z/OS Open Source Guild Meeting #7

Feb. 22, 2023
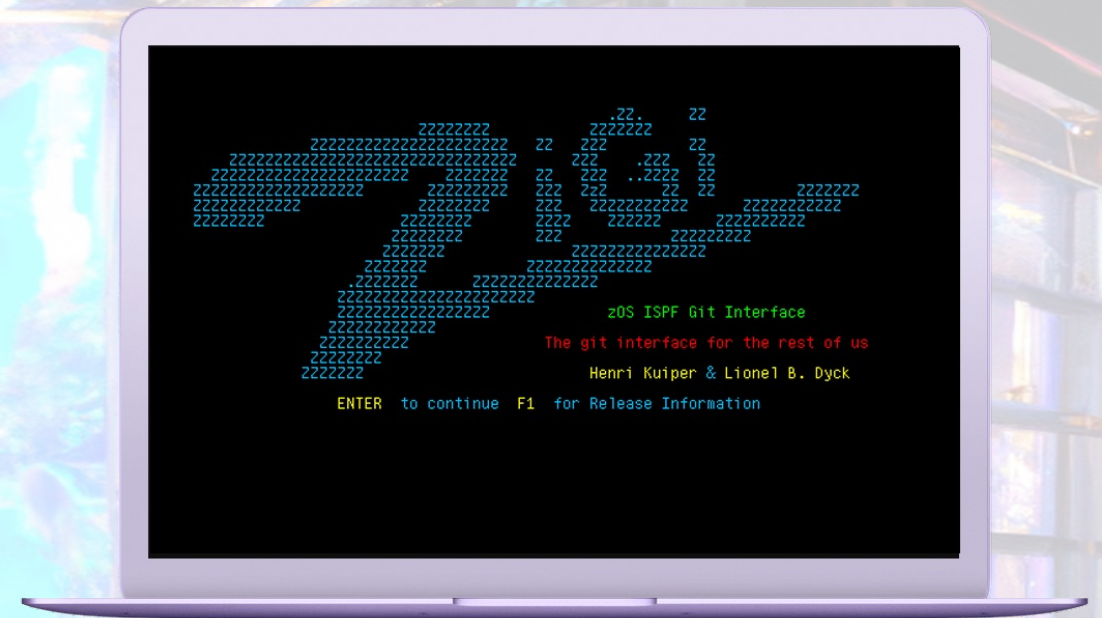
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Mike Fulton
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https://github.com/ZOSOpenTools

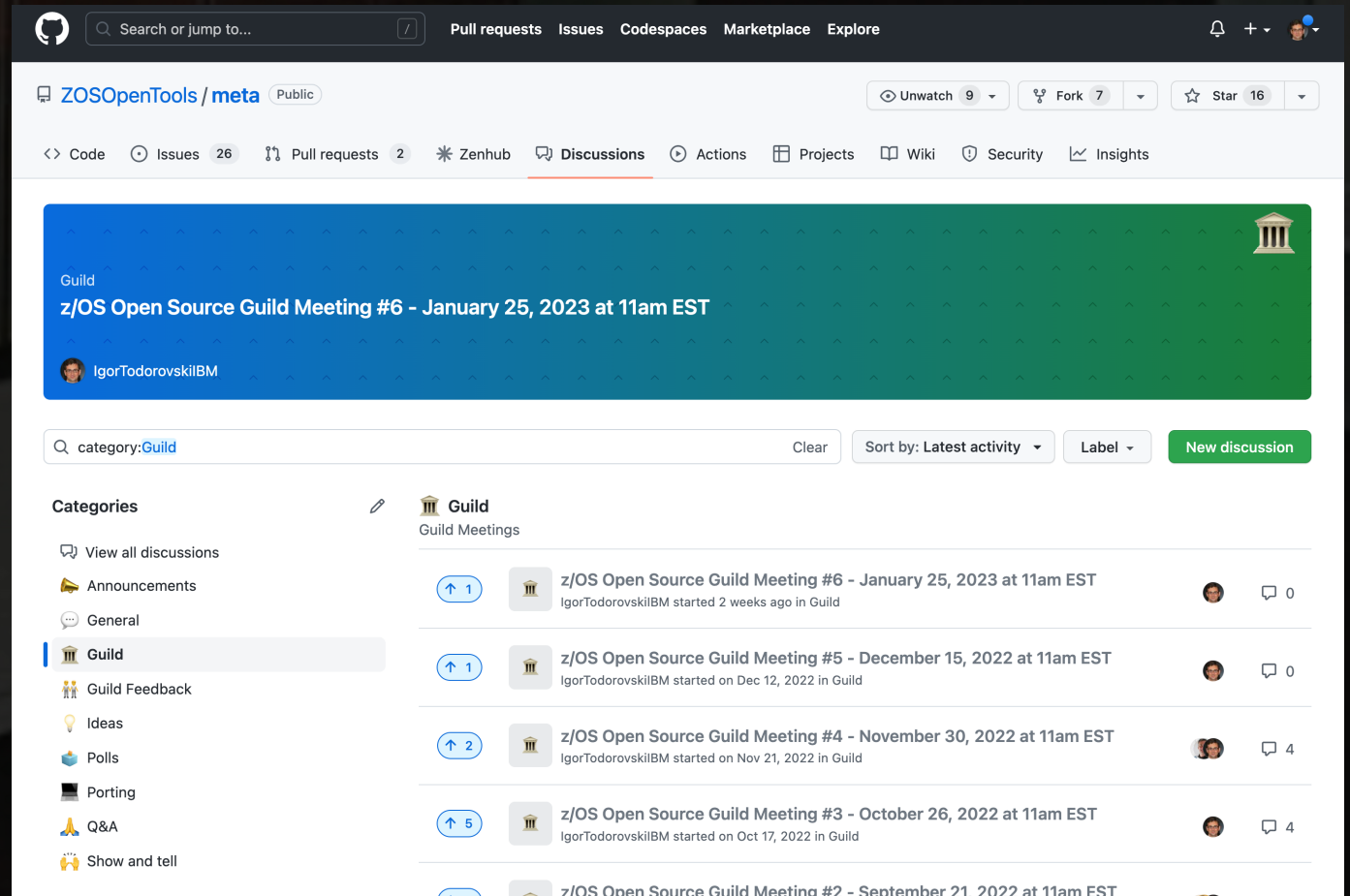Zigi – Open Source z/OS ISPF Git Interface

Agenda

- A review of updates and progress
- Highlights of new zopen features
- Live demonstrations of:
  - Zigi (Lionel Dyck)
  - Man-db (Mike Fulton)
- Digital Badges Proposals
- Polling and feedback
- Q/A

How to access Guild Meetings

All previous and future guild meeting recordings/slides/info are available at
https://github.com/ZOSOpenTools/meta/discussions/categories/guild

Topics from previous meetings:

- **Guild #1** – Introduction, how to get started
- **Guild #2** – Deep dive into the porting process
- **Guild #3** – Leveraging the zoslib library
- **Guild #4** – zopen-setup, upstreaming, porting example
- **Guild #5** – cmake, ninja, vim
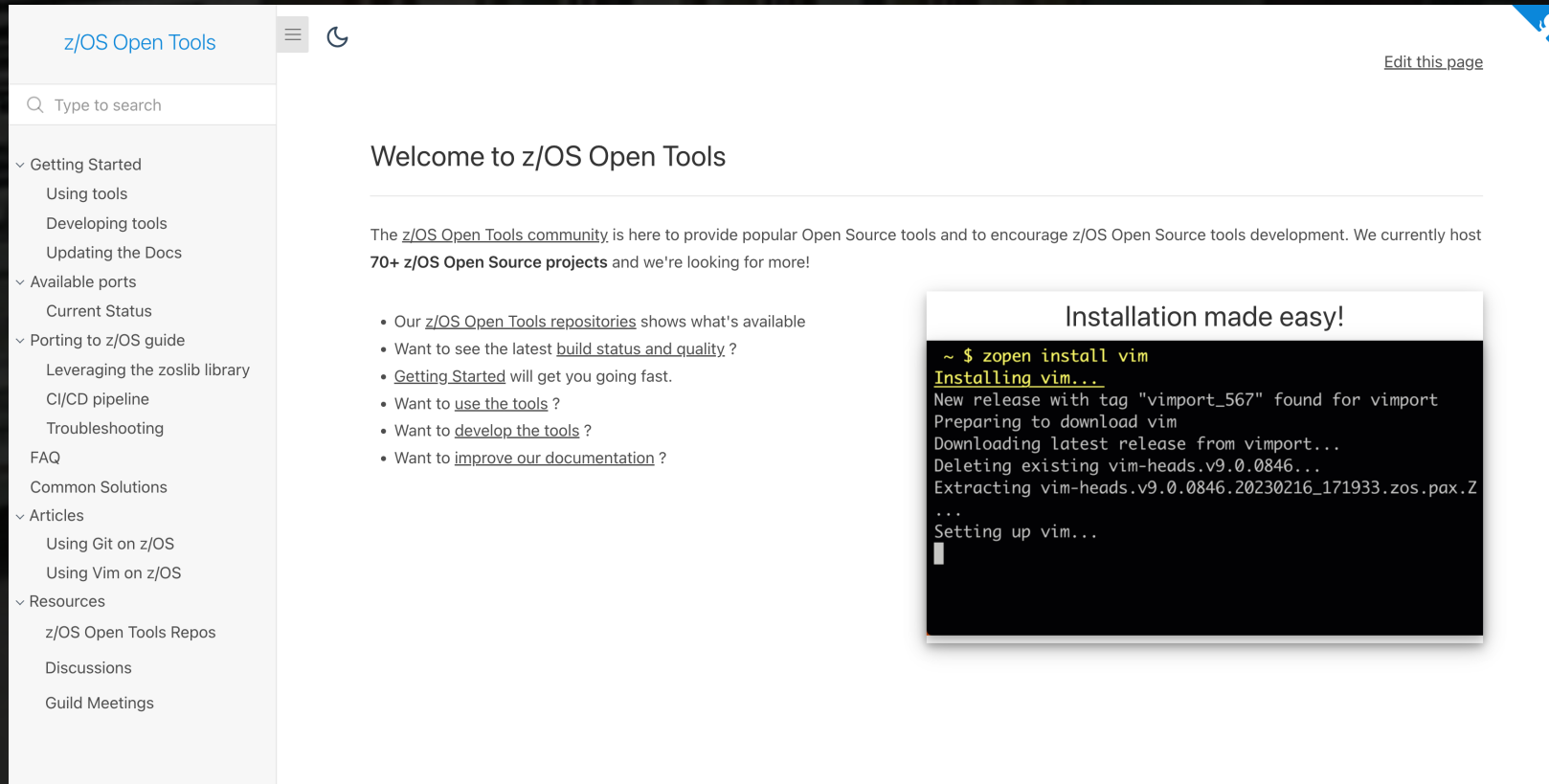- **Guild #6** – Git and Bash

New to z/OS Open Tools?

Start with the documentation: https://zosopentools.github.io/meta

We are looking for contributors to the documentation!

Highlights in z/OS Open Tools

- **New Task-based documentation**
  - https://zosopentools.github.io/meta
  - We're continueing to redesign our documentation, if you want to help, let us know!

- **Introducing `zopen install`** (`zopen download` deprecated)
  - `zopen install` will download, extract, and ***now setup the tool too***
    - (Use `--download-only` for the previous behaviour)

- **Need a tool and don't know what it depends on?**
  - **Run-time dependency support has been added**
    - `zopen install` will detect dependencies and install them for you
  - **Do I need to explicitly source each .env?**
    - No, the .env file will source the dependency's .env files.

- **You can now move installed directories**
  - After moving, just make sure re-run `setup.sh`

Demo

What's available under z/OS Open Tools

New tools/libraries: man-db, getopt, libpcre2, libxslt, libxml2
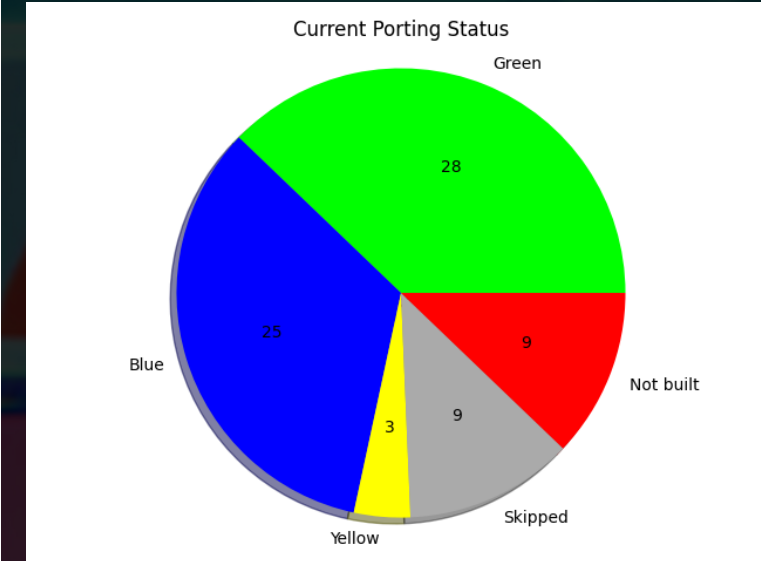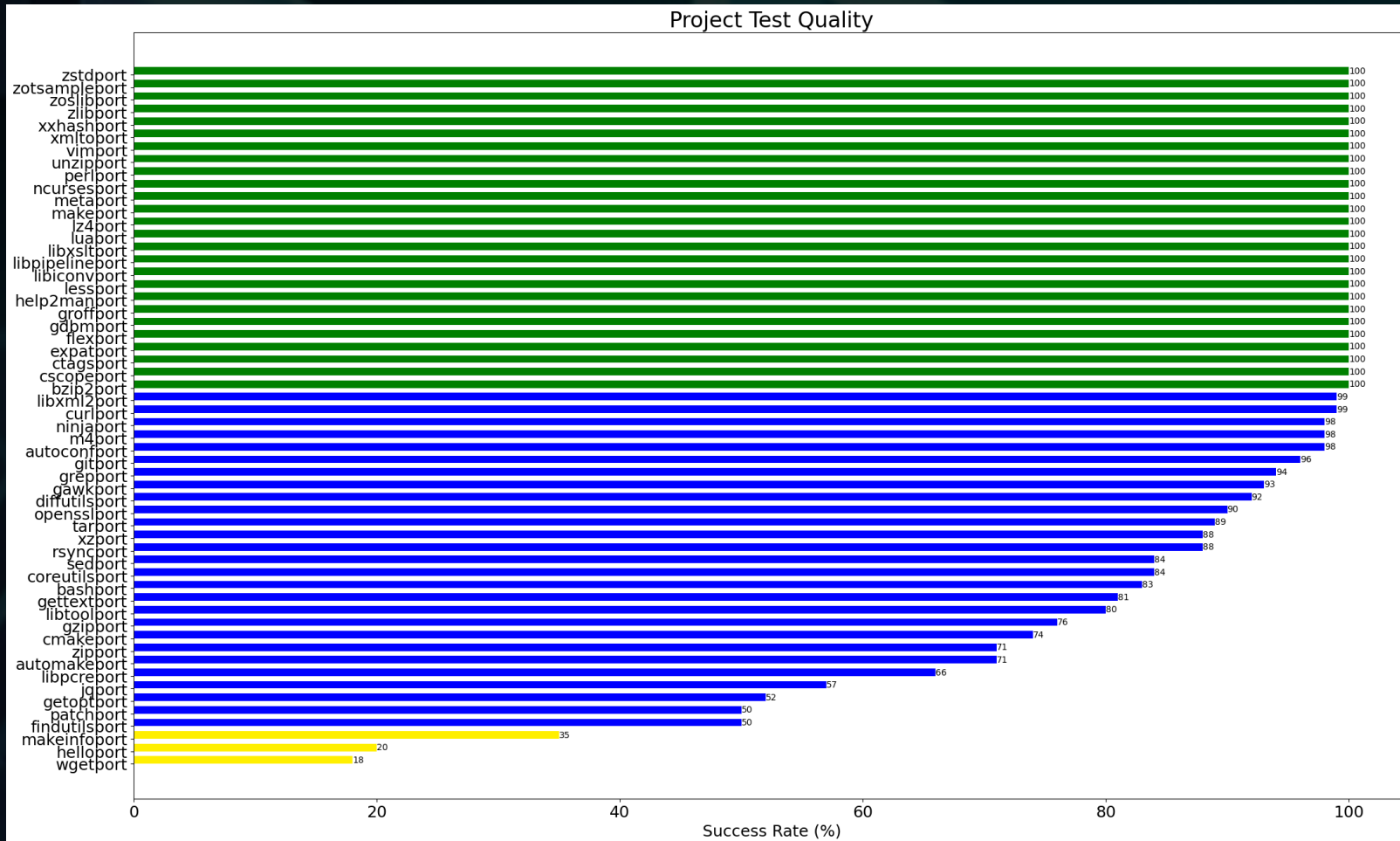
We're always looking for help: https://zosopentools.link/help-wanted

zOS ISPF Git Interface

The git interface for the rest of us

Henri Kuiper & Lionel B. Dyck

ENTER to continue F1 for Release Information

https://github.com/zigi/zigi

Man-Db

```
MAN(1)                    General Commands Manual                    MAN(1)

NAME
     man, apropos, whatis – display online manual documentation pages

SYNOPSIS
     man [-adho] [-t | -w] [-M manpath] [-P pager] [-S mansect] [-m arch[:machine]]
         [-p [eprtv]] [mansect] page ...

     man -f [-d] [-M manpath] [-P pager] [-S mansect] keyword ...
     whatis [-d] [-s mansect] keyword ...

     man -k [-d] [-M manpath] [-P pager] [-S mansect] keyword ...
     apropos [-d] [-s mansect] keyword ...

DESCRIPTION
     The man utility finds and displays online manual documentation pages.  If mansect is
     provided, man restricts the search to the specific section of the manual.

     The sections of the manual are:
          1.   General Commands Manual
          2.   System Calls Manual
          3.   Library Functions Manual
          4.   Kernel Interfaces Manual
          5.   File Formats Manual
          6.   Games Manual
          7.   Miscellaneous Information Manual
          8.   System Manager's Manual
          9.   Kernel Developer's Manual

     Options that man understands:

     -M manpath
             Forces a specific colon separated manual path instead of the default search
             path.  See manpath(1).  Overrides the MANPATH environment variable.

:
```

Man-db

- **Install command:**
    `zopen install man`

- **View manpages**
    - `Example: man make`

```
MAKE(1)                                        User Commands                                        MAKE(1)

NAME
       make - GNU Make utility to maintain groups of programs

SYNOPSIS
       make [OPTION]... [TARGET]...

DESCRIPTION
       The  make  utility  will determine automatically which pieces of a large program need to be recompiled, and issue the commands to recompile them.  The manual de-
       scribes the GNU implementation of make, which was written by Richard Stallman and Roland McGrath, and is currently maintained by Paul Smith.  Our examples show C
       programs,  since  they  are very common, but you can use make with any programming language whose compiler can be run with a shell command.  In fact, make is not
       limited to programs.  You can use it to describe any task where some files must be updated automatically from others whenever the others change.

       To prepare to use make, you must write a file called the makefile that describes the relationships among files in your program, and provides commands for  updat-
       ing each file.  In a program, typically the executable file is updated from object files, which are in turn made by compiling source files.

       Once a suitable makefile exists, each time you change some source files, this simple shell command:

              make

       suffices to perform all necessary recompilations.  The make program uses the makefile description and the last-modification times of the files to decide which of
       the files need to be updated.  For each of those files, it issues the commands recorded in the makefile.

       make executes commands in the makefile to update one or more targets, where target is typically a program.  If no -f option is present, make will  look  for  the
       makefiles GNUmakefile, makefile, and Makefile, in that order.

       Normally  you  should  call  your  makefile either makefile or Makefile.  (We recommend Makefile because it appears prominently near the beginning of a directory
       listing, right near other important files such as README.)  The first name checked, GNUmakefile, is not recommended for most makefiles.  You should use this name
       if you have a makefile that is specific to GNU make, and will not be understood by other versions of make.  If makefile is '-', the standard input is read.

       make updates a target if it depends on prerequisite files that have been modified since the target was last modified, or if the target does not exist.
Manual page make(1) line 1 (press h for help or q to quit)
  2 bash
```

- **Current issues:**
    - **https://github.com/ZOSOpenTools/man-dbport/issues**

Digital Badges are coming soon!

Goal: to recognize your accomplishments and contributions to z/OS Open Source

Proposed Badge Descriptions:
- **z/OS Open Source Contributor:** Contributed to an z/OS open source project in the last year.
- **z/OS Open Source Creator:** Creator of a z/OS Open Source project, with several commits to the project.
- **z/OS Open Source Port Leader:** Successfully ported and upstreamed z/OS contributions back to the original community.
- **z/OS Open Source High Frequency Contributor:** Contributed over 500 contributions to z/OS related projects.
- **z/OS Open Source Team Player:** Reviewed over 50 pull requests to z/OS related projects in the past year.
- **z/OS Open Source Trail Blazer:** Ported 5 tools or libraries to z/OS in the past year, with a port quality of 90% or above for the test cases provided.
- **z/OS Open Source Manual Laborer**: Contributed 5 PRs to the z/OS Open Tools documentation
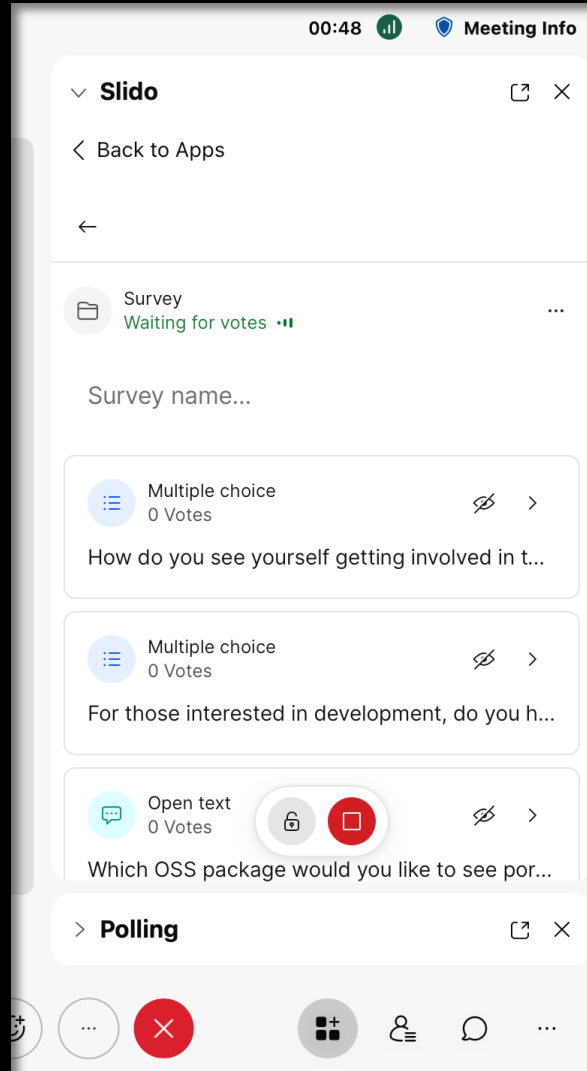
Target Audience: Everyone!

Interested in being part of the badge committee? Discuss here
https://github.com/ZOSOpenTools/meta/discussions/86

Survey

You can post feedback in our discussions page as well:
- https://github.com/ZOSOpenTools/meta/discussions/categories/guild-feedback

What's we're working on next

- **Improving the documentation**

- **Improving zopen install to install into a single directory**
  - https://github.com/ZOSOpenTools/meta/discussions/110

- **Incorporating zoslib into every tool/library**

- **Migrate to the new Clang compiler for build**

- **Getting the Git man-pages working**
  - Needs Docbook2x, AsciiDoc ported

- **Continue to improve quality for various ports and continue to port missing core Linux tools to z/OS**

Thank you!

- **Thank you and welcome to our new contributors!**
  - RCOS Students (Maia, Kenny, and Andrew) **RCOS**
  - Lionel Dyck

- **Thank you to our existing contributors!**
  - Kai Nacke, Ian Mitchell, Eric Covener, Russell Wilson, Tin Hang To, Erik Janssen, Jeff Shimoda, Sean Perry, Anthony Giorgio, Emily Ratliff, Nate Myers, Fanbo Meng, Doug Burns, Haritha D and many others!

We need your help! How do you get involved?

Get involved either as a creator, or a consumer, of z/OS Open Source Technology

Do you have access to a z/OS machine?
- **Yes**:
  - Then visit to our Getting Started docs and get started today!
- **No**:
  - Email itodorov@ca.ibm.com or fultonm@ca.ibm.com to be considered for z/OS system access

What should I get started with?
- Visit our discussions page for a list of projects and availabilities:
  - https://github.com/ZOSOpenTools/meta/discussions
  - Got an idea or an issue? Create a discussion

- Visit our *help wanted* issues:
  https://github.com/search?q=user%3AZOSOpenTools+repo%3Ahttps%3A%2F%2Fgithub.com%2FZ
  OSOpenTools+label%3A%22help+wanted%22+state%3Aopen&type=issues&ref=advsearch&state=o
  pen

We'll see you next month!

Q/A