

High performance distributed system technical manager Networking and object design expert Complex systems design

Wishes :

Architecture, design and technical management of multi-tiers solutions,

Technically lead and coach teams to build distributed products.
Investigation, prototyping and productization of tricky software elements.
Gather needs and constraints to fit market demand.
Support whole creation of value chain, from presales, through realization, to support.

Skills :

Dependable, autonomous, fast learner, pragmatic.
Technology intelligence, technical analysis, innovation, technical choices, risk management, interface definition, quality.
Task definition, prioritization, tracking, reporting.
Teams technical coaching. Knowledge transfer to other teams.
Customers/partners relation, crisis management.
Consulting, collaboration and training in english and french, in foreign companies.
Architectural Expertise : component framework, IPC, API design, performance.
Event oriented, asynchronous, resource (not-)sharing, single/multi tasking
Fault-tolerance, high-availability, load-balancing, scalability, critical application, industrial environment
Defensive programming, auditable/testable API/IPC
Technical Expertise : C, C++, Perl, Web, Mobile, network, protocols.
Linux kernel coding, templates, macros, compilation, POSIX API, WIN32 API
Socket API, iptables, iproute2, tc, pcap, pf_packet, routers, switches, DPI
ARP, IP, ICMP, TCP, UDP, HTTP, WTP, WSP, RADIUS, SNMP, CORBA
Software technologies : shell, Makefile, Java, JNI, JVMxl, Javascript, GWT, XML, HTML, CSS, XML-RPC, JSON.
Linux technologies : embedded linux, busybox, uclibc, linux early boot process (USB, CD, flash), lilo, syslinux.
Quality - Administration - System infrastructure : virtual machine administrator, system administrator, network administrator.
Git, ClearCase, CM Synergy, automatic packaging and installation
Linux, Solaris, HP-UX
VMWare, Qemu/KVM, Docker, linux unshare
SCM administrator, release management, Non-regression, traffic generators
Javascript injection, Selenium, Appium, Robot framework, SoapUI
Oddities : assembly, low level PC, reverse-engineering, code injection, network processor.

Work Experience :

- 2012 - 2022 : Cognizant Technology Solutions, Grenoble - France, dedicated in providing infrastructure, solutions and services for software and hardware validation
Technical manager, solution builder, expert and architect of the Grenoble Test Center (~50p).
Define, design, implement and support solutions created for qualification purpose and support of the production.
Hire, train, leverage teams. Provide definition, training, support and enforcing of rules and best practices to achieve high quality levels.
Customers types : CAC40, highly innovative enterprises
Domains : Hospitality (Accor), Energy (Total), Banking (Dexia, Euronext), Robotic (Softbank Robotics), Pharmacy (MSD, Fresenius)
Create whole **infrastructure** supporting Grenoble Test Center production
Server infrastructure for **virtual machines** management
Solution infrastructure for day to day production services
Networking infrastructure and customer network peering allowing **network behavior testing and tampering**
Physical and virtual desktop systems farm as test targets and supporting technologies
Physical and virtual **mobile device farm** and supporting technologies
Technology acquisition, reduction of technical gap to allow usage by functional testers
Global **mentoring** on all aspects related to testing and technologies
Web technologies, Web services
Hardware, systems and networks
Desktop / Mobile native and hybrid applications
Automation, Test repository, Defect repository
Engineering, Software Engineering, Quality
Create **technology enablers** allowing to deliver test to customers
Web service simulator
SMS management
Data processors and comparators
Data acquisition and transformation
Report generation
Create / acquire / incorporate technologies into **automated testing solutions**
Selenium, Appium, Detox, Chrome DevTools, Soap-UI, Tosca, Apache HttpCore, Apache POI, ...
Java, NodeJS, Perl, Python, Groovy, Windows, Linux, Android, iOS, OSX, ...
ALM, Jira, SquashTM, QTest, TestRail, Jira/Xray, Jira/Zephyr, ...
Sales process support : solution building, risk assessment, technology assessment, cost assessment, investment accounting, task splitting, planning, preparation and validation of sales documents
Project management of challenging projects. Shadow project management for crisis management. Support for project management regarding customer communication.
- 2002 - 2012 : Volubill Telecom solution company, Grenoble - France, editor of solutions to charge and control data traffic of mobile phone users by analysis of their data usage.
Technical manager, expert and architect of the Grenoble product team (~20p).
Hire, train, leverage team members. Provide definition, training, support and enforcing of rules and best practices to achieve high quality levels. Design, code key points.
Technical leading of the VPF/VNS Service Controller, a **distributed high-availability** software and hardware solution to capture, analyze, report and control the network traffic of the phone users.

Some **mobile operator** customers : Orange, Vodafone, Movistar(Telefonica,O2), Orascom, Tata teleservice, Airtel, Globe Telecom, Celcom, Digicel.

Technical **communication channel** to the rest of the company and customers.

Administrator : Linux, network, CM Synergy, Git, release management, virtual machine.

Distributed frameworks design and coding :

Tool libraries : C++, Java, Perl

Trusted components for network packet processing : Java and C++

API chains for Name to IP translation dynamicity, **Statistics, Management and Configuration** : Perl

Semi-trusted components to process high number of stateful concurrent running contexts : Java, C++, C++ zero allocation

Java Tool,XML,GUI Widget, Javascript **interpreter** API to build "heavy client" skinnable gui, bindings to gwt, **swing** and **cli**

Deep Packet Inspection API, bindings to Qosmos, Ipoque, (**Wireshark** also)

Packet acquisition API, bindings to pcap, pf_packet, iptables, named pipe, tee, volubill

Coaching and leverage of development teams

Quality tools design and coding : unified building environment, documentation generator, packaging system with automatic installation (including small footprint linux os), non-regression, traffic generators.

Legacy code source take over, reverse-engineering, support, maintain and graceful leverage.

Design and coding of high-availability weighted load-balancer : network processor, **VIP** and **VRRP**.

Protocol decoders coding : ARP, IP, UDP, TCP, HTTP, WTP, WSP.

Coding of **Packet forging**, changing (fake answer, fake traffic, payload insertion).

Performant codings :

Zero queue bandwidth management

Zero parsing searchable xml (xpath)

Network processor zero memory load-balancer

Fast memory mapped database

Fast decision tables (int, url, network with different size)

Shared memory statistics

Preparsed XML for fast C++ application reading

Linux kernel modules coding :

Two wires for High-Availability

Zero memory allocation traffic volume and time counter

Zero memory allocation traffic load-balancer to several user space processes

Efficient packet transfer from kernel to user space, and back

Investigations : adding ref counted management memory in **llvm** C++ compilation, ref counted managed language with **coroutines/continuation**.

Interpreter integration in framework : javascript in java, **squirrel** in C++.

- 1997 - 2002 : **SILICOMP** Industrial software company, Grenoble - France.

Team manager, Technical manager of the Appli-Bus team (~10p) and Technical sale consultant.

Define, train, support and enforce design and coding methods, rules, and best practices to achieve high quality levels. Design, code key points.

Technical leading of Appli-Bus software, a **fault-tolerant simd** "middleware" used as integration platform for industrial applications in a heterogeneous distributed objects environment on both UNIX and Windows NT.

Example of Appli-Bus software use : RATP subway station security equipment control, Singapore airport taxiway and runway.

Project management, communication with **customers & service** team.

Support to the **marketing and sale teams** of the company.

Coding of automatic generation of software sources from IDL interfaces.

Design and development of versioning, delivering and packaging tools for an industrial product.

Coding of Platform Abstraction Layer : Linux, HP-UX.

Administrator : ClearCase, Linux, Solaris.

- 1996 - 1997 : **SILICOMP**.

Developer and Technical leader in the Appli-Bus team.

Help define, design solutions. Design and code.

Design, technical choices and development of the product.

Expertise in object oriented technologies : Perl, C++, Java and CORBA.

Integrator specialist for development teams in **foreign companies**.

Framework design and coding : API, IPC, performance, components, fault-tolerant, asynchronous, event driven, mixed threading.

System programming coding, platform abstraction layer for POSIX, Windows NT.

- 1995 - 1996 : **Hewlett-Packard** Grenoble, Telecom Network Operation division.

Internship for end of engineer study project : porting of the TCAP layer, part of the SS7 network protocol stack, over TCP/IP, running in High-Availability.

Design and code. C, Objective-C, Unix System, socket.

- 1989 - 1995 : **EIBA** Montpellier - France, softwares for building companies.

Internship software development for about 24 month cumulated.

Coding, progressive takeover of design and technical choices. C, C++, Dos/Windows.

Education :

- 1992 - 1995 : **ENSIMAG** (computing and networks)/**ENSERG** (digital electronic) jointed **System architecture** Engineer (Equivalent to a Master degree).

Language C,ADA,Scheme Assembly language Computers architecture Computer building

Integrated circuits Networking Kernel coding Compiler coding

- 1989 - 1992 : Preparatory classes to the French 'grandes écoles' (Math Sup., Math Spé. M) (Equivalent to an Associate degree in Math and Physics)

- 1988 - 1989 : French C BAC

Miscellaneous :

French : Native language.

Professional english : Daily usage.

Business trips to Europe, Asia, South America and North America to meet customers and partners.

Backpack vacation trips to Asia and Southeast Europe.

Ski, science fiction, mountain walking.

Computing home projects : embedded software, **compilers, interpreters, adobe flash, javascript, OpenGL, neural network, genetic algorithm, arduino, pi, dot net, nodejs, wasm, cryptography, ...**