

ALESSANDRO VITALE

CURRICULUM VITAE ET STUDIORUM

PERSONAL INFORMATION

First Name: Alessandro
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GitHub: <https://github.com/Alessandrovito>
Nationality: Italian
Date of Birth: 21 January 1977
Current Job Position: Permanent role in WebRatio Srl
Marital Status: Single

EDUCATION AND TRAINING

- 03 / 2018
 - Attend the AWS Summit - Milan
- 02 / 2017
 - Training Session in SKY UK on Infrastructure Development (14 days) - Sky Osterley , DevOps Division
- 02 / 2017
 - Attend FOSDEM 2017 in Brussels as member of FSFE Milan (2 days)
- 2016
 - Complete course about "Time Management" (2 days), "Public Speaking" (1 day) , "Principles of communication" (1 day) , - IMA Altran Italia
- 09 / 2013
 - Complete course on Selling Methods for Modern Trading (2 days) - IPQ Tecnologie srl
- 02 / 2007
 - Advanced course based on 'Linux device drivers' supported by Ing. Alessandro Rubini (2 days)- Elsag S.P.A.
- 07 / 2005
 - 120/120 State Examination to practice the profession of Engineer
- 07 / 2005
 - 110/110 Master of Science in Electronic Engineering at the University of L'Aquila.
Spermental Degree Thesis title:
 "System Development for dynamic management of Quality of Service in a Differentiated Service architecture on IP networks"
Spermental Degree Thesis completed in "Kasko Networks Srl" ICT-TLC Company - L'Aquila
- 07 / 1996
 - 42/60 High school graduation at the Scientific Liceo 'L. Da Vinci', Sora (FR)

SUMMARY

I have acquired skills and competencies through professional training achieved during work projects and practical experience. Team spirit, project sensibility and technical knowledge allow me to reach faster my goals.

My mission is to use my professional skills in ICT & Telco to be involved in designing, developing and supporting complex Software solutions and contribute at its technical evolution especially for Embedded Platform, Java Application, VoIP technologies, IoT Cloud Solution, Frontend and backend application, C++ and C software on Linux and Windows platform.

I'm looking for a permanent job in an highly dynamic and rewarding environment. I'm ready to face a stimulating and challenging environment where sharing my knowledge and personally contribute to the growth of the company.

Core competencies and strengths include:

- Linux Embedded Developer on ARM, MIPS arch
- Network and Security Engineer
- Full Stack Developer (Angular, Spring, NoSql)
- IoT Cloud Software Developer
- Software Application and Backend Developer(C++,Java)
- DevOps engineer
- Passionate, ambitious Software Developer
- Proactive and Propositive team worker
- Results driven and excellent problem solver
- Customer oriented

WORK EXPERIENCES

5/2017 -
present

WebRatio, Lomazzo (Como) - IoT division
IoT Cloud Software Developer Engineer

Job Type: Permanent

As **IoT Cloud Software Developer**, I'm responsible to develop multi-tenant cloud software solution for a IoT factory platform called Semioty that provide scalable, robust and modular cloud services. Semioty is a Cloud-based IoT solution distributed as a SaaS, hosted in AWS Environment.

In collaboration with my team, my target aim to project new architecture, to evolve and support multi-tenant IoT platform, to develop front-end components, to support integration with back-end components and to permit communication between things and platform through IoT middleware. I'm working closely with different software layer: Web based UI enforced with Angular, backend environment, IoT devices and protocols. I'm in charge to Secure all Infrastructure hosting cloud platform on AWS to satisfy the most demanding information security requirements.

I'm part of Infrastructure as Code (IAC) team to continuously deliver high quality software and efficiently release products using automated (CI/CD) process DevOps oriented.

I'm interesting to discover new technologies, trying new things and working with cutting-edge products.

Activities and Technologies:

- Development in Java 8 and Java framework (**Spring Boot** , **Spring Cloud**)
- Understanding **Microservice architecture** model and Microservice capabilities:
 - REST APIs endpoint services
 - API Gateway Pattern
 - Asynchronous communication (RabbitMQ)
 - Distributed caching (Redis) and on-heap caching system (Caffeine, EhCache)
- Working with **MQTT** protocol, Mosquitto broker and TLS security protocol
- **AWS Cloud** Solution using **Docker** container to host services and tools (Docker Core, Compose, stack). Create different Docker image deployed on Docker Hub registry.
- Using **Docker Swarm** as cluster management solution to support containers's orchestration.
- Deploy solution on **Clustering** environment
 - NoSql database : manage multi-node **Cassandra cluster**, **MongoDB** Replica Set.
 - **Redis replication** cluster in High-Availability using **Redis Sentinel**
 - **RabbitMQ cluster** in High Availability
- Deep use and understanding of tools: **Jenkins**, **SonarQube**, **Git**, **Tuleap**
- Test Driven Development for end-to-end tests using different tools: Junit, **Selenium**, **Protractor** , javascript.
- **Agile** Environment
- Frontend developer with **Angular**: typescript, webpack.
- Performed **DevOps** procedures: Virtualization , networking , Shell scripting, Groovy, Docker orchestration, Jenkins, Vagrant, Red Hat **Ansible** to automate software provision, app deployment using multiple ad-hoc playbooks.
- Supporting Monitoring system using **Prometheus**, **Grafana** (dashboard customization), **exporter** ad-hoc application.

2/2017 –
4/2017

Altran Italia Spa, Milan - TEM division
Infrastructure Developer

Job Type: Permanent **Client involved:** SKY Italy – Milano

Infrastructure Developer for Test Automation system for Ethan Sky European projects. I was responsible for all Italian Infrastructure to configure, maintain, improve performance for all software and hardware to permit execution of Test Automation on Broadcasting devices (Sky Q Set top box, Multi Room device). I was able to follow all software process lyfe cycle in Continuous Integration practice. Working in agile environment with stand-up meeting with DevOps, Automation, Verification team in Italy and UK.

Activities and Technologies:

- Performed problem diagnosis; performance tuning; capacity planning and configuration management for Infrastructure components.
- Perform Test Automation activities using **Jenkins** tool in Continuous Integration software context
- Day-to-day system maintenance activities of the services and the configurations on Linux e Windows Server in collaboration with **DevOps** team (DB, LDAP, DNS, DHCP, VLAN, Jenkins.)
- Python scripting analysis to permit full execution of test scripts.
- Maintain Hardware: Video Server, Switch Netgear, Raspberry pi 3, IrDa System, Moxa, StormTest Racks.
- Software and tools : Nagios XI, StormTest Rack Software Suite, MySql DB, Zork, **GIT**, SVN, **Jira**, **Confluence**
- Participating in meeting and call conference with suppliers : Cisco (STB firmware), Accenture (StormTest Infrastructure).

11/2016 -
1/2017

Altran Italia Spa, Milan - TEM Division

Senior Software Engineer

Job Type: Permanent **Client involved:** Vodafone Italia S.p.A. – Milano

Software Engineer involved on Testing and Developing software solution on Vodafone Access Gateway device.

I was responsible for Benchmarking Project aim to get performance of different commercial Network Gateways.

I designed, developed software application under VSAF Cisco framework. This framework allows to extend capabilities of Access Gateway loading and running application at runtime based especially for IoT environment (XMPP, MQTT data collection, data analytics on cloud platform). Application developed using C Language and Lua scripting to support Wi-Fi 5GHz and 2,4 GHz collection of data (status wlan, connected client, radar status, dfs, channels info) and store data information on Cloud environment using **REST API, Json** protocol.

Activities and Technologies:

- Implement Test case scenario to analyze CPU, network, interface, Storage performance for DUT
- Setting PPPOE on FTTH WAN, VoIP configuration in order to access to Vodafone Network Infrastructure
- Using IxLoad and IxNetwork to generate traffic and simulate services (http server-client, ftp server-client, media streaming) in order to test network devices performance
- Develop Application using Lua script, C Language, JSON protocol, REST API services. Linux environment.
- CISCO VSAF Framework management

8/2014 -
11/2016

Altran Italia Spa, Milan - TEM Division

Software Embedded Developer

Job Type: Permanent **Client involved:** ADB Broadband – Milano

Software and Firmware Engineer with strong skills in TLC and Networking fields. Responsible for analysis, implementation, development, of software Embedded, Firmware solutions focused on VoIP solution. Involved in project "Development FW Access Gateway".

Activities and Technologies:

- Designing and Development of Firmware for **Linux Embedded** board deployed on CPE devices focused on VoIP Stack level and Voice physical interface (**FXS, FXO, DECT**). Management of endpoint Broadcom for FXS, FXO support, handle signaling and event, deep knowledge of DSP, Media stream on VoIP gather with DSP system , Audio Codec. Using C Language for application on both Kernel space and User space.
- I was responsible for overall project about porting Broadcom **BSP** to support new feature in Voice environment.
- **Developed C** application :
 - POSIX library, multithreading, IPC techniques, UNIX socket

- Using **Algorithm** procedures and **Design Patterns** (Finite State Machine logic, API, Event-Driven, Producer-Consumer)
- Kernel modules
- **Shell scripting** methodologies on handlers
- SIP Stack protocol with Radvision support; RTP /RTCP / UDPTL media protocol; Codec , ITU G.71X, ITU G.72X
- Working on Broadcom SoC HW bcm96xx series based on RISC families: **ARM, MIPS** .
- Very deeply knowledge of architecture **Microsemi** SLIC/SLAC ZL880 Series, **DSPG** DECT Chipset
- **Git**, Gerrit, HPQC, **Jira**, Confluence, Wiki
- **OpenWRT** building system, cross-compiling activities.
- Deep understanding of Networking system: firewall, DNS, ALG, routing
- Working with Linux **RTOS** environment, Low level Signaling analysis
- Supporting: TR-104 v2, TR-181, CWMP protocol to permit CPE configuration, ACS provisioning script.
- I followed entire process about **DECT CAT IQ 2.0** Certification:
 - Design new features and perform testing and debugging activities.
 - Coordinating activities in order to align internal Developed team to other team in charge of testing and debugging (Intenal Division Verification and testing , Indian team, Israel team) through email, document, videoconference.
 - Developed DECT CAT IQ 2.0 features based on **ETSI** technical specifications: Contact List, Call list, Line List, Name Handset. Integration with Web Services agent. SQLite 3 DB. Linked List Data structures.
- Solid networking assessment on Linux platform : Firewall (iptables), **network devices** (Ethernet, Wi-Fi, xDSL), configuration.
- Working with **Linux Network Device driver** (Ethernet, xDSL) .
- Knowledge of the system Asterisk framework to implement **IP PBX** systems, Proxy and Server SIP. Using SIPP to simulate and test VoIP infrastructures.
- Working with VegaTool **JTAG** to manage **QSPI flash** and with **GDB** linux debugger.
- **Documentation** and maintenance of the developed modules and infrastructure
- Use of **Jenkins 2.X** tool to provide Continuous Integration and Continuous Delivery.

4/2012 -
7/2014

Vitale Consulting (my individual own company), Sora
Freelance Software Engineer Expert Consultant.
Relevant Projects :

Client: "Voiptech srl" Company, Roma

Project duration: 6 months

Project: Optimization Zabbix Server DB schema. Applied "Partitioning" procedures to PostgreSQL RDBMS in order to avoid default housekeeping and using most fast and scalable custom housekeeping.

Key achievements and Technologies:

- Working on Linux Environment
- Improved query performance
- Created **Store procedure (Trigger, Functions)** and create **Schema** inside **RDBMS PostgreSQL**
- Build overall step-by-step bash script to apply Partitioning and Retention procedure to preexistent **Zabbix** DB data. Create **Sql script** in order to achieve Optimization goal.
- Testing performance and measure reliability of DB
- Using tootls: **pgAdmin III**, **vim**, proprietary **DB benchmark** (measure speed and size : Insertion of large amount of data, Read of the inserted records)
- Zabbix Server 2.4, PostgreSQL 9.3, Linux **CentOS** 6.5
- Provided manual and documentation

Client: "Voiptech srl" Company, Roma

Project duration: 1 year

Project: This current project aim to integrate Phonebook Service into proprietary Enterprise Software Solutions. I designed and implemented Phonebook Service as **MVC application** using **J2EE** Technologies on top of Tomcat Container. Deployment this Web Application with **JAVA 7.X** technologies

Key achievements and Technologies:

- Involved in the analysis of overall stack: data / persistence / business / integration / presentation.
- Designed **E-R Diagram** and deployed schema and sql script on PostgreSQL 9.5 RDBMS
- Using **Hibernate 3** framework as ORM part of project to support data persistence
- Using **GIT** as system repository versioning
- **Apache Maven 3.0** to manage different projects and module.
- **Spring framework 3** to implement patter MVC (spring MVC, Spring Core, Spring WEB) and integration with Hibernate. Data access object (DAO) implementations and transaction strategies. Dependency Injection.
- **Web Services** supported by Apache CXF with JAX-WS and **SOAP, WSDL, XML**
- **JUnit Framework** to handle testing methodologies: Test suites, Test runners, JUnit classes.
- **Apache Tomcat 7** as Application Server.
- Development Java 7 with IDE - MyEclipse for Spring 3.0 (Spring support)
- **Spring Boot framework** to create package portable with all necessary library and container (Tomcat).
- Development web application using **JSP** and **Servlet** server-side Java technologies with **JSTL** and **I18n** support

Client: "Voiptech srl" Company, Roma

Project duration: 6 months

Project: Responsible for building application based on shell scripting handling firewall iptables, monitoring services status; updating packages on Linux Server running on VMware ESX; compile and build asterisk modules and kernel modules linking to Linux Kernel.

- Linux **Shell scripting** to manage iptables rules and to monitor application services.
- Kernel configuration, linux driver support, asterisk modules compiling method (Gcc - Makefile build systems).
- Create rpm package (Makefile, template)
- Working on **VMware ESX** server environment, **VMWare Workstation 10.x**. Using VMware vSphere Client to connect to **VMware ESX**.

Client: Poste Vita S.p.a. Company, Roma

Project duration: 2 months

Project: Installation and Configuration Application Server Apache Tomcat to permit LDAP authentication of users from Web Application to Active Directory Domains.

- Apache Tomcat 6.x configuration on **Windows Server 2012 R2**
- **LDAP** Authentication on Active Directory through SSL connection
- Connecting Java Servlets to Active Directory using the (**JNDI**) built into the Web or Servlet Container.
- Debugging on WS 2012 through Windows event and Tomcat logging

Client: "Voiptech srl" Company, Roma

Project duration: 1 year

Project: Upgrading Linux distribution from Centos 5.9 to Centos 6.4.

Created custom Linux distro to install on embedded platforms and workstation server as main PBX Asterisk System.

Integrated into distro, custom applications as RPM packages and standard software packages as PostgreSQL Databases, Open SSH Server, Open SSH Client, Open VPN, Java and php framework. Compile and install driver as kernel modules to support specific hardware for telecommunications systems (PSTN, Ethernet, ISDN-PRI, ISDN-BRI, etc).

Customization Project IPCop GNU Linux distribution to install on embedded platforms and workstation server; integration into distro of application software packages PBX Asterisk, PostgreSQL Databases, Open SSH Server, Open SSH Client, Open VPN, Java and php framework, driver as kernel modules to support specific hardware for telecommunications systems (PSTN, Ethernet, ISDN-PRI, ISDN-BRI, etc).

- Project planning, execution, status reporting , co-ordination with offshore development Team, Requirement gathering, Client Interaction, Analysis, Design, Development, Documentation, functional Testing, Implementation, Integration, code version control and Quality control
- Kernel configuration, linux driver support, compiling method (Gcc - Makefile build systems)
- Implemented build factory mechanism to create iso installer distro to install on target device
- Strong knowledge Linux OS : **IpCop 2**, **CentOs 6.X**, Debian Etch
- Network Driver Support as Linux build-in module and loadable kernel module
- Creating **custom Rpm packages**, shell **scripts**, perl scripts, post-setup script to insert in custom distro
- Strong competence (installation. configuration, integration) with following products : Open SSH Server, Open VPN, Postgresql, Zabbix, Asterisk, Fail2Ban, Apache httpd, Dahdi.

Client: "Voiptech srl" Company, Roma

Project duration: 5 months

Project: Designing and implementation PHP Web Services Layer Communication between iPhone App (Json Protocol) and E-commerce System (**REST Web Services**). Synchronization between E-Commerce DB and CRM DB with Java Object Oriented application standalone.

- My duties started from Project planning, status reporting , co-ordination with offshore development Team and Client Interaction. I was in charge of analysis, design, Development, Documentation, functional Testing, Implementation of overall project
- **Java Web Application 7.X**
- **Mysql DBMS 5.x** as Data Source for the application and related toolkit: MySQL Administrator, MySQL Query Browser.
- Developed **Web Services REST** application using JAX-RS Java API
- **Json** Protocol

Project: Professional activities relating to following roles: Web Designer , Web Developer and Information Architect.

Highly specialization in **Graphic** and Web Design, **Web** Develop with experience in html 4/5, css 2/3, Responsive web (PHP,ASP), accessibility, **SEO** and marketing, **CMS** Joomla, Wordpress. Web Developer. Build and maintained several web dynamic platform for Business Companies.

- ✓ <http://www.weinigitalia.it> for Weinig AG Company (Germany).
- ✓ <http://www.demspirali.it/> for DCM Spirali SRL Company.
- ✓ <http://www.napaf.it/> for Napaf SRL Company.
- ✓ <http://www.portami.net> for Portami S.r.l. Company.
- ✓ <http://www.verrecchiainfissi.it> for Verrecchia Infissi S.r.l. Company.
- ✓ <http://www.bbsweethome.it> for Bed and breakfast accomodation 'B&B Sweet Home'

Key achievements and Technologies:

- Content Management Systems (**CMS**)
 - Modified CSS to achieve cross-browser compatibility
 - Accepted web design documents and implemented the advanced high quality web design in custom CMS system using internal company specific class libraries (based on PHP, JavaScript, **HTML & CSS**) .
 - Implemented design features such as animated fading slideshows, gallery, navigation menu rollovers with sprite images, self-adjusting font size text elements, custom embedded fonts etc.
 - Deliberately optimized HTML structure and images were to improve site performance. Tested web pages on compatibility with all major browsers IE, Safari, Mozilla, Chrome.
 - Marketing integration with **Google Analytics**, Proprietary **Analytics System**
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- Experience with Macromedia Dreamweaver, Fireworks programs.
- Researched and investigate new technologies for web development.
- Designed **SEO-friendly** public marketing websites for client
- Web graphics creation and editing Adobe Fireworks CS3
- Customization some **php** component to meet client needs
- Web Technologies: **jQuery, PHP, Ajax, JavaScript**
- Extensive use of CMS framework: **Joomla 1.x,2x,3.x; Wordpress**

10/2011 -
4/2012

"Thaos S.r.l." Consulting Company - Roma
Software Engineer Expert Consultant

Job Type: Temporary **Client involved:** Larimart S.p.a. (Finmeccanica Company) – Roma

I designed and implemented a web application with **J2EE** Technologies to support real-time remote control telemetry services. It permits at Central Control department to command action on civil equipment systems over wireless and wired network through Web Gui. All commands are controlled by **JSF** component **MVC** oriented that serialized command and send them to Web-Services over socket application.

Key achievements and Technologies:

- Used JSF framework in developing user interfaces using **JSF UI** Components, Validator, Events and Listeners, Facelets technologies. Developed JSF oriented application as **MVC (Model-View-Controller)** software architecture build on top of **Servlet** API.
- Created and deployed web pages using HTML, JSF, JavaScript and CSS
- Developed **Java client/server socket** to provide Web Application communication with External Service as a way to send and retrieve information (telemetry information collect by MOTOROLA equipments).
- Involved in all development phases, code review and elaboration of unit test case.
- Designed and developed **Web Services (SOAP)** using Apache Axis 2 API , WSDL on Catalina **Tomcat** Web App Server
- Modeling application using Design Patterns (**Observer, Event-Driven, Producer/Consumer**)

7/2010 -
4/2012

"Thaos S.r.l." Consulting Company - Roma
Software and Network Engineer Expert Consultant

Job Type: Temporary **Client involved:** Larimart S.p.a. (Finmeccanica Company) – Roma

I was responsible for designing and implementing proprietary communication protocols (Motorola, Selex) for interfacing and remote management of equipment **Analog Radio** (VHF, UHF, HF) and **Digital Radio** (DMR) in communication between MOTOTRBO radio systems and operations centers powered by Asterisk system . Developed with the programming language **C++ on Linux**.

Key achievements:

- Depth knowledge of the protocol owners MOTOTRBO™ for analog communication (VHF, UHF, HF) / digital (DMR) within the Motorola radio systems and related services (TMS Text Messaging Services, ARS Automatic Registration Service GPS Global Positioning, TELEMETRY Services telemetry) vehicles and supported by that protocol.
- Developed complete Stack Protocol to support communication between MOTOTRBO™ DMR devices and GUI interface powered by Asterisk system . C++ based language on Linux source code editing environments
- Software philosophy and best practices, modularity, re-use, simplicity
- Responsible for design and development of proprietary communication protocols MOTOTRBO over **IP** based on **C++ language**.
- Developed **C++ client/server socket**,
- Developed Software in **C++** to support **POSIX Multithreaded Programming** and **IPC technique**

- Supported **Voip** technologies : **SIP / SDP / RTCP / RTP protocol**
- Enhanced **C** libsip library
- Installing , configuration of Asterisk 1.8 to operate in client Project
- **Linux Debian** Etch OS
- Use Codec for audio and video data stream (H.264/MPEG-4, PCM, GSM, G.722, G.729)
- Re-engineering **server multithreading application** with particular attention to concurrency access to shared resources
- Compiled and build software to allow building installable distro based on Debian Etch OS
- Worked with **MySQL** database and **stored procedures** to handle customer information
- Created sh-based tools to auto backup and restore **MySQL dump** using **Linux shell scripts**.
- Involved in all development phases and code review

6/2009 -
4/2010

‘GruppoSistemica S.p.a ’ Company, Roma

Software IT Engineer Expert Consultant

Job Type: Temporary

Client involved: Ministero dell'Ambiente e della tutela del territorio (Italian Ministry) - Selex SEMA S.p.a. (Finmeccanica Company) - Roma

Involved in projects for Telco companies regarding the analysis, design and deploy of a system of rating and billing/accounting as a Web Application to supply services within a project called SISTRI that allows traceability of special and hazardous waste.

Key activities:

- **AS IS** analysis, Definition of **TO BE** procedure, Gathering of user requirements, definition of functional specification , **Drafting of requirements**, definition software architectures, manage document lifecycle
- Designed of **ER Diagram** to describe relational database in abstract way. Activities focus on requirements analysis to describe information stores in a database, **data modeling** using logical data model (relational model). Use professional software to project logical ER model and after approved, realize entire relational database.
- Designing applications using **UML diagram** and design pattern (Sybase Power Design Data Modeling): **Use case diagrams, Class diagrams and Sequence diagrams**.
- High capacity to analyze software requirements using **UML** methodologies (software develop, database design , etc).
- Operating with **Oracle 10g** databases : writing stored procedures in an SQL Server environment, Designed necessary views in Oracle database
- Development, deployment of Web Application with **JAVA 6.X** technologies; in-depth knowledge of the development environment **NetBeans** and **Eclipse IDE**; in-depth knowledge on the development of **J2EE** application and application servers (**JBoss, GlassFish, Tomcat**); development of **technologies EJB**, Hibernate technology middleware; using **Struts** frameworks to implement the **Model-View-Controller** software architecture. Development web application using **JSP** and **Servlet** server-side Java technologies with **JSTL** and **l18n** support; development of technology JasperReport, use and development Web services as an interface for dialogue systems external to the Web Application; perfect a knowledge of **RDBMS** systems integration within the Web Application.
- Participate in **project planning** sessions with business analysts and team members to analyze business IT Requirements and translate business requirements into working software.
- **Designed process** including requirements definition, **technical specific**, functional specific, design, java software implementation, testing and maintenance.
- Creation and maintenance of software documents
- Designed and Implemented **Java** software based on Java Rating framework multithreading (OpenRate) to manipulate xml file (over 10G a day)
- Extensively used **XML** technologies like **XML, DTD, XSLT**, to parse data , manipulate and transfer data to different independent modules.
- Designed, developed, **JSP Web application** to Created interactive reports for Accounting Department
- Working to support **MVC Architectural Pattern** using **Struts Framework** including **JSP, Servlets, EJB**, Form Bean and Action classes for Accountig & Billing framework (Jbilling)

- Designed custom reports based on Jasper Reports open source project.
- Developed **Web services (SOAP)** to interact with other components supported with Apache Axis 2.
- Used **ANT** automated build scripts to compile and package
- Programming using Struts, Java, Java Servlets, JSP, JDBC and **Oracle 10g** as database
- Using **Hibernate** technology middleware

11/2008 -
6/2009

‘GruppoSistemica S.p.a Society’, Roma
Network Engineer /Software Developer

Job Type: Temporary **Client involved:** Seicos S.p.a. and Selex SEMA S.p.a. (Finmeccanica Company) – Roma)

Network Engineer with duties of customization, integration and installation of following systems **HP OpenView Network Node Manager, HP OpenView Performance Insight** and **HP Operations Manager** within the project QoSManager made for the Seicos Spa, a Finmeccanica Spa Company. Working deeply with **HP OpenView Suite** for management, maintenance, performance analysis of WAN equipments over IP, SDH, Radio domain.

Key achievements:

- Responsible for Developing, maintaining and supporting entire project focus on customize **HP OpenView Performance Insight** to collect huge amount of data from devices on large-scale network LAN and MAN.
- Worked with Oracle Database 10gR2 to collect raw data and aggregate data (daily, monthly, yearly aggregation,). Elaborate Procedure in Oracle Environment for aggregation and retention activities . using Oracle client systems (Toad).
- Knowledge of **MIBs** system and RFC related documentations
- Experienced with Cisco routers and switches, Juniper, extreme switch, 3Com, Selex Radio Devices.
- Worked with **VMware** Server and Workstation Solutions
- Educate staff on the functionality of software suite
- Continue to develop Network Management Systems for proactive problem identification which has decreased the mean time to repair, increasing overall availability
- Provided technical guidance for operators to install and maintained software developed.

4/2008 -
10/2008

‘Open eSse S.r.l.’, Roma
Security Network Engineer / System Security Network

Job Type: Temporary **Client involved:** Italian Ministry of Heritage and Culture - Roma

Electronic Engineer with duties of **Senior System Administrator** , expert in the field of Network Security. Management and maintenance of the network of the Ministry of Heritage and Cultural Activities for the provision of services in intranet security scheme. Applied firewall rules and policy to networking equipments in order to assure Network security at Italian Ministerial Institute:

Key achievements:

- Management and control of equipment Cisco Catalyst 4000 Series Switches, Cisco 2000 Series Router, Firewall Linux based, Extreme Switch. Enabling and configuring access lists, VLANs, NAT / PAT, Routing Table
- Planning policies on the Firewall for making safe intranet. Full administration and configuration for Firewall functions : Stateful Inspection Firewall, Stateless Inspection, Transparent, Layer 3-4, Bridging, Transparent proxy, NAT, PAT.
- Responsible for **ACLs** on corporate **firewalls**; applying firewall rules to permit security on LAN
- Responsible for network documentation and weekly reports.
- Duties as Network Engineer include **Firewall**, Switch and Router configuration and maintenance.
- Local Area Network and Intranet network hardware and software administration
- Configured and Managed table routing on **CISCO** Routers.
- Monitored switches, hubs, routers.

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- Monitored and maintained the **Linux-based Firewall Appliance**.

1/2006 -
3/2008

Forward contract - 'Kasko Networks Srl', L'Aquila

Software Embedded Engineer / Software and Firmware Engineer

Job Type: Temporary **Client involved:** ElsagDatamat R&D S.p.a. (Finmeccanica Company) – Genova

Software and Firmware Engineer with skills in TLC and Networking fields. Responsible for analysis, implementation, development, debugging and testing of software solutions designed for kernel-space and user-space environment. I supported Firmware and device driver solutions for network devices on Linux embedded system (Freescale Motorola Architectures).

Key achievements:

- Linux Embedded **C/ ANSI C**
- Worked on Business Networking Equipments SAS® Series - Selex ES: SAS 500 series , SAS 900 series
- Kernel configuration, manage cross **toolchain** (compiler, linker, debugger, and OS) supported **Montavista** , root file system creation, bootloader manipulating, Gcc - Makefile build systems
- Linux Firmware and device driver developed
- Focused on Embedded Microcontroller **Freescale PowerQuicc II MC82xx**
- **Jtag Debugging** (Lauterbach), **GDB debugger**: allows me debugging of Linux boot programs kernel, drivers, loadable modules.
- Supported **Software Test Engineers** in the execution of software tests to test plans to meet product requirements for linux device driver for network interfaces: ADSL, ISDN, Ethernet
- Responsible for software detail design, implementation, and testing the **SNMP** protocol using Net-SNMP components Kernel Space e User Space also to support dozen of **MIBs**. Handle subagent to support specific MIB, management trap service v2,v3.
- **Performed unit testing , provided test cases**, unit test plan (profiling) to evaluate **performance** of embedded system on overall loading
- Tuning kernel variable (time scheduling), change setting hardware variable on microcontroller by UART, to increment and optimize resources for embedded system
- Use **ESVN** Subversion System to keep the track of software development.
- Developed **testing scripts** of the communication stacks and Linux applications
- Improved, and tested the existing code for firmware device driver to support ADSL interface communication , ISDN interface communication, Ethernet interface communication.
- Configure kernel, iptables, ipoute 2 for **Traffic control**. Created a sophisticated structures using Traffic Shaping (Filter, Queueing Disciplines FIFO, SFQ, TBF, CBQ, HTB,RED, GRED) to perform **QoS** on different network interface through cli command by user space control
- Manage Bugzilla bugtracker system
- **IDE Eclipse** development environment
- Configures **ZebOS** Network Platform that permit hardware and embedded OS software abstraction layers.
- Configuration and management of network devices **DSLAM, Cisco Router, SmartBits, Switch Layer 2, Wireless LAN Access Point**.

5/2004 -
5/2005

Kasko Networks Srl', L'Aquila

Software Embedded Engineer

Job Type: Degree Project inside Telco Company

Degree thesis project, completed in Telco Company. In the **Differentiated Services (DiffServ)** environment, I developed Java client application, on Linux embedded devices (routes) and a Server Multitreading Application on Linux Server to control dynamic allocation of **QoS** in the Policy-Based Networking framework with Bandwidth Broker entity to support differentiated treatment of different types of traffic.

Key Skills:

- An extensive experience and sensibility on QoS . High knowledge of all mechanism to allow Quality of Service.
- Worked on Business Networking Equipments Imola® - Tiesse : Linux embedded with **ARM** microprocessor
- Java 5 embedded
- Client/Server applications
- Designed, implemented DiffServ Architectures based on **RFC / IETF**
- Configure kernel, iptables, ipoute 2, Created a sophisticated structures to perform QoS on DiffServ network.
- Managed **VoIP** Technologies (SIP /SDP /RTP) to support H.264 video conference between peers on DiffServ IP network
- Automatic allocations of QoS on Bandwidth Broken **DiffServ** Element installed on Router Imola® through policies resident on **MySql** DB
- QoS architectures :
 - Traffic Shaping :Filter, Queueing Disciplines (FIFO, SFQ, TBF, CBQ, HTB,RED, GRED)

1/2002 -
4/2005

Collaboration in several projects - 'Università degli Studi di L'Aquila', Faculty of Medicine, L'Aquila

Computer technician Collaborator

Job Type: Part-Time

Main Activities:

- Web publishing, E-learning, Network Administrator
- Developed, installed and maintained a web platform (<http://fisioterapia.univaq.it>) for the CampusOne project to create e-learning's web portal for students and Professors for the 'Fisioterapia' course of Faculty of Medicine, University of L'Aquila.
- Developed, installed a web platform (<http://tep-learning.univaq.it>) project to create e-learning portal for the 'Tecniche della Prevenzione nell'ambiente e nei luoghi del lavoro' course of Faculty of Medicine, University of L'Aquila.
- Member of the staff to realize the CD attached to 'Guida dello studente per la facoltà di Medicina A.A. 2002-2003' for the Faculty of Medicine, University of L'Aquila.
- Audio and video production to realize **multimedia DVD** with professional hardware and software system (**Adobe** Premiere, Adobe Photoshop).

TECHNICAL SKILLS AND COMPETENCES

Cloud Software Engineer	Skill Level
AWS tools : SNS, CloudWatch, Route53 DNS	Intermediate
RabbitMQ clustering, Mongo DB replicaset, Redis Redis Sentinel, Cassandra multi-node cluster	Expert
Spring Boot and Spring: JPA , JPA mongo data, JPA Cassandra data, JPA Redis repository, Spring Config Server, Spring Sleuth, Spring Batch, Spring Cloud Bus, Spring AMQP and WebSocket	Expert
Docker Swarm to build services. Deep knowledge of VirtualIP, network Overlay, meshing. Deploy, scale micorservices.	Advanced
DevOps pcedures: Virtualization , networking , Docker container and Docker Swarm orchestration, Jenkins, Vagrant, Ansible .	Advanced
CD/CI using Jenkins . Pipeline for test intergration End-to-end.	Intermediate

Embedded Software Engineer	Skill Level
Building System OpenWrt on CPE Routers MIPS architecture , Broadcom BCM63xx SoC family SMP, Wi-Fi - LAN - WAN network interfaces, VoIP Stack, Endpoint for FXS, FXO support.	Expert

Extensive experience in kernel configuration, cross tool chain (compiler, linker, debugger, and OS) , root file system creation, bootloader understanding, Gcc - Makefile build systems	Advanced
Design, implement and delivery of high-quality code , compliant with the client's requirements	Expert
Responsible for debugging activities and integrated test Application software	Intermediate
Understanding of telecommunication systems	Expert
Experience in the full embedded software development life cycle from the concept to the delivery of next-generation applications and customizable solutions	Intermediate
Knowledge of embedded software architecture development	Advanced
Knowledge of RISC microprocessors (Freescale PowerPC, Broadcom MIPS and ARM)	Intermediate
Good skills with leading-edge programming tool complemented by proven ability to assimilate and rapidly utilize emerging technologies, ability to quickly gain an understanding of the system context.	Intermediate
Solid networking knowledge with experiences developing stack proprietary protocol on over IP environment.	Expert
Strong competence with UNIX / LINUX development environments.	Expert
Ability to understanding the IEEE/IETF/ITU/RFC standards to report as requirements for software technical specific	Expert
Extensive knowledge of ANSI C/C/C++ applications for embedded system, perl and shell scripting	Expert
Lua scripting language	Intermediate
IPC techniques: pipe, queues, shared memory. Socket Unix.	Expert
Strong team player, with the ability to find practical solutions fitting well into systems	
High level hardware and software debugging using: Jtag debugging, GDB debugger	Intermediate
Linux network device driver developer	Advanced
Strong Experienced with Multithread and Multiprocessing software	Intermediate
Strong background in signal processing, queue theory algorithm to support QoS (Traffic Shaping), networking stack protocols.	Expert
Strong understanding of SNMP V2. V3 and MIB system	Expert

Software Engineer	Skill Level
Database design, administration and ER (entity-relationship diagramming).	Intermediate
Extensive knowledge of versioning control and bug tracking systems (GIT, Gerrit , SVN, HPQC, Jira, Bugzilla)	Expert
Jenkins tool : use Plugin, Delivery Pipeline, Git, Maven integration, Test, Distributed Builds	Intermediate
Maven 3.xx, JUnit, Spring 3.xx technologies	Intermediate
Spring 3.xx framework, Spring MVC, Spring Web, Spring Core, Spring Boot 1.x	Intermediate
Linux embedded C developer user space, kernel space focused on RTOS environment	Advanced
Advanced overall web site development: CMS , Joomla, Wodpress, HTML, CSS,Graphic	Expert
Software design methodologies : UML (Class diagram, Sequence diagram, Object Diagram, Use Case Diagram.)	Intermediate
Excellent knowledge of Server OS Linux (CentOs, Red Hat, Debian Distro,Kubuntu, Ubuntu, OpenWrt), Unix, Windows (2003 Server, 2008 Server)	Expert
Supporting database solutions in Oracle Enterprise , MySql Enterprise environments, PostgreSQL .	Advanced
Strong understanding of SQL and store procedure.	

Extensive experience in VoIP Technologies (SIP /SDP /RTP) and major Codec , Container for audio and video data stream (H.264/MPEG-4, PCM, G.722, G.729,etc)	Expert
Strong and depth working activity on Asterisk framework to support IP PBX systems, VoIP gateways, SIP Protocol. Customization asterisk in LINUX environment	Expert
Strong understanding of Java, C++, J2EE , XML and object-oriented Language : expertise in Object-Orients analysis/design and Development	Advanced
Excellent oral presentation skills and ability to create documentation	Intermediate
Deep Knowledge of Web Services Solutions : Soap Protocol , XML, XSLT, WSDL, Apache Axis2 WS Engine, RESTful WS, JSON Protocol, Apache CXF, JAX-WS	Expert
Designed and crafted web app employing a MVC -layered architecture and best-of-breed J2EE open-source frameworks.	Intermediate
Developed Web Application with Java Servlet, JSP, JSTL, JFS 2.X, J2EE technologies supported by Application Server Apache Tomcat, JBoss .	Advanced
Strong experiences with Agile methodologies	Intermediate

Network Engineer	Skill Level
WAN technologies: Frame Relay, ATM (xDSL, xDSL +), Metro Ethernet , and dedicated line data networks	Intermediate
Knowledge of the TCP-IP Protocol Suite, Seven-Layer Model and Variable Length Subnet Masking	Expert
Strong competence with following products: Open SSH Server, Open VPN	Intermediate
Knowledge of protocol and stack IEEE 802.11x (MAC,LLC,PHY) for WLAN	Intermediate
Network Software: OVNMM HP Open view Node Network Management, OVPI HP Open View Performance Insight	Expert
Worked with VMware ESX , VMware Workstation, VMware Player solutions.	Intermediate
Familiar with all type of wiring; copper, fiber, and types of end	Novice
Experienced with Cisco routers , Juniper, Extreme switches, 3Com Wireless	Intermediate
Duties as Network Engineer include Firewall, Switch and Router configuration and maintenance	Expert
Networks, Protocols: Ethernet 802.3, TCP, IP, DHCP, DNS, WINS, ARP, FTP, Telnet, DSL, Cable, hubs, cabling, SNMP, SMTP, FTP, POP3, NAT, VPN, VLAN, RIP, Ethernet 802.11, LAN,WAN, SIP, RTP, RTCP, UDP/T, NTP.	Expert
Traffic analysis with tools Wireshark, Iperf, Tcpdump	Expert
Handling WAN with 500+ network devices	Intermediate

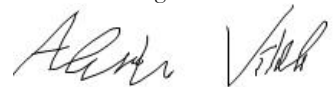
Tools	Skill Level
IDE: Eclipse IDE Platform Ganymede, Helios, Kepler; NetBeans IDE for C++, Java.	Expert
Web Server and Application Server: Apache, Tomcat, GlassFish, Jboss, ISA Server .	Intermediate
Applications: Open SSH Server, Open VPN, Postgresql, Zabbix, Asterisk, Fail2Ban, Dahdi .	Expert
Web Server and Application Server: Apache, httpd, Tomcat, GlassFish, Jboss, ISA Server .	Expert

PERSONAL SKILLS AND SOCIAL SKILLS

- Italian: Mother tongue
- English: Excellent speaking and writing, verbal skills improved in certificated English courses on campus in England (Torquay and Oxford).
- Ability to quickly understand specific issues to avoid potential troubles and transfer solutions soon at the deployment process. Team building and program management capabilities.
- Proactive and motivated software engineer
- Team work: My interpersonal skills have been well developed through working as a part of many teams.
- Good communication skills gained during various project presentations.
- Sports: swimming (semi-agonist), volley (agonist), soccer, five-a-side football, skiing, tennis.
- Agonistic Experiences: volley team 'F.V. Alvito (Alvito, Frosinone)', 1995-1996, volley team 'Paganica Volley (Paganica, L'Aquila)', 2001-2002.
- Leadership student representative at 'Comitato per la Gestione degli Impianti Sportivi' University of L'Aquila, 2001-2003.

I hereby authorize the use of my personal details solely for circulation within the company.

Signature

A handwritten signature in black ink, appearing to read "Alberto Vito". The signature is written in a cursive style with a large initial 'A' and 'V'.