Contact

Cordoba, Argentina
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www.linkedin.com/in/mcuenca
(LinkedIn)
scholar.google.com.ar/citations
(Other)

Top Skills

Distributed Systems
Software Engineering
Linux

Languages

English (Native or Bilingual)
Spanish (Native or Bilingual)

Honors-Awards

Best Paper of HPDC (1992-2012)

Publications

PlanetP: Using Gossiping to Build
Content Addressable Peer-to-Peer
Information Sharing Communities

Reducing the Availability
Management Overheads of
Federated Content Sharing Systems

Cooperative Caching Middleware for
Cluster-Based Servers

Programming Device Ensembles in
the Web of Things

Self-Managing Federated Services

Patents

Device, method, and system
for augmented reality security
(continuation)

End-point visibility

Device, method, and system for
augmented reality security

System and method to protect user
privacy in multimedia uploaded to
internet sites

Francisco Matias Cuenca-Acuna

Principal Engineer/Software Architect
Argentina

Summary

Over 25 years of experience providing infrastructural software
solutions. Unusual combination of skills including scientific, technical
and business acumen. Experience participating and coordinating
multidisciplinary teams. Interests on Distributed Systems, Security
Operations, Internet of Things, Modeling and Data Analysis.
Published 15 distributed computing and security peer reviewed
papers with over 1000 citations, including one of the best papers
in HPDC history (1992-2012); 4 US patents filed in distributed
computing and web security

Experience

LANDING AI
Principal Engineer
October 2020 - Present (2 years 6 months)

Landing AI™ is pioneering the next era of AI in which companies with even
limited data sets can realize the business and operational value of AI and
move AI projects from proof-of-concept to full scale production

McAfee
Sr. Principal Engineer
April 2017 - October 2020 (3 years 7 months)
Córdoba Province, Argentina

MVISION EDR is an endpoint detection and response solution that was
created from the ground up at McAfee. As the content & analytics architect
my role was to define and deliver a detection MVP. Nowadays, my team is
responsible for the product's efficacy in detecting and investigating adversaries
as well as known attacker techniques (as in the MITRE ATT&CK matrix).

Intel Corporation
11 years

Principal Engineer

March 2015 - April 2017 (2 years 2 months)

Over the years I have worked doing Software Architecture for several products and R&D projects:

● McAfee Investigator (2016-2017): Led the exploration to build an expert system to assist Security Operation Centers (SOCs) investigate faster and more accurately. McAfee Investigator uses machine learning and expert knowledge to postulate investigation hypotheses and look for viable answers. Together with the security analyst we create a virtuous Human-Machine team which is unique on the industry.

● Software Guard Extensions/SGX enabling (2015): Architected and drove the use of SGX into McAfee products (McAfee Agent and the Data Exchange Layer/DXL). SGX is a set of instructions that allows user-level code to allocate private regions of memory that are protected from processes running at higher privilege levels. As part of this work Intel open sourced an SGX enabled version of OpenSSL.

Software Architect

May 2006 - March 2015 (8 years 11 months)

● Web Enclaves (2014-2015): A research project to build a cloud service to enable applications to seemingly run across groups of devices (i.e. mobile, IoT and wearables) and the cloud (similar to Amazon Lambda). This was part of Intel's Cloud Services Platform and ended up influencing W3C's Web Of Things workgroup and producing a couple of patents (50+ citations).

● Intel Update Manager (2011-2014): An update solution (client + cloud) used to push firmware, microcode, drivers and software for Intel products to ensure customers had the best possible experience. The update manager was born as a result of a presentation to Intel senior executive mgmt and it ended up becoming a six year project. At its peak the update manager was used by 15+ products (e.g. graphics, SSD, ME, etc) and installed by all major OEMs (including Lenovo, Samsung, ASUS, HP, Toshiba, Dell, Acer, Sony). Our infrastructure managed 20 million clients and delivered over 400k updates per month. As part of this project I authored the "updateability" specs for several Intel products.

● Intel Service Manager (2008-2011): An OS-agnostic SW container that accelerated and simplified the market deployment of business logic for Intel software services (e.g. provisioning, crash-reporting, update, usage, licensing).

This container was adopted by 5 Intel products. In particular it supported the Intel App Store (AppUp) which was launched at CES 2010 to deliver windows applications to millions of netbook users.

- SOA Security Toolkit (2006–2008): A WS-Security library that leveraged proprietary XML processing technology to deliver high speed XML & SOA security. I architected the product from existing building blocks and delivered a 5X performance improvement over the leading competitor (BEA Logic). The product was launched at RSA 2008 with a contest to secure 1 billion IRS forms in 8 hours.

Universidad Nacional de Córdoba
Assistant Professor
2004 - February 2008 (4 years)

Ask.com
Systems Architect & Technical Lead
April 2004 - May 2006 (2 years 2 months)

Ask Jeeves was the third most visited search engine globally (Morgan Stanley 2006), serving 4 billion queries per month and reaching over 25% of the active US Internet audience. Upon my arrival I worked on how to expand their multi-billion document index.
Highlights:
- Designed the new offline system architecture for continuous url scheduling, crawling & data processing. This project represents a multi-million dollar investment which is scheduled to replace the existing infrastructure (400,000 C++ lines) running across 1000 machines.
- Doubled the amount of pages crawled (over 6 billion) and improved the refresh frequency for individual web pages by developing the idea of adaptive crawling.

Rutgers University
Research Assistant
1999 - 2004 (5 years)

As part of my PhD research I worked on the following projects:
- Resource management for federated computer systems (2001 – 2004): Studied infrastructural support for managing data and replicated services in federated computing environments. Federated systems are typically comprised of heterogeneous components spanning multiple organizations; thus, a major challenge for building federated applications is the lack of

centralized control and high system volatility. A completely decentralized framework, which provides global and coherent control of resources, was constructed to address these challenges (33000 Java lines). Stochastic models and simulations (18000 Perl lines) were used in the design phase to predict performance and scalability. To date, this work has been successfully tested on deployments spanning over 100 universities around USA and has been cited in over 400 scientific publications.

- Cooperative in memory caching on clusters (2000 – 2001): Studied the use of a generic cluster-wide page cache to increase throughput on stock web servers. Research found that servers using the cooperative caching middleware layer could achieve 92% of the performance, when compared to specialized cluster based servers that implement request distribution.

Education

Rutgers University
PhD, Computer Science · (1999 - 2004)

Universidad Nacional de Córdoba
Lic, Computer Science · (1994 - 1999)