

#333 - Investigation and provision of meeting software

- “It would be interesting to have this [Jitsi Meet] as a supported informatics service”
- Jitsi (formerly SIP Communicator) is “a multiplatform voice (VoIP), videoconferencing and instant messaging application.”

Jitsi...

- ...supports several popular instant-messaging and telephony protocols, including
 - open recognised encryption protocols for chat (OTR)
 - voice/video streaming
 - voice/video conferencing (SIP/RTP/SRTP/ZRTP)
 - built-in IPv6, NAT traversal and DNSSEC

also...

- "Jitsi Meet is an OpenSource (MIT) WebRTC JavaScript application that uses Jitsi Videobridge to provide high quality, scalable video conferences."
- "Prosody (formerly Ixmppd) is a cross-platform XMPP server written in Lua."
- "Nginx... is a web server. It can act as a reverse proxy server for HTTP, HTTPS, SMTP, POP3, and IMAP protocols, as well as a load balancer and an HTTP cache."

Trying the RPMs

- downloaded RPM from <https://download.jitsi.org/jitsi/rpm>
- installed & started
- ...brought up a sign-in/configuration window
- downloaded <https://download.jitsi.org/jitsi/src/jitsi-src-2.8.5426.zip>
- template file supplied, but configuration opaque

Jitsi Meet

- Discovered <https://jitsi.org/Projects/JitsiMeet>, and investigated installation. Not quite sure how this relates to the above installation of Jitsi
- Instructions on github suggest that other packages are needed:
 - Install & configure "prosody"
 - Install "nginx"
 - Install "Jitsi Videobridge"
 - Install "Jitsi Conference Focus (jicofo)"
 - Deploy Jitsi Meet

Prosody

- Installed prosody (via yum)
- Configured with test values
- Generated certs for jitsi.inf.ed.ac.uk domain & created test user
- restart prosody XMPP server with the new config...
- ...assumed it wouldn't work (but hoped for debug info)

Nginx & VideoBridge

- Installed nginx via yum
- configured /etc/nginx/sites-available file...
- ...wasn't sure whether settings were correct
- installed jitsi videobridge using source from <https://download.jitsi.org> (although no indication of where it's to go!)
- tried starting it – LOTS of info/diagnostic messages!

Jitsi Conference Focus 1

- installed JiCoFo - cloned source from Github repo
- "Install JDK and Ant if missing", but we seem to have both
- tried building, but warned that "maven-ant-tasks" is required to maintain project dependencies
- install maven-ant-tasks [attempt 1], failed
- updated maven
- ...but got bogged-down in configuration options

Jitsi Conference Focus 2

- retried jicofo build (re-fetched source via different route)
- ...unsurprisingly, same error as before:
 - BUILD FAILED
Problem: failed to create task or type
antlib:org.apache.maven.artifact.ant:dependencies
Cause: The name is undefined.
No types or tasks have been defined in this namespace yet
- install maven-ant-tasks [attempt 2]

Jitsi Conference Focus 3

- Found WordPress article describing jicofo installation:
 - Install ant
 - Clone jicofo repository
 - Download maven task pom and jar file from <http://search.maven.org>
 - Remove ~/.m2/
 - Run "mvn -U clean package -DskipTests"
 - Run "ant -lib lib dist.lin64"
- ...so used existing ant and jicofo (jicofo-master) installations, and then downloaded maven task pom and jar files
- Build did work with minimal build file

Jitsi Meet

- installed Jitsi Meet (from GitHub)
- configured `/srv/jitsi.inf.ed.ac.uk/config.js`
- restarted nginx
- edited `~/.sip-communicator/sip-communicator.properties` to add videobridge settings
- added `"enableRecording: true"` to `/srv/jitsi.inf.ed.ac.uk/config.js`
- restarted jitsi-videobridge
- bogged-down in configuration hell!

What's working?

- Eventually managed to get Prosody working with Pidgin chat
- Successfully ran nginx to “test the proper operation of the nginx HTTP server after it has been installed.”
- ...which confirmed:
 - If you can read this page, it means that the web server installed at this site is working properly.
- tried restarting jitsi videobridge
- ...more configuration hell!

Current status

- Re-started everything from scratch...checked operation by restarting components in order, as described in GitHub docs:
 - prosody & "jtest" chatroom appears to work
 - started nginx, and browsing to <http://jitsi.inf.ed.ac.uk/> gives correct page
 - started jitsi videobridge
 - docs then optimistically say "Hold your first conference"!
- However, configuration is still poorly understood, and a conference has yet to be successfully established.

What now?

- Have contacted William Waites to see if he can offer guidance on configuration
- Possible further work on viable integration of all components (prosody, lua, jitsi, nginx, videobridge, jicofo, & Meet)
- Try to get some idea of how everything hangs together!