



redhat.

GOOGLE SUMMER OF CODE 2018

PROJECTS UNDER THE RED HAT UMBRELLA

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JBoss AND MIDDLEWARE

JBoss Core Services and Web Servers

- ① A separate Red Hat JBoss distribution of web-servers using Apache httpd and Apache Tomcat under-the-hood
- ② JWS and JBCS are certified by our engineers in terms of integration and security and we provide development support
- ③ JWS and JBCS is a combination of upstream products combined together.

PLATFORM AND VIRTUALIZATION

libvirt

- ① libvirt is a toolkit to manage virtualization platforms
- ② supports QEMU, Xen, Virtio, LXC and more
- ③ is used by many applications such as virt-manager, OpenStack, libguestfs, oVirt and much more

JBOSS CORE SERVICES AND WEB SERVERS GSOC 2018 PROJECT

- Project "JBoss Web Servers, JBoss Core Services and dependencies, security vulnerability tracking tool"
- <https://developer.jboss.org/wiki/GSoC2018Ideas>
- We need a CVE tracker in order to be able to maintain security standards in an automated way instead of tracking manually the security lists of the upstream advisories.
- Since JBoss Core Services and JBoss Web Server is a big collection of upstream projects such as Apache httpd, Apache Tomcat, OpenSSL, curl, libxml2, mod_security, mod_cluster, nghttp2 and many more, tracking of CVEs will scale much better when having an automated tool to do the job for us.
- It all boils down on basically having an upstream advisory parser and aggregator that will notify us upon a new public pops-up (embargoed ones won't be announced obviously, only the people with access to the upstream security lists will be the ones who knows it so there's no application for the tool in that case).

PROGRESS (SO FAR..)

- Phase 1 - Create the security advisory parsers
- Phase 2 - Combine them altogether, create the aggregator logic and notification system
- Phase 3 - Create project configuration parameters, polish it out and we're good to go!
- Extra Phase - Baptize it!

WHAT'S NEXT?

- After polishing it will be a great open-source tool for everyone to use, experiment and contribute for those who wants a notification system on CVEs
- Most feeds from CVEs authorities like Mitre either provide limited information or plain reserved CVE ids for embargoed security issues hence the information still needs human intervention in order to be readable.
- The tool can therefore be extended to anyone's need just by adding whatever parser fit ones need.

LIBVIRT

CONVERSION TO AND FROM OCI-FORMATTED CONTAINERS GSOC 2018 PROJECT

Project: Conversion_to_and_from_OCI-formatted_containers

https://wiki.libvirt.org/page/Google_Summer_of_Code_Ideas

- Libvirt has support for Linux Containers through its LXC driver
- Currently the container configuration can be described either in
 - libvirt xml configuration
 - lxc configuration aka containers created with LXC userspace tools (yes naming is confusing)
- Container formats is being standardized by [Open Container Initiative](#)
- The project's goal is to support parsing and exporting to OCI format
 - Extend libvirt's API
 - Two new commands should be exported to virsh CLI using the defined APIs
 - domxml-to-oci command can be used to convert a domain XML fragment to OCI compliant format
 - domxml-from-oci command can be used to convert from OCI compliant format into a domain XML fragment

PROGRESS (SO FAR..)

- Phase 1 - Support for following simple properties and test them
 - **User**
 - **Env**
 - **Entrypoint**
 - **Command**
 - **WorkingDir**

Do these options look familiar? Yes, Docker image format has been standardized as the [OCI Image format](#).

WHAT'S NEXT?

- Support more tricky properties such as:
 - **Volumes**
 - **ExposedPorts**

SUMMARY

- As in every year communities and projects under Red Hat umbrella joined GSoC 2018.
- JBoss and libvirt among the biggest ones this year.
- Plethora of open-source communities under Red Hat that are participating in GSoC

And above all:

We're waiting for you :)

See you in GSoC 2019 and cheers!