Javier Navarro

Curriculum Vitae

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 jnavarrof

 javiernavarrofdez

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ResearcherID: I-5066-2016

A results-driven, creative, and proactive System Engineer with extensive experience in both High-Performance Computing and Cloud environments. Team-oriented professional who works effectively in cross-disciplinary teams. I am convinced that the best way to perform a job is with active listening, determination, and a positive attitude to hard work.

PERSONAL DETAILS

Name:	Javier Navarro
Nationality:	Spanish
Visa status:	EU Settlement Scheme, pre-settle approved
Address:	Cambridge, Cambridgeshire (UK)

EXPERIENCE

Aug 2020 –

HPC and Cloud Lead Engineer, *Scientific Computing Platform (SCP)*, Astrazeneca PLC.

As an Engineer Lead in the SCP team, I work with a highly skilled team of people distributed worldwide to deliver, evolve, and support all critical services and capabilities offered by the Scientific Computing Platform.

Jan 2020 Aug 2020

High Performance Computing Engineer, *Scientific Computing Platform (SCP)*, Astrazeneca PLC.

The Scientific Computing Platform is AstraZeneca's state-of-the-art computing environment that provides building capabilities and services. We tackle this challenge by offering three main platforms; a classical InfiniBandSlurm HPC cluster, an Openstack private cloud, as well as Public Cloud for elasticity and scale. To exploit these resource pools most efficiently, our team is taking advantage of robust DevOps tooling, cloud-native technologies and an Agile mindset.

Keywords: Linux, High-Performance Computing, Cloud Computing (GCP, AWS), OpenStack, CEPH Storage, Infiniband, SLURM, GPFS, NiceDCV, JupyterHub, Kubernetes, Hashistack (Consul, Vault, Terraform, Nomad), Ansible, Molecule, TestInfra, Python, Bash

Jun 2019 Jan 2020

Cloud Engineer, *Technical Services Cluster (TSC)*, European Bioinformatics Institute (EMBL-EBI).

As a Cloud Engineer on the Virtualisation and Cloud team, my main goal was to improve existing processes and platforms and implement new automation techniques. Additionally, I worked architecting and developing the next version of the Embassy Cloud service (IaaS), a Private Cloud platform (OpenStack based). Moreover, during this period, we successfully delivered a new Container as a Service (CaaS) integrated with our internal Service Desk platform to set up a fully automated end-to-end self-service. Lastly, I supported the adoption of the SCRUM framework and Agile mindset within the team, accelerating the delivery and improving the flow of value.

Keywords: Linux, Cloud Computing, OpenStack, VMWare, CEPH Storage, Packer, Terraform, Vault, Ansible, Kubernetes, Gitlab, Rundeck, Prometheus

Jun 2018 Jun 2019

Research Computing Solutions Specialist, *HPC Services (HPCS)*, University of Cambridge.

I joined the HPC Platforms team with the primary goal of transforming HPC from its traditional static old fashioned way into a more modern and agile by applying a DevOps approach. During this year, as a team, we achieve to deliver a production IaaS service (OpenStack based) and certify this service under the ISO-27001/2 regulation. As a result, we offered a customised and Secure On-demand High-Performace Computing platform service (PaaS) on top of this framework.

Keywords: Linux, Cloud Computing, OpenStack, CEPH Storage, Packer, Terraform, Ansible, Docker, Python, RestAPI, Kubernetes, Prometheus, ElasticSearch

Nov 2016 Jun 2018	**Head of Systems Architecture**, *Mind the Byte*, Parc Científic de Barcelona (UB). I joined Mind the Byte as a Head of Systems Architecture to provide new methods to improve Scalability, Reliability, and Security for the next evolution of their pay-per-use SaaS platform. That includes providing a modern DevOps approach to deliver value with maximum speed, functionality and innovation. The main goal was to achieve a real continuous software delivery environment and reduce the complexity to manage a complex production environment while improving resiliency and availability. **Keywords:** Cloud Computing, AWS (EC2, VPC, Lambda, S3, Cloudfront, Cloudformation), Packer, Terraform, Ansible, Vagrant, Docker, SLURM, NFS, Python, Nagios, Prometheus, Grafana, ELK, Alert Manager, MongoDB
Jun 2013 Nov 2016	**Research Assistant, HPC System Administrator**, *Department of Computer Architecture and Operating Systems (CAOS)*, Universitat Autònoma de Barcelona (UAB) | Centre for Research in Agricultural Genomics (CRAG). As a result of a collaboration agreement between UAB and CRAG, I joined the Bioinformatics Core Unit, providing solutions in many aspects, such as HPC system administration, but also the development of parallel applications (MPI, OpenMP). Everyday tasks include network administration, accounting, monitoring, reporting, system administration of storage services, and procedure automation. **Keywords:** Galaxy project, Spacewalk, Modules Environment, CUDA, MPI, OpenMP, SLURM, NFS, Lustre, Red Hat, CentOS, VMware VSphere, Docker, R, C++, Bash, Perl, Nagios, Ganglia, ELK
Feb 2012 Feb 2013	**Research support, HPC system administrator**, *Bioinformatic Core Unit*, Centre for Research in Agricultural Genomics (CRAG). I joined CRAG as a technical expert to help design and install the first High-performance Computing platform. Along this year, we successfully installed and configured a completed HPC cluster and related services like helpdesk, provisioning, and monitoring. **Keywords:** Spacewalk, Cobbler, Puppet, Modules Environment, SLURM, NFS, Lustre, Red Hat, CentOS, Cluster VMware VSphere, Nagios, Ganglia
Jul 2007 Jun 2013	**Technical Research Assistant**, *Department of Computer Architecture and Operating Systems (CAOS)*, Universitat Autònoma de Barcelona (UAB). I worked as a System Administrator with different High-performance Computing environments, providing services at all levels: installation, troubleshooting, performance analysis, tuning, and daily-based tasks like administering, monitoring, and support to experienced high-level users (PhD students in HPC). **Keywords:** XCAT, Cobbler/Puppet, Modules Environment, Checkpoint libraries, CUDA, MPI, OpenMP, SGE, PBS, NFS, Debian, Suse 10, Red Hat, Cytrix, VMware ESXi, Nagios, Ganglia
Sept 2006 Jul 2007	**Technical Research Assistant**, *Escola d'Enginyeria*, Universitat Autònoma de Barcelona (UAB), Technical Support and Systems Administration, *Grid Computing.* I helped in the development of the initial version of the CrossBroker Grid Scheduler, a job management system for interactive and parallel jobs included in the Interactive European Grid (Int.eu.grid) project. I gained experience in different Grid-based systems (EGEE2, Globus, and Condor), and local resource management systems like Sun Grid Engine (SGE), Torque-Maui, and Portable Batch System (PBS). **Keywords:** EGEE2, Globus, Condor, SGE, NFS, Debian, Xen, Bash, Perl
Jun 2005 Sept 2006	**Analyst programmer**, *Agresso Spain, S.L.*, Department of Computer Information Systems, Web applications development and Systems Administration.

Teaching

Sept 2014 Aug 2015	**Assistant Lecturer**, *Autonomous University of Barcelona (UAB)*, Teacher assistant of undergraduate Computer Engineering courses: Distributed Systems (Hadoop framework), and High-Performance Computing (MPI, GPU, and OpenMP programming) .
2011	**Managing, and configuring a High-Performance Computing Cluster (HPC)**, *Universidad Nacional de San Luís (UNSL)*, Argentina, Invited as Technical Expert in High-Performance Computing to teach the practical part of the course: How to setup and configure an HPC cluster..

EDUCATION

2015 – 2017 unfinished	**Ph.D. High-Performance Computing**, *(Performed two years of studies in pursuit of PhD before exiting program)*, Universitat Autònoma de Barcelona (UAB), Spain.

2013 – 2014 **M.Sc. High-Performance Computing, Information Theory and Security**, Universitat Autònoma de Barcelona (UAB), Spain.
UK Framework: RQF Level 7 - Master's degree

2007 – 2011 **BSc. Computer Engineering**, Universitat Autònoma de Barcelona (UAB), Spain.
UK Framework: RQF Level 7 - Integrated Master's degree (MEng)

2002 – 2005 **ASc. Computer Engineering**, *(ASc.'s extraordinary award)*, Universitat Autònoma de Barcelona (UAB), Spain.
UK Framework: RQF Level 6 - Bachelor degree

Certifications

2021 **Professional Cloud Architect (PCA)**, *Gloogle Cloud*, Credencial ID: 27766334.

2020 **Professional Scrum Master I (PSM I)**, *Scrum.org*, Certified Scrum Master.
Credencial ID: 59206

2019 **FitSM® Foundation**, *APMG International*, Credencial ID: 04309561-01-VZWJ.

Courses

2021 **OpenStack User and Administration Workshop with Kayobe**, *Introduction to Kayobe operations and advanced administration. Administering CEPH storage with OpenStack. Bare metal deployment with Ironic. Security Audit with Wazuh.*, Astrazeneca PLC.
3rd-Party delivered course by StackHPC Ltd

2021 **Hashicorp Workshops and Trainings**, *Training 101 workshops around Terraform, Consul, Vault and Nomad. Introduction, Best Practises, Enterprise Overview. Multi-DC Service Discovery, Service Mesh and Vault Replication. Multi-Region Federation with Consul and Nomad*, Astrazeneca PLC.
3rd-Party delivered course by HashiCorp

2021 **Be the Manager People Won't Leave**, *LinkedIn Learning*, Manager relationships are becoming the make-or-break point for whether employees stay or go. Basics how to be someone people can trust, be an example of integrity, and be relentlessly inclusive.

2021 **Developing Teams**, *Learn more about Developing Teams*, As a people leader, how to develop and build and effective team. How to build trust and loyalty and improve group dynamics.

2021 **People Manager: New to AZ**, *Manager Essentials*, This pathway is designed to enable you to set yourself and others up for success. To grow, coach and support your people to be an effective team.

2021 **Leading People**, *AZ Leadership Training Program*, Leading People is a CEO Award winning programme designed specifically for AstraZeneca. Each topic combines a core Leadership skill with a core AZ topic or theme.

2021 **Helm Deep Dive v3**, *A Cloud Guru*.

2021 **Google Cloud SRE and DevOps Engineer with Google Cloud Specialization**, *Coursera*, Certificate link.

2021 **Preparing for the Google Cloud Professional Cloud Architect Exam**, *Coursera*, Certificate link.

2021 **Mastering the AWS Well-Architected Framework**, *A Cloud Guru*.

2021 **Reliable Google Cloud Infrastructure: Design and Process**, *Coursera*.

2021 **Leading Self**, *AZ IT Leadership Training Program*.

2020 **Splunk Fundamentals Levels 1&2**, *Splunk Training*.

2019 **ISO-27001 foundation training**, *Introduction to the concept of an ISMS and the ISO27001 process and standard*, Universisty of Cambridge.
3rd-Party delivered course.

2016 **Biostatistics and basic R for molecular biology analyses**, *Simon Andrews (Head of Bioinformatics) and Anne Segonds-Pichon (Bio-Statistician), Babraham Bioinformatics*, Center for Research in Agricultural Genomics (CRAG).
September 5th-7th, 2016 - Barcelona, Spain

2016 **(CSUC) IEEE Authors Workshop**, *Eszter Lucas - European Manager IEEE Client services*, Aula Màster - UPC, Campus Nord.
June 23th, 2016 - Barcelona, Spain

2016 **Network analysis and modeling in Cytoscape**, *Dr. Marti Bernardo-Faura - Head of data analysis area*, Bioinformatics Core Unit, Center for Research in Agricultural Genomics (CRAG).
June 16th, 2016

2016 **Galaxy DevOps Workshop 2016**, *de.NBI, ELIXIR*, Institut fur Pharmazie und Molekulare Biotechnologie (IPMB).
April 6-7th, 2016 - Heidelberg, Germany

2016 **PATC Course: Big Data Analytics**, *PRACE*, BSC-UPC.
February 8-11, 2016 - Barcelona

2015 **Parallel computing and GPU computing**, *Carlo Nardone*, NVidia Architect.

2014 **Openstack Bootcamp OS110**, *Dr. Damian Igbe*, Mirantis.

LANGUAGE

Spanish	Fluent	*Mother tongue*
Catalan	Fluent	*Mother tongue*
English	Basic professional competence	*B2 - CEFR*

THESES, TECHNICAL REPORTS AND ARTICLES

M.Sc. Thesis

Title **Analysis and parallelization of a Genotype and Haplotype caller application: GH Caller**, 2014.

Supervisors PhD Porfidio Hernández, PhD Gonzalo Vera

Department Architecture of Computers and Operating Systems (CAOS)| CRAG

Publications

2016 Javier Navarro, Bruno Nevado, Porfidio Hernández, Gonzalo Vera, Sebastián Ramos-Onsins: *Optimized NGS Genotype-Haplotype Calling for Genome Variability Analysis.* Journal - Evolutionary Bioinformatics

2016 Javier Navarro, Gonzalo Vera, Sebastián Ramos-Onsins, Porfidio Hernández: *Improving Bioinformatics Analysis of Large Sequence Datasets Parallelizing Tools for Population Genomics.* PBio 2016 Euro-Par Workshop

2011 Carlos Nuñez Castillo, Gonzalo Zarza, Javier Navarro, Diego Lugones, Daniel Franco, Emilio Luque: *Cluster GUI, an application to launch OPNET simulations within Resource Managed Environments.* OpNetWork 2011

UPDATED

August 2021