Maximiliano **Osorio**

Computer Science Engineer · Researcher · Linux troubleshooter

(+56) 9 54 32 33 04 | maxiosorio@gmail.com | https://mosorio.me

Projects

DockerPedia

Valparaíso, Chile

Creator

Feb. 2018 - PRESENT

- DockerPedia automatically describes the software components of Docker images and their vulnerabilities using Clair.
- Dockerpedia provides a visualization tool, which uses the data available, to help Docker users search and compare between different Docker images, allowing them to find software distributions which fit their needs and monitor the state of Docker repositories over time.

Education

M.Sc. in Computer Science

Valparaíso, Chile

Universidad Técnica Federico Santa María

Mar. 2017 - PRESENT

- Published five scientific papers in workshops, conference and journal.
- Thesis: Towards reproducibility of computational environments for Scientific Experiments using Container-based virtualization.
- Current GPA: 98 (on a 0-100 scale)

Computer Science Engineering

Valparaíso, Chile

Universidad Técnica Federico Santa María

Mar. 2010 - Jan. 2016

- Evaluation of Kubernetes (v1.0.6), an orchestration system of Docker Containers.

Work Experience

Part-Time Professor

Valparaíso, Chile

Computer Science Departament

Jul. 2016 - Present

- Propose and teach a new course called Software Deployment on Linux. Some tools that we used were: Docker, Kubernetes, AWS, Django, PHP, and Nginx. As a result, the students acquired practical and useful skills to deploy their applications.
- Teach the course Operating System. In this course, the students practically learned the concepts using a Linux environment and related tools such as strace and perf.

DevOps

Valparaíso, Chile

Chilean Virtual Observatory (ChiVO)

Jan. 2018 - May. 2018

- DevOps in the Jovial porject, a Cloud service where astronomers can safely use Jupyter notebooks over a personal space designed for high-performance processing under the high-availability principle.

Systems Engineer

Santiago, Chile

Linets

Jan. 2014 - Mar. 2016

- System Administrator for the internal servers and primary Level 3 support for all the clients
- Work with OpenStack and all its components to build the first OpenStack deployment in Chile which backs Beebop the first public cloud in Chile.
- Automatic Deployment of OpenStack using Docker Containers and Ansible playbooks
- Design and implementation of Ceph Cluster

Systems Administrator

Valparaíso, Chile

Computer Science Departament

Aug. 2011 - Oct. 2014

- System Administrator for the internal servers

Skills

Programming Language

- Fluent in Go and Python.
- Good understanding of C, C++, Java and PHP.

Cloud

- Excellent knowledge of OpenStack and its components; in particular, Kolla. It provides Docker containers, Ansible playbooks to deploy OpenStack on bare-metal or virtual machines.
- Develop experience on Kubernetes and Docker.
- Familiar with virtualization technologies (KVM) and Cloud providers (AWS, Digital Ocean, and Google Cloud).

DevOps & Mastering Tools

- Experience with Docker, Ansible, Git and Jenkins to build the full chain of DevOps.
- Excellent skills to troubleshoot Linux problems using tools such as Tcpdump, Perf, strace etc.

Presentations

DockerPedia: A knowledge graph of Docker Images. *Santiago, Chile*

Presenter for StarsConf *Nov. 2018*

- DockerPedia is an RDF linked dataset that stores the information about Docker images hosted in Docker Hub. We present DockerPedia in the Starsconf; the most significant technological event in Chile and one of the most important of South America

Reproducibility of computational environments for Scientific Experiments using Container-based virtualization *Monterey, California, USA*

Presenter for SemSci 2018: Enabling Open Semantic Science *Oct. 2018*

- We propose to use containers for distributing software experiments throughout software images and an annotation system that describes these software images

Docker security: Using Containers safely *Valparaíso, Chile*

Presenter for Security Talks UTFSM *Jul. 2018*

- A overview of the Docker security best practices to consider in your deployment.

Publications

Journal Articles

JOVIAL: Notebook-based astronomical data analysis in the cloud
M Araya, M Osorio, M Díaz, C Ponce, M Villanueva, C Valenzuela, M Solar
Astronomy and Computing 25 (2018) pp. 110–117. Elsevier, 2018

Conference Articles

Docker-based implementation for an astronomical data analysis cloud service
M Díaz, M Araya, C Jauregui, C Valenzuela, L Pizarro, M Osorio, M Solar
XXVII Astronomical Data Analysis Software & Systems, 2018