

On 31 March 2020, PyLadies Berlin did a 2.5 hour online workshop. We wanted our event to be more interactive and hands-on than your usual webinar, so we decided on a format in which the speaker did live demos of the tasks, and afterwards participants would be given time to recreate the tasks themselves. We thought that Zoom Meetings would be the most appropriate platform to simulate the social interaction we were looking for.

The organizing team was made up of me (Marielle) as the head organizer, the speaker and a team of 6 coaches who assisted participants during the hands-on exercises. We asked everyone to join a Slack channel on the PyLadies workspace so that participants and coaches could communicate better.

Even before the event I had read about Zoom trolls disrupting meetings. Not that I thought it would happen to us, but just in case we made sure of the following:

- The speaker and all coaches were made co-hosts of the Zoom Meeting and can manage participants
- Only hosts and co-hosts can share their screen at a time and only the Host can share their screen while someone is already sharing their screen.
- Hosts can remove participants
- Removed participants are not able to join back.
- The Meeting would be password-protected.

30 minutes before the event, the link and password were sent out via the following channels:

- Posted on event Slack channel
- Emailed to participants who RSVPed YES on Meetup
- Link was posted under “Venue” on the Meetup event page
- Password was then posted in the comments

Since the pandemic, Meetup has had a new feature where you can make your event an “Online Event”, so that the field for “Venue” is for video conferencing links instead of addresses. I did this cos some users probably opted out of getting emails. I figured it would be safe since it said next to the “Venue” box: “this link will only be visible to those who RSVP” and that any troll would have had to do 2-3+ steps to get all the info they need to access our event (find our event listing, be a member of PyLadies on Meetup, RSVP Yes to the event, find password in the comments etc etc).

But about 45 minutes into the meetup, as the speaker was doing the first demo, a group of around 3-4 trolls started yelling lewd obscenities at our speaker, doodling all over her screen and abusing everyone in the chat. As the host, I was frantically trying to mute everyone while the other co-hosts were trying to kick the trolls out (there were 60+ participants so it wasn't so easy to spot bogus usernames). At some point, one of the co-hosts said “we're kicking them out” to which the trolls replied “we can always come back!”. Then a co-host suggested that we lock the meeting so no one can get in. So I transferred my host rights to that co-host, who then locked the Meeting. After doing that, everything was back to normal. Everything happened

within 5 minutes and we ended up having an awesome workshop anyway (although admittedly we were all pretty shaken up).

The Meeting remained locked till the end. We had a few genuine participants who would get locked out (e.g., when their computer crashed or their internet connection went down). They would alert us on Slack so we could unlock the Meeting for a split second til they found their way back in the chat. I also deleted the entire Meetup event because for some reason, I couldn't simply take the link down.

In the end, we have no idea how the trolls got access to our video conference. Our best guess is that they were either lurking around our Meetup event page (which seems like a hell of an effort), or someone leaked our link/password. We don't know who the trolls were or exactly how many they were, but they had male voices, spoke English with North American accents and sounded young (teenagers).

I suppose the trolls are here to stay and maybe the best defense against them is to avoid Zoom altogether. But in case this happens to you, our advice would be to do the following:

1. Lock the Meeting
2. If no one is sharing their screen, let the host/a co-host share their screen so that the trolls can't abuse this function.
3. Mute all participants and make sure you click on the setting that disables unmuting by participants
 - If you click Mute All, there's a dialog box that asks whether people should be able to unmute themselves. Click **No**. (This is defaulted to 'yes')
4. Kick out the trolls
 - You'll have to go through the list of participants and kick out any with suspicious sounding names.

Here are a few things you can do before the event to prevent/be prepared for a troll attack.

When planning the event:

1. Assume that, even if you use a password to protect your meetup, it will be leaked - and plan accordingly.
2. Maybe make participants aware of the possibility of trolls interrupting the event, so that they can be emotionally prepared. Ask participants to keep the password only for themselves
3. Advise your participants to use their real name as their username in the Zoom meeting. This makes it easier to spot who the trolls are (especially if you have a long participant list)
4. Set up an alternative communication channel, so that you can communicate with your participants in case some leaves the call (we had a dedicated Slack channel)
5. Never share password or link with password in a public medium (Don't trust Meetup)
6. If possible, send the Zoom link directly to participants (email, direct message etc).

Setting up the Zoom call:

7. **Make sure that there is at least one person with full host controls!**
8. Familiarize yourself with the following Zoom settings and practice using them. You can do this by opening your zoom desktop app and clicking **New Meeting**. You will be in a meeting where you are the host/admin, and so all the tools will be available to you.
 - How to lock room
 - How to mute all
 - How to remove participants
9. Familiarize yourself with the differences between Zoom host and co-host controls.
10. Use a password for your Zoom meeting.
11. Designate **one** co-host who will be responsible for handling things if this situation happens. This person should be the Host of the Zoom call (so that they have full control of all the settings). It can become confusing and counterproductive if multiple hosts panic and don't coordinate their action.
12. Consider using Webinar mode, so participants are automatically not allowed to talk (we didn't do this because wanted our event to be interactive)
13. Consider using Waiting Rooms so that you can monitor who comes in or out (works best if you limit the number of participants and you have an RSVP list of expected attendees. When admitting people into the call, you only have their usernames to go by, so it'll still be tough to identify who's a genuine user or not)
14. Change screen sharing settings so that only one participant can share their screen at a time and that only the Host can share their screen while someone is already sharing.
15. Disable annotation for participants

I want to emphasize that the interruption lasted only 5 min and we still had a great event! Feedback has been positive so far. In no way did the trolls win. We just wanna share our experience if it helps other communities have great events, in spite of assholes trying to ruin them.

If you have any questions, get in touch with us on Twitter: Marielle @marielli or Mika @autophagian