TANELI OTALA

Home 408 773-9689 / Cell 408 480-7733
taneli@otala.com

1915 Woodland Ave
Santa Clara, CA 95050
http://pointyhair.com

WHOAMI(1)

I'm a Unicorn, executive manager, technologist, mentor and inventor.

Bay Area technologist, geek, coder, inventor and engineering manager – excited for the next big innovation challenge.

SKILLS

- Scalability – designing for reliability, scalability and security.
- Multi-threading and Distributed Computing using Micro-services is my way of scaling.
- Big data – developing solutions accounting for cost and efficiency.
- People – hiring, managing, leading, mentoring; growing teams from 1 to 110.
- Polyglot – almost any language and framework, including systems. Favorites are Scala with Akka and C++ with Boost; when applicable.
- Process and Innovation – VP Engineering or CTO, I do both, depending on context and company drive.
- Hands-on – Architecture, Design, Code reviews, Coding, DevOps, SysAdmin, Systems design, Mentoring, Teaching – lead by example.
- Clouds and Containers – On Premise (Xen, VMware, Kubernetes, Docker), Public cloud (AWS, Google Cloud), Private cloud (IBM Softlayer), and Hybrid.
- Patents – recently awarded patent 9,830,368; 11/2017; Asynchronous parallel processing of log data – showing how scalable, fast and parallel a system built with Scala and Akka can be. Collaborated on many more patents.

EXPERIENCE

CTO 2018 – 2019
monARC Bionetworks in San Francisco, Santa Clara, Redwood City

- Collecting medical data and then matching users to clinical studies (data mining, machine learning). Integrated to hospital systems, EHR retrieval systems.
- Spidering public data collecting information about diseases, diagnoses, side effects and clinical studies – and then composing SEO optimized landing pages.
- 631,000 patients through EHR integration and 1,300 patients through portals; each with 3-30 years of medical history.
- Trained engineers in Scala, frameworks (Play, Akka, Slick, Spark) and Microservices.
- Replaced PHP application with a simpler, much faster Scala; replaced MySQL with MariaDB plus replication
- Went from Aptible to native AWS; Increased performance, security and cut costs by 12k/mth; added VPC & SGs, TLS 1.2, 1.3, VPN
- Hired five new developers, started south bay (Santa Clara) office

- Switched mobile development from Swift to React Native, producing Android & iPhone from same code base, as well as React.js for Web

CTO 2012 – 2017
Glassbeam in Santa Clara, CA and Bangalore, India

- Glassbeam receives terabytes of IoT streaming data daily, building analytics dashboards, predictive analytics and alerts for large equipment manufacturers.
- Joined the company to redesign an aging platform for a scalable, faster, multi-tenant, secure SaaS cloud based (but cloud agnostic) system.
- Designed the system significantly lowering TCO, increasing processing speed by 100x while adding linear scalability. Hired additional people with Scala/Java skills.
- Technologies: Scala + Akka + Java, Cassandra, Spark, MySQL, Tableau, LogiXML, syslog, iptables, ssh.
- Engineering team: 3 in Santa Clara, 43 in Bangalore, India.
- Clouds: AWS, Xen, Dimension Data, Softlayer (IBM), Google Cloud, VMware.

CTO 2011 – 2012
GoingOn in San Francisco, CA

- Social networking site for colleges, combining academic collaboration with access control
- Evaluated established Drupal codebase with scalability and performance limitations. Isolated the worst components and replaced them with a scalable solution.
- Engineering team: 12 in San Francisco, 8 in Vietnam.
- Deployed: AWS with emphasis on security (RBM, HIPAA, PCI)
- Company folded after running out of funding.
- Drupal as a Content Management System (PHP) platform and making it scalable, multi-tenant, web-scale. Adding chat, mobile, email interfaces and social media.
- Technologies: Drupal/PHP, MySQL, Scala/Akka/Java, Hadoop, Cassandra.

CTO 2008 – 2011
Atomic Labs (renamed to CloudMeter), Mountain View, CA

- Atomic Labs developed extremely fast complex event processing platform, Pion.
- One vertical usage of Pion, is tagless web analytics, (i.e., no tags needed, no slowdown on loading) works with any client, produces analytics output (Google Analytics, Omniture, Webtrends, etc) and allows deep inspection and correlation of all web traffic. Pion can be used as a passive monitoring system, and it can decrypt SSL/TLS on-the-fly.
- Pion integrated with 12 SQL databases (Oracle, IBM DB2, Informix, PostgreSQL, MySQL, SQLite, …) simultaneously using a “SQL dialect translator”
- Pion was built multi-platform (Linux, Windows, Solaris, BSD) in C++ with STL/Boost, Javascript, Python, Scala, Bash.
- Engineering team: 3 in Mountain View, one in Los Angeles.
- Deployed: individual machines, Xen, VMware, AWS.
- Company was acquired by Splunk.

VP Engineering 2007 – 2008
Jaxtr in Menlo Park, CA

- Jaxtr started out as free/low cost phone calls (VoIP) via matched numbers around the globe.
- Originally the platform did not scale past 10k active users – I helped it scale to 100M+ users by adding a first of its kind load-balancing Tomcat/Apache/Asterisk network management system based on Linux/iptables/iproute2, as well as a scalable MySQL master-slave system (while changing from InnoDB to MyISAM engine).
- Built in Java with managing components in Bash shell script.
- Deployed: Linux servers with LVM2, Java, MySQL, data center (Equinix)
- Company folded after VC's replaced CEO, and got bought for assets only by Sabsebolo.

VP Technology 2006 – 2007
Various Inc (holding company) in Palo Alto, CA & Las Vegas, NV

- 700 domains/web sites of social networking and dating, about 500 million user accounts; 2400 web servers, 300 MySQL servers, 11 NetApp filers.
- Sites were built with Perl and Apache, Video chat/on-demand was built with Java.
- Engineering team: 105 in Palo Alto, CA, 12 in Las Vegas, NV.
- Technology staff of over 100: development, operations, layout, graphics, community
- 2 week release cycle, ~120 tasks/features developed, tested and released every cycle
- Drove development and testing of in-memory databases, optimized Filer performance in high-speed environment.

CTO 2006 – 2006
MySQL in Cupertino, CA & Helsinki, Finland, and 24 other countries

- MySQL server was built in C, though some of the later pluggable DB engines were built in C++ (Falcon) and Java driver was built in Java.
- I was hired as co-CTO (along with Monty Widenius). We had 200+ critical bugs, and a deadline for release. Prioritizing bugs, finding people to work on them, was important as well as presenting to buyers and VC's.
- Company got bought by Sun Microsystems.
- Engineering team: 86 people in 26 countries, managed with weekly IRC meetings.
- Implemented the 3rd party database engine integration program, yielding five new engines, as well as evangelizing the choice of "right RDBMS model and replication" for large scale implementations – MySQL, used correctly, remains one of the most scalable databases.

VP Engineering, CTO 2002 – 2006
Addamark (renamed to SenSage) in San Francisco, CA

- Addamark/Sensage: Analyzing logs; detecting breaches and attacks by insiders and outsiders.
- VPE: Came on board as VP Engineering, to lead a team of five engineers and offload management from CTO. Productized the LMS (Log Management System) to reduce professional services. Grew engineering/QA from 5 to 35.
- CTO: Company changed name, and moved to real-time log processing. I switched to CTO, and hired a new VP Engineering. I built the first version of RT (Real-Time platform) while augmenting the team.
- Built in C++, STL, Bash, Javascript, PostgreSQL, MySQL
- After a series of CEO changes the company was bought by Hexis.

- Deployment: cluster of Linux machines – “private cloud”
- As VP Eng, managed the ongoing development and releases of LMS (the scalable Log Management System) -- a product with incredible insert and query speeds, due to distributed architecture.
- As CTO, spearheaded the design and development of RT (RealTime event processing architecture) -- allowing the processing of over 1M events-per-second (of non-trivial stream processing) in a clustered environment.

VP Engineering, CTO 2001 – 2002
Verano (renamed to Industrial Defender) in Sunnyvale, CA & Alberta, Canada

- Managed Development, QA, Docs; 40 engineers in Sunnyvale/CA, Calgary/AB and Mumbai, India
- Verano had two product lines -- SCADA (Supervisory Control And Data Acquisition – today called IoT) and B2B integration
- Technologies: C/C++, Java, RTAP, TCP/IP, Parallel/distributed processing, networking, SOAP, XML

VP Engineering 2000 – 2001
Zambeel in Fremont, CA

- Data-center scale (10PB+), self-healing file server cluster (CIFS/SMB, NFS, HTTP) using 3Ware controllers.
- Managing Development (Hardware + Software), QA, Project Management; 86 engineers – engineering was running “half cylinders”; putting continuous integration in place improved productivity by 50%.
- Zambeel developed distributed massive storage system; based on Linux, C/C++, Java, Apache, NFS, Samba, Oracle, BDB, JBOD, RAID

Sr Director of Engineering 1999 – 2000
Oracle in Redwood Shores, CA

- iFS – Internet File System.
- Managed the completion of Java based system allowing storage of all data types, access via Internet protocols (HTTP, FTP, NFS, SMB/CIFS, SMTP, IMAP, POP), into an Oracle 8i database.
- End to the data silos, allowing uniform access to data regardless of protocol, with features, such as versioning, backups, snapshots and access control.

Director of Engineering 1994 – 1999
GlobalCenter in Sunnyvale, CA

- Networking, Dialup, ISDN, Web services, Email services

VP Engineering 1989 – 1994
Alcom in Palo Alto, CA

- LANfax – fax servers on LAN

CEO & Founder 1983 – 1994
Otasoft, Inc. in Oulu & Helsinki, Finland

- Networking (TCP/IP, LAT, CTERM, X.29,X.400), Encryption

EDUCATION

Oulu University, Finland
- EE, ME & CS

Oulun lyseon lukio (college), Finland
- Magna Cum Laude

PROFESSIONAL ORGANIZATIONS

ACM
IEEE

ADDITIONAL SKILL-SETS

- Databases (SQL): MySQL, MariaDB, PostgreSQL, Oracle, H2, SQLite
- Databases (NoSQL): Cassandra, BDB, MongoDB
- Elastic Search, Lucene, SOLR
- Linux, Kernel, Drivers (contributor)
- Xen, VMware, Kubernetes, Docker, AWS, EC2, S3
- Distributed computing, Network computing, Fault tolerant
- C++, C++11, C++14, Boost, Scala, Akka, Java, Ruby, PHP, Assembler, Prolog, Haskell
- bash, sh, Python, zsh, Perl
- TCP/IP, UDP, IP, DNS, Sockets, LAT, CTERM, Wire protocol, X.3, X.29, PAD
- Multi-threading, Pthreads, POSIX Threads
- Object Oriented, Functional Programming, Actor model, Microservices
- File systems, NFS, SMB/CIFS
- VoIP, SIP, RTP, IAX, Asterisk
- Apache, Tomcat, HTTP, HTTPS
- Email, SMTP, SMTPS, SSL, TLS, Deliverability, DNS, DNSSEC, X.400
- DevOps, SysAdmin, Chef, Puppet, Jenkins, CI
- HIPAA, PCI, PHI/PII, GCP, VPC, RBM, VPN, RSA, DES, SHA
- Machine Learning, ML, MLlib, Data Science, R, Derive, muMath
- SCADA, IoT, Home Automation
- Scrum, Agile, CMM, Waterfall