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15 SEPTEMBER 2021

# Looking for Open Source Software on Z? Meet the Software Discovery Tool!

Divya Goswami & Elizabeth K. Joseph



IBM Z



APP MODERNIZATION



OPEN Z



VOICE OF Z



STUDENT Z

# A Little About Divya

```
T[divya at racharch in ~/a/t/IBM_Z_DAY]
```

```
↳ λ whoami
```

I'm Divya, a senior computer student, Lfx Summer Mentee at Open Mainframe Project, Z Ambassador for the year 2021. Currently, I am working in DevSecOps Intern at Trell.

```
T[divya at racharch in ~/a/t/IBM_Z_DAY]
```

```
↳ λ cat important_links
```

```
Find me on Twitter:      @rachejazz
```

```
Find me on Github:      @rachejazz
```

```
About me:                rachejazz.me
```

```
About me in free time:  rachejazz.me/blogs.html
```

# A little about Elizabeth

`elizabeth@ibm-z-day:~$` **Developer Advocate for IBM Z, Linux Systems Administrator**

`elizabeth@ibm-z-day:~$` **Author of books on Ubuntu and OpenStack**

`elizabeth@ibm-z-day:~$` **Find me on Twitter @pleia2!**





Ever wonder what open source packages are available  
for your operating system on Z?

The search is on!



## But first, the search criteria

- z/OS or Linux?
  - If z/OS, are you looking for something in USS?
  - What distribution of Linux?
    - What version of that distribution of Linux?
    - IBM Z vs. s390x vs. System Z vs. zArchitecture...
      - (hint: they're all the same, but projects refer to IBM Z in different ways!)
- Fully open source? Enterprise edition?
- Vendor or community supported?

Ok, now we can search!

# Search!

- Software website
  - ◆ Software “About” page for version available
  - ◆ Documentation
  - ◆ Downloads page
- Linux distribution package search page
- [Package Distro Search](#) (PDS)
- Online search
- Ask your vendor

# Meet the Software Discovery Tool!

The Open Mainframe Project's Software Discovery Tool helps match practitioners with the best open source software that meets their needs.



OPEN **MAINFRAME** PROJECT  
**Software  
Discovery Tool**

You can search through open source software for zArchitecture/s390x for any Z operating system from any source, any repo, anywhere, in one place.

<https://www.openmainframeproject.org/projects/software-discovery-tool>

[bit.ly/SDT-main](https://bit.ly/SDT-main)



[bit.ly/SDT-data](https://bit.ly/SDT-data)

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# How did you come up with this idea?

Package Distro Search Tool from IBM already maintains an IBM Z (s390x) search tool for:

- Ubuntu
- Red Hat Enterprise Linux
- SUSE Linux Enterprise Server
- SUSE Package Hub

PDS: <https://ibm.biz/LoZPackageDistroSearch>

PDS source: <https://github.com/linux-on-ibm-z/PDS>

Uses JSON files stored in GitHub as a storage back-end for package data.



# How different is the Software Discovery Tool?

- IBM z/OS supported packages!
- description for each package (if supported by source file)

Also,

- Debian 10 and 11
- OpenSUSE Tumbleweed and Leap 15.3
- Fedora 34
- ClefOS 7 from Sine Nomine

And.....?

YOU can help us!



## Basic Design And What To Expect

- Simple easy navigable UI
- Options to filter through different operating systems
- Optional description column for the confused individuals
- Further filtering based on exact versions
- Writing a script? We have an API to get you covered!
- Few crashes. But that's OK.

# I'd Like to Host It Myself!

Have you got CI/CD?

YES!

[bit.ly/SDT-deploy](https://bit.ly/SDT-deploy)

- Script that will be auto update your config to support sources from PDS
- Delete previous cache and reload server with new sources
- Updating every source with every new push

OMP is taking too long to update the sources. May I?

YES YES!

`./bin/package_build.py` does all the updating

[bit.ly/SDT-main](https://bit.ly/SDT-main)

|

[bit.ly/SDT-data](https://bit.ly/SDT-data)

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# Demo

What SDT is capable of doing till date

[bit.ly/SDT-main](https://bit.ly/SDT-main)

|

[bit.ly/SDT-data](https://bit.ly/SDT-data)

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OPEN MAINFRAME PROJECT

# Software Discovery Tool

Software Discovery Tool helps match developers with the best open source software that meets their needs. Developers can search through open source software for zArchitecture/s390x for any Z operating system from any source, any repo, anywhere, in one place.

[FAQ](#)

### Select Operating System:

All  ClefOS  Debian 10  IBM z/OS™  OpenSUSE  RHEL  Ubuntu

 Show Description

Enter the name of the package or at least three characters to enable pattern search. Wildcard (\*) can be used either before or after the search keywords.

Records per page:

Package Name↕	Version↕	Distro	Description
cockpit-docker	188-1	Debian 10 (Buster)	Cockpit user interface for Docker containers
docker	1.5-2	Debian 10 (Buster), Ubuntu (xUbuntu 21.04)	transitional package
docker-compose	1.21.0-3	Debian 10 (Buster)	Punctual, lightweight development environments using Docker
docker-doc	18.09.1+dfsg1-7.1+deb10u3	Debian 10 (Buster)	Linux container runtime -- documentation
docker-registry	2.6.2~ds1-2+b21	Debian 10 (Buster)	Docker toolset to pack, ship, store, and deliver content
docker.io	18.09.1+dfsg1-7.1+deb10u3	Debian 10 (Buster)	Linux container runtime
docker.io-doc		Debian 10 (Buster)	virtual package provided by <a href="#">docker-doc</a>
docker2aci	0.17.2+dfsg-2+b10	Debian 10 (Buster)	CLI tool to convert Docker images to ACIs
golang-docker-credential-helpers	0.6.1-2+deb10u1	Debian 10 (Buster)	native stores to safeguard Docker credentials
golang-docker-dev	18.09.1+dfsg1-7.1+deb10u3	Debian 10 (Buster)	Transitional package for golang-github-docker-docker-dev
golang-github-appc-docker2aci-dev	0.17.2+dfsg-2	Debian 10 (Buster)	library to convert Docker images to ACIs
golang-github-docker-distribution-dev	2.6.2~ds1-2	Debian 10 (Buster)	Docker toolset to pack, ship, store, and deliver content (source)
golang-github-docker-docker-credential-helpers-dev	0.6.1-2+deb10u1	Debian 10 (Buster)	native stores to safeguard Docker credentials - library
golang-github-docker-docker-dev	18.09.1+dfsg1-7.1+deb10u3	Debian 10 (Buster)	reusable Go packages included with Docker

### Refine your results:

### Filter distribution:

- ClefOS

ClefOS Base 7 - (1/1)

- Debian 10

Buster - (42/42)

# We Need Your Help

Do not find your software on the list?  
Have a new operating system to add?  
Other ideas for the tool?

The Z community could use your help!

Learn more in this blog post:

[bit.ly/HelpUsZ](https://bit.ly/HelpUsZ)

## Skills

- Python
- Flask framework
- HTML & CSS
- User Interface / design
- Documentation

Or just curiosity, we can guide the way!



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# THANK YOU!

Join the IBM Z & LinuxONE Community: [ibm.com/community/z/](https://ibm.com/community/z/)