy	defaults to `unless-stopped`
`DISABLE_HTTPS`	Handle TLS connections outside of this setup	0
`ENABLE_HTTP_REDIRECT`	Redirect HTTP traffic to HTTPS	0
`LOG_LEVEL`	Controls which logs are output from prosody and associated modules	info
`ENABLE_HSTS`	Send a `strict-transport-security` header to force browsers to use a secure and trusted connection. Recommended for production use.	1
`ENABLE_IPV6`	Provides means to disable IPv6 in environments that don't support it	1
`ENABLE_COLIBRI_WEBSOCKET_UNSAFE_REGEX`	Enabled older unsafe regex for JVB colibri-ws URLs. WARNING: Enable with caution, this regex allows connections to arbitrary internal IP addresses and is not recommended for production use. Unsafe regex is defined as `[a-zA-Z0-9-\._]+`	0
`COLIBRI_WEBSOCKET_JVB_LOOKUP_NAME`	DNS name to look up JVB IP address, used for default value of `COLIBRI_WEBSOCKET_REGEX`	jvb
`COLIBRI_WEBSOCKET_REGEX`	Overrides the colibri regex used for proxying to JVB. Recommended to override in production with values matching possible JVB IP ranges	defaults to `dig $COLIBRI_WEBSOCKET_JVB_LOOKUP_NAME` unless `DISABLE_COLIBRI_WEBSOCKET_JVB_LOOKUP` is set to true

Variable	Description	Default value
DISABLE_COLIBRI_WEBSOCKET_JVB_LOOKUP	Controls whether to run dig $COLIBRI_WEBSOCKET_JVB_LOOKUP_NAME when defining COLIBRI_WEBSOCKET_REGEX	0

Advanced Prosody options

Variable	Description	Default value
PROSODY_RESERVATION_ENABLED	Enable Prosody's reservation REST API	false
PROSODY_RESERVATION_REST_BASE_URL	Base URL of Prosody's reservation REST API	
PROSODY_AUTH_TYPE	Select authentication type for Prosody (internal, jwt or ldap)	AUTH_TYPE

Advanced Jicofo options

Variable	Description	Default value
JICOFO_COMPONENT_SECRET	XMPP component password for Jicofo	s3cr37
JICOFO_AUTH_USER	XMPP user for Jicofo client connections	focus
JICOFO_AUTH_PASSWORD	XMPP password for Jicofo client connections	<unset>
JICOFO_ENABLE_AUTH	Enable authentication in Jicofo	ENABLE_AUTH
JICOFO_AUTH_TYPE	Select authentication type for Jicofo (internal, jwt or ldap)	AUTH_TYPE
JICOFO_AUTH_LIFETIME	Select session timeout value for an authenticated user	24 hours
JICOFO_ENABLE_HEALTH_CHECKS	Enable health checks inside Jicofo, allowing the use of the REST api to check Jicofo's status	false

Advanced JVB options

Variable	Description	Default value
JVB_AUTH_USER	XMPP user for JVB MUC client connections	jvb
JVB_AUTH_PASSWORD	XMPP password for JVB MUC client connections	<unset>
JVB_STUN_SERVERS	STUN servers used to discover the server's public IP	stun.l.google.com:19302, stun1.l.google.com:19302, stun2.l.google.com:19302
JVB_PORT	UDP port for media used by Jitsi Videobridge	10000
JVB_COLIBRI_PORT	COLIBRI REST API port of JVB exposed to localhost	8080

Variable	Description	Default value
JVB_BREWERY_MUC	MUC name for the JVB pool	jvbbrewery
COLIBRI_REST_ENABLED	Enable the COLIBRI REST API	true
SHUTDOWN_REST_ENABLED	Enable the shutdown REST API	true

Advanced Jigasi options

Variable	Description	Default value
JIGASI_ENABLE_SDES_SRTP	Enable SDES srtp	0
JIGASI_SIP_KEEP_ALIVE_METHOD	Keepalive method	OPTIONS
JIGASI_HEALTH_CHECK_SIP_URI	Health-check extension	
JIGASI_HEALTH_CHECK_INTERVAL	Health-check interval	300000
JIGASI_XMPP_USER	XMPP user for Jigasi MUC client connections	jigasi
JIGASI_XMPP_PASSWORD	XMPP password for Jigasi MUC client connections	<unset>
JIGASI_BREWERY_MUC	MUC name for the Jigasi pool	jigasibrewery
JIGASI_PORT_MIN	Minimum port for media used by Jigasi	20000
JIGASI_PORT_MAX	Maximum port for media used by Jigasi	20050

Running behind NAT or on a LAN environment

When running running in a LAN environment, or on the public Internet via NAT, the JVB_ADVERTISE_IPS env variable should be set. This variable allows to control which IP addresses the JVB will advertise for WebRTC media traffic.

NOTE

This variable used to be called DOCKER_HOST_ADDRESS but it got renamed for clarity and to support a list of IPs.

If your users are coming in over the Internet (and not over LAN), this will likely be your public IP address. If this is not set up correctly, calls will crash when more than two users join a meeting.

The public IP address is attempted to be discovered via STUN. STUN servers can be specified with the `JVB_STUN_SERVERS` option.

NOTE

Due to a bug in the docker version currently in the Debian repos (20.10.5), Docker does not listen on IPv6 ports, so for that combination you will have to manually obtain the latest version.

Split horizon

If you are running in a split horizon environemt (LAN internal clients connect to a local IP and other clients connect to a public IP) you can specify multiple advertised IPs by separating them with commas:

```
JVB_ADVERTISE_IPS=192.168.1.1,1.2.3.4
```

Offline / airgapped installation

If your setup does not have access to the Internet you'll need to disable STUN on the JVB since discovering its own IP address will fail, but that is not necessary on that type of environment.

```
JVB_DISABLE_STUN=true
```

Accessing server logs

The default bahavior of `docker-jitsi-meet` is to log to `stdout`.

While the logs are sent to `stdout`, they are not lost: unless configured to drop all logs, Docker keeps them available for future retrieval and processing.

If you need to access the container's logs you have multiple options. Here are the main ones:

- run `docker compose logs -t -f <service_name>` from command line, where `<service_name>` is one of `web`, `prosody`, `jvb`, `jicofo`. This command will output the logs for the selected service to stdout with timestamps.
- use a standard docker logging driver to redirect the logs to the desired target (for instance `syslog` or `splunk`).
- search docker hub for a third party docker logging driver plugin

- or write your own driver plugin if you have a very specific need.

For instance, if you want to have all logs related to a `<service_name>` written to `/var/log/jitsi/<service_name>` as `json` output, you could use docker-file-log-driver and configure it by adding the following block in your `docker-compose.yml` file, at the same level as the `image` block of the selected `<service_name>`:

```
services:
    <service_name>:
        image: ...
        ...
        logging:
            driver: file-log-driver
            options:
                fpath: "/jitsi/<service_name>.log"
```

If you want to only display the `message` part of the log in `json` format, simply execute the following command (for instance if `fpath` was set to `/jitsi/jvb.log`) which uses `jq` to extract the relevant part of the logs:

```
sudo cat /var/log/jitsi/jvb.log | jq -r '.msg' | jq -r '.message'
```

Build Instructions

Building your images allows you to edit the configuration files of each image individually, providing more customization for your deployment.

The docker images can be built by running the `make` command in the main repository folder. If you need to overwrite existing images from the remote source, use `FORCE_REBUILD=1 make`.

If you are on the unstable branch, build the images with `FORCE_REBUILD=1 JITSI_RELEASE=unstable make`.

You are now able to run `docker compose up` as usual.

Running behind a reverse proxy

By default this setup is using WebSocket connections for 2 core components:

- Signalling (XMPP)
- Bridge channel (colibri)

Due to the hop-by-hop nature of WebSockets the reverse proxy must properly terminate and forward WebSocket connections. There 2 routes require such treatment:

- /xmpp-websocket
- /colibri-ws

With nginx, these routes can be forwarded using the following config snippet:

```
location /xmpp-websocket {
    proxy_pass https://localhost:8443;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection "upgrade";
}
location /colibri-ws {
    proxy_pass https://localhost:8443;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection "upgrade";
}
```

In addition we need a route for /http-bind as XMPP over BOSH is still used by mobile clients:

```
location /http-bind {
    proxy_pass https://localhost:8443;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection "upgrade";
}
```

With apache, `mod_proxy` and `mod_proxy_wstunnel` need to be enabled and these routes can be forwarded using the following config snippet:

```
<IfModule mod_proxy.c>
    <IfModule mod_proxy_wstunnel.c>
        ProxyTimeout 900
        <Location "/xmpp-websocket">
```

```
        ProxyPass "wss://localhost:8443/xmpp-websocket"
    </Location>
    <Location "/colibri-ws/">
        ProxyPass "wss://localhost:8443/colibri-ws/"
    </Location>
    <Location "/http-bind">
        ProxyPass "http://localhost:8443/http-bind"
    </Location>
  </IfModule>
</IfModule>
```

where `https://localhost:8443/` is the url of the web service's ingress.

Disabling WebSocket connections

NOTE

This is not the recommended setup.

If using WebSockets is not an option, these environment variables can be set to fallback to HTTP polling and WebRTC datachannels:

```
ENABLE_SCTP=1
ENABLE_COLIBRI_WEBSOCKET=0
ENABLE_XMPP_WEBSOCKET=0
```

Scalable setup Jitsi Docker

Link: https://jitsi.github.io/handbook/docs/devops-guide/devops-guide-scalable

A single server Jitsi installation is good for a limited size of concurrent conferences. The first limiting factor is the videobridge component, that handles the actual video and audio traffic. It is easy to scale the video bridges horizontally by adding as many as needed. In a cloud based environment, additionally the bridges can be scaled up or down as needed.

DANGER

The Youtube Tutorial on Scaling is outdated and describes an old configuration method. The current default Jitsi Meet install is already configured for horizontal scalability.

NOTE

Building a scalable infrastructure is not a task for beginning Jitsi Administrators. The instructions assume that you have installed a single node version successfully, and that you are comfortable installing, configuring and debugging Linux software. This is not a step-by-step guide, but will show you, which packages to install and which configurations to change. It is highly recommended to use configuration management tools like Ansible or Puppet to manage the installation and configuration.

Architecture (Single Jitsi-Meet, multiple videobridges)

A first step is to split the functions of the central jitsi-meet instance (with nginx, prosody and jicofo) and videobridges.

A simplified diagram (with open network ports) of an installation with one Jitsi-Meet instance and three videobridges that are load balanced looks as follows. Each box is a server/VM.

```
        +                    +
        |                    |
        |                    |
        v                    v
```

```
  80, 443 TCP                    443 TCP, 10000 UDP
+--------------+                +---------------------+
| nginx        | 5222 TCP       |                     |
| Jitsi Meet   |<---------------+| jitsi-videobridge   |
| prosody      |       |        |                     |
| jicofo       |       |        +---------------------+
+--------------+       |
                       |        +---------------------+
                       |        |                     |
                       +--------+| jitsi-videobridge   |
                       |        |                     |
                       |        +---------------------+
                       |
                       |        +---------------------+
                       |        |                     |
                       +--------+| jitsi-videobridge   |
                                |                     |
                                +---------------------+
```


Machine Sizing

The Jitsi-Meet server will generally not have that much load (unless you have many) conferences going at the same time. A 4 CPU, 8 GB machine will probably be fine.

The videobridges will have more load. 4 or 8 CPU with 8 GB RAM seems to be a good configuration.

Installation of Jitsi-Meet

Assuming that the installation will run under the following FQDN: `meet.example.com` and you have SSL cert and key in `/etc/ssl/meet.example.com.{crt,key}`

Set the following DebConf variables prior to installing the packages. (We are not installing the `jitsi-meet` package which would handle that for us)

Install the `debconf-utils` package

```
$ cat << EOF | sudo debconf-set-selections
jitsi-videobridge   jitsi-videobridge/jvb-hostname  string  meet.example.com
jitsi-meet  jitsi-meet/jvb-serve    boolean false
jitsi-meet-prosody  jitsi-videobridge/jvb-hostname  string  meet.example.com
jitsi-meet-web-config   jitsi-meet/cert-choice  select  I want to use my own certificate
jitsi-meet-web-config   jitsi-meet/cert-path-crt    string  /etc/ssl/meet.example.com.crt
jitsi-meet-web-config   jitsi-meet/cert-path-key    string  /etc/ssl/meet.example.com.key
jitsi-meet-web-config   jitsi-meet/jaas-choice  boolean false
EOF
```

To enable integration with Jitsi Meet Components for telephony support, set the `jitsi-meet/jaas-choice` option above to `true`.

On the jitsi-meet server, install the following packages:

- `nginx`
- `prosody`
- `jicofo`
- `jitsi-meet-web`
- `jitsi-meet-prosody`
- `jitsi-meet-web-config`

Installation of Videobridge(s)

For simplicities sake, set the same `debconf` variables as above and install

- `jitsi-videobridge2`

Configuration of jitsi-meet

Firewall

Open the following ports:

Open to world:

- 80 TCP
- 443 TCP

Open to the videobridges only

- 5222 TCP (for Prosody)

NGINX

Create the `/etc/nginx/sites-available/meet.example.com.conf` as usual

Jitsi-Meet

Adapt `/usr/share/jitsi-meet/config.js` and `/usr/share/jitsi-meet/interface-config.js` to your specific needs

Jicofo

No changes necessary from the default install.

Configuration of the Videobridge

Firewall

Open the following ports:

Open to world:

- 10000 UDP (for media)

jitsi-videobridge2

No changes necessary from the default setup.

Testing

After restarting all services (`prosody`, `jicofo` and all the `jitsi-videobridge2`) you can see in `/var/log/prosody/prosody.log` and `/var/log/jitsi/jicofo.log` that the videobridges connect to Prososy and that Jicofo picks them up.

When a new conference starts, Jicofo picks a videobridge and schedules the conference on it.

Configurações Jitsi Docker

Procedimentos de configurações e customizações.

Jitsi Meet Load Balancing

Link: https://meetrix.io/blog/webrtc/jitsi/jitsi-meet-load-balancing.html

Setup multi server, load balanced videobriges

One of the amazing features in Jitsi Meet is the inbuilt horizontal scalability. When you want to cater large number of concurrent users, you can spin up multiple video bridges to handle the load. If we setup mulple video bridges and connect them to the same shard, Jicofo, the conference manager selects the least loaded Videobridge for the next new conference.

Run Prosody on all interfaces

By default prosody runs only on local interface (127.0.0.0), to allow the xmpp connections from external servers, we have to run prosody on all interfaces. To do that, add the following line at the beginning of `/etc/prosody/prosody.cfg.lua`

```
component_interface = "0.0.0.0"
```

Allow inbound traffic for port 5222

Open inbound traffic from JVB server on port `5222` (TCP) of Prosody server. But DO NOT open this publicly.

Install JVB on a seperate server

Install a Jitsi Video Bridge on a different server.

Copy JVB configurations from Jitsi Meet server

Replace `/etc/jitsi/videbridge/config` and `/etc/jitsi/video-bridge/sip-communicator.properties` of JVB server with the same files from the original Jitsi Meet server

Update JVB config file

In `/etc/jitsi/videbridge/config` set the `XMPP_HOST` to the ip address/domain of the prosody server

```
# Jitsi Videobridge settings

# sets the XMPP domain (default: none)
JVB_HOSTNAME=example.com

# sets the hostname of the XMPP server (default: domain if set, localhost otherwise)
JVB_HOST=<XMPP_HOST>

# sets the port of the XMPP server (default: 5275)
JVB_PORT=5347

# sets the shared secret used to authenticate to the XMPP server
JVB_SECRET=<JVB_SECRET>

# extra options to pass to the JVB daemon
JVB_OPTS="--apis=rest,xmpp"



# adds java system props that are passed to jvb (default are for home and logging config file)
JAVA_SYS_PROPS="-Dnet.java.sip.communicator.SC_HOME_DIR_LOCATION=/etc/jitsi -
Dnet.java.sip.communicator.SC_HOME_DIR_NAME=videobridge -
Dnet.java.sip.communicator.SC_LOG_DIR_LOCATION=/var/log/jitsi -
Djava.util.logging.config.file=/etc/jitsi/videobridge/logging.properties"
```

In `/etc/jitsi/video-bridge/sip-communicator.properties` file update the following properties

1. `<XMPP_HOST>`: The ip address of the prosody server. Better if you can use the private IP address if that can be accessed from JVB server.
2. `<JVB_NICKNAME>`: This should be a unique string used by Jicofo to identify each JVB

```
org.ice4j.ice.harvest.DISABLE_AWS_HARVESTER=true
org.ice4j.ice.harvest.STUN_MAPPING_HARVESTER_ADDRESSES=meet-jit-si-turnrelay.jitsi.net:443
org.jitsi.videobridge.ENABLE_STATISTICS=true
org.jitsi.videobridge.STATISTICS_TRANSPORT=muc
org.jitsi.videobridge.xmpp.user.shard.HOSTNAME=<XMPP_HOST>
org.jitsi.videobridge.xmpp.user.shard.DOMAIN=auth.example.com
org.jitsi.videobridge.xmpp.user.shard.USERNAME=jvb
org.jitsi.videobridge.xmpp.user.shard.PASSWORD=<JVB_SECRET>
org.jitsi.videobridge.xmpp.user.shard.MUC_JIDS=JvbBrewery@internal.auth.example.com
org.jitsi.videobridge.xmpp.user.shard.MUC_NICKNAME=<JVB_NICKNAME>
org.jitsi.videobridge.xmpp.user.shard.DISABLE_CERTIFICATE_VERIFICATION=true
```

You can add the following line at the beginning of `/usr/share/jitsi/jvb/jvb.sh` to generate a unique nickname for the JVB at each startup. This might be useful if you are using an auto-scaling mechanism.

```
sed -i
"s/org.jitsi.videobridge.xmpp.user.shard.MUC_NICKNAME=.*/org.jitsi.videobridge.xmpp.user.shard.MUC_NICKNA
ME=$(cat /proc/sys/kernel/random/uuid)/g" /etc/jitsi/videobridge/sip-communicator.properties
```

Looking for commercial support for Jitsi Meet ? Please contact us via hello@meetrix.io

Updated: October 19, 2020

Load Testing Jitsi Meet

Link: https://meetrix.io/blog/webrtc/jitsi/jitsi-meet-load-testing.html

Make sure your Jitsi Meet infrastructure is ready for production

By deploying a horizontally scalable Jitsi Meet setup, you can scale your Jitsi Meet conferencing infrastructure to cater thousands of concurrent users. But, before you go live you might want to make sure that your infrastructure is capable of handling the desired number of concurrent users.

Jitsi Meet Torture is a tool that can be used to run tests against a Jitsi Instance and it is capable of load testing Jitsi Meet.

> Jitsi Meet Load Testing
> Jitsi Meet Load Testing with Torture

Selenium Grid

To simulate hundrads of concurrent users, we need to deploy Jitsi Meet Torture agains a selenium grid setup. There would be a `selenium hub` which accepts commands from Jitsi Meet Torture and pass them to `selenium nodes`. You can have hundrads of `selenium nodes` to simulate users.

> Jitsi Meet Load Testing
> Jitsi Meet Load Testing with Torture

Minimal setup with docker-compose

1. Install Docker. You can use following scripts on Ubuntu 18.04

```
sudo apt-get update


sudo apt-get -y install apt-transport-https ca-certificates curl software-properties-common


curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -


sudo add-apt-repository -y \
"deb [arch=amd64] https://download.docker.com/linux/ubuntu \
$(lsb_release -cs) \
stable"


sudo apt-get -y update
sudo apt-get -y install docker-ce


sudo usermod -a -G docker $(whoami)
```

2. Install the latest version of Docker Compose
3. Create a `docker-compose.yml` file with following content.

```
version: "3.3"
services:
  torture:
    image: meetrix/jitsi-meet-torture
  hub:
    image: selenium/hub:3.141.59
  node:
    build: ./node
    image: meetrix/jitsi-meet-torture-selenium-node
    volumes:
      - /dev/shm:/dev/shm
    depends_on:
      - hub
    environment:
      HUB_HOST: hub
```

4. Please note that `node` are configured to run only one chrome instance at a time. Run the setup with `docker-compose up -d --scale node=2` to run two nodes.
5. `docker-compose exec torture /bin/bash`
6. Change `<YOUR_JITSI_MEET_INSTANCE_URL>` to your Jitsi Meet installation (for example `https://meet.example.com`) in following script and run to perform the test.

```
./scripts/malleus.sh --conferences=1 --participants=2 --senders=2 --audio-senders=2 --duration=300 --room-name-prefix=test --hub-url=http://hub:4444/wd/hub --instance-url=<YOUR_JITSI_MEET_INSTANCE_URL>
```

Running the test with large number of nodes

You can scale the number of nodes with `docker-compose up --scale node=<NUMBER>` or you can create a VM using same docker images for `selenium hub` and `selenium-node`. Then you can use an autoscaling mechanism (Such as Autoscaling groups on AWS) to scale the number of nodes.

Updated: June 19, 2020