

ANTON OKMYANSKIY

Principal Engineer

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Profile

Expert in high-performance back-end systems scaling to millions of clients.
Experienced in technical roles calling for breadth of skills and technical depth:

- **Principal Engineer** – from vision to implementation of carrier-grade software
- **Cloud Solution Architect** - SaaS, AWS, Big Data Analytics, OpenStack
- **Technical Leader** - led teams up to 60 engineers on \$50-250mln projects

Effective team leader as well as prolific individual contributor.

Skills

Technical Depth

16 years of experience.
Full product lifecycles.
E2E architecture.
Prolific coder in Java.
Cloud SaaS.
6 industry standards.
30+ patents.

Team Direction

Technical direction of distributed teams.
Spanning business units and external partners.
Waterfall and agile.
Continuous integration.

Product Management

Customer engagements for large opportunities / RFPs.
Product requirements.
Vendor relations & pre-acquisition analysis.
Passionate evangelist.

Technologies

Java (certified)

AWS & OpenStack

NoSQL: DynamoDB,
Oracle Berkeley DB

Netty, Kafka, Druid

Sockets, Threads, NIO

HTTP, REST, JSON

SOAP, WSDL, XML

JavaScript, HTML

SNMP, DNS, DHCP

TCP, UDP, IP

TR-069 & 3GPP
Standards, SON

3G, LTE & WiFi Small
Cells; RF planning

TLS, PKI, X.509

Solaris, Linux,
Windows

Specialties

- Back-end systems
 - Real-time Big Data analytics
 - Cloud Solutions for SaaS
 - Self-optimizing RF networks
 - IoT device management systems (RG, STB, VoIP, HNB, OSGi, DOCSIS)
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Experience

Cisco Inc.

Vancouver, Canada

2014-Present

Principal Engineer (May '15) , **Mobility IQ SaaS Product**

Lead architect and developer of Motus – the real-time location analytics engine behind Cisco SaaS solution for mobility analytics.

- Architected and implemented the first release on a 4 month schedule
- Back-end for processing real-time data streams with NoSQL DynamoDB
- Achieved query response of <30msec with elastic scale and HA
- Java, Netty NIO, AWS, CloudWatch, ELB, CloudFormation, EMR
- Successfully launched by Cisco CEO at MWC with a live event analytics

Led architecture & development of Cisco CloudProxy that automated secure connectivity with customer sites and provided scalable data stream ingest.

- IPsec tunnelling without private network conflicts
- Supervised partner and internal developers
- Kernel-level StrongSwan for IPsec. Advanced Linux Networking - NATs, source-based routing. OpenStack.

Architected a SaaS solution for new market verticals with multi-tenancy and multi-cloud HA. The solution included orchestration of a total of 20+ different server types spanning multiple cloud vendors: Kafka, Samza, Druid, PostgreSQL, Tomcat, etc.

Cisco Inc.

Vancouver, Canada

2008-2014

Solutions Architect, Mobile Internet Technology Group

Principal Architect for device management SW developed by ~60 engineers:

- Zero-touch provisioning of 3G/LTE Small Cells, Home Automation CPE
- Java-based servers, Web UIs, HTTP / REST / JSON / XML web services, TR-069, XMPP, embedded clients, Oracle, Solaris, Linux.
- Requirements, priorities, specs, design decisions, Agile product owner

Solution Architect on projects with over \$250mln revenue:

- Principal architect for the world's largest UMTS Femtocell deployment by AT&T. Award-winning self-activation. 3GPP SON, TR-069, TR-196, AGPS.
- Architect of management systems for AT&T Digital Life project for home security & home automation. TR-069, XMPP, OSGi, 3G/WiFi, HPAV.
- Proposed and negotiated system design spanning multiple customer teams, many SW and HW products, several internal business units and partners.

Acted as primary technical interface between customer and Cisco engineering teams. Recognized as trusted advisor by both sides.

Experience

Cisco Inc.

Boxborough, MA

2000-2008

Technical Leader, Network Management Technology Group

Co-architected a market-leading product (BAC) for device provisioning & management. Deployed at over 160 service providers worldwide. Handled over 50mln cable modems, WiFi gateways, VoIP and TV set-top boxes at Comcast.

- Technical direction for a group of 25 engineers. Defined product vision & features, roadmaps, selected technologies, authored key specs, conducted code reviews, evangelized quality initiatives.
- Primary individual contributor responsible for development of a custom database engine that enabled product scalability. Java, Oracle Berkley DB, Solaris.
- Responsible for competitive analysis, acquisition evaluations, pre-sales customer presentations, RFP responses, partnership development.
- Co-authored a number of industry standards at BBF and IETF.
- Developed & evangelized the company-wide CiscoLog standard.

Process Software Corp Software Engineer

Framingham, MA

1998-2000

- Collaborated with CTO on the architecture for a new CampusWorks product
- Designed & developed web UI, database layer and reporting capabilities
- DHCP / DNS products. Java, Perl, HTML, HTTP, AJAX, JavaScript, LDAP.
- Co-developed "DNS Doctor" SaaS product. Yes, SaaS in 1999! ☺ C++, MS SQL.
- Developed UI app for real-time reporting of server statistics. It used techniques later known as AJAX. SNMP, Java, Perl, HTML, JavaScript.
- Performed expert-level tuning of Netscape LDAP directory schema for high performance. See Talks.

PrimeTronix Inc Founder

Framingham, MA

1994-1995

- Created, marketed and ran multiple e-commerce web sites.
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Education

Babson College

Wellesley, MA

1995-1999

BS in MIS (Management Information Systems)

- 4.0 GPA in major (3.83 overall)
 - CS curriculum + 14 MBA curriculum courses
 - Two awards for winning math competitions
 - Paul F. Greene Telecommunications Research Award
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Industry Standards

Broadband Forum: TR-069 Amendment 1: CPE WAN Management Protocol (CWMP) v.1.0. Co-author.

Broadband Forum: TR-106: Amendment 1: Data Model Template for Home Networking Devices. Co-author.

Broadband Forum: TR-098 Amendment 1: InternetGatewayDevice (IGD) Data Model. Co-author.

Broadband Forum: TR-131: ACS Northbound Interface (NBI) Requirements. Co-author.

Broadband Forum: 56 formal contributions submitted & presented. Author and lead co-author.

IETF: RFC 5426 - Transmission of Syslog Messages over UDP. Author / editor.

CiscoLog. Internal company-wide logging format standard. Author.

Publications & Talks

Light Reading SuperWebinar. “*BroadbandHome: Automating Remote Management*”. Feb 2007. Speaker and panel member representing Cisco’s Connected Home strategy.

Dr. Dobbs Magazine. “*The unglamorous database option that works*”. Dec 2002. Article about developing a high-performance transactional system with Berkeley DB database.

DECUS Conference. Talk: “*Case study in directory enabling an application*”. Nov 1999.

Patents

US6978447 - Method and System for Efficiently Interpreting a Computer Program

US7165129 - Method and Apparatus for Self-tuning Transaction Batching

US7421542 - Technique for Data Cache Synchronization

US7600003 - Method and Apparatus for Dynamically Configuring CPE

US7975058 - Systems and Methods for Remote Access of Network Devices

US7505464 - Identifying a Home Gateway Using Network Traffic Sniffing

US7586905 - Method for Device Service Activation Using a Discovery Mechanism

US8086233 - Detecting cloning of network devices
US8121598 - Scrambling code allocation and hand-in for wireless network
US8175005 - Coordinated neighbor discovery of radio access point devices
US8233481 - Access Class Based Picocell Policy Enforcement
US8175005 - Coordinated neighbor discovery of radio access points
US8121598 - Scrambling code allocation and hand-in for wireless network
US8611887 – Time zone assignment based on dynamic location area code selection
US8680987 - Streamlined distribution of GPS assistance data
US8644818 - Access point location verification based on user roaming history
US8731536 -Automated LAC assignments for enterprise Femtos
US8843622 - System and method to contact and maintain status of managed devices
US8295837 - Scrambling code allocation and hand-in for wireless APs
US8996025 - Communication parameter selection for small cell access points
2007/0097956 - Device Service Activation for VoIP Service
2008/0240226 - Record Compression Using Incremental Reverse Templating
2009/0318193 - Provisioning of Information in a Cellular Network
2010/0210280 - Radio access point location verification using GPS and 3G data
2012/0088482 – Automated LAC assignment for enterprise Femtos
2012/372,398 – AP location verification using GPS location and radio scans
2014/066,420 – Hand-in disambiguation using UE WiFi location
2011/264,188 - Method and system for efficiently interpreting a computer program
2013/188,196 – System for whitelist management
14/088,536 - Systems, Methods and Media for Small Cell Mode Mobility
14/281,213 – System for identifying a subscriber in a wireless network
14/299,905 – System for handover to ambiguous small cell
14/310,915 – Handling connected mode mobility in multi-operator network
14/564880 - Walk-assisted Automated AP Coverage Adjustment
14/481,654 – System for cell updates for mobility in cell paging channel mode
14/679,868 – System for interference management based on user presence
14/830,132 - Serving Gateway-Based Presence/Location Detection
62/126,571 – System to determine WiFi client category in WiFi network
62/126,668 – Schema for scalable summary analytics of time series data
62/126,594 - Normalizing Summarized Time Series Data That is Time Zone Aware
62/126,692 – System for selective data path offload from Small Cell GW
Additional patents in process of being filed by Cisco & not yet disclosed
