

# PETER THEOBALD

Software Engineer (SWE),  
Site Reliability Engineer (SRE)

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## PROFESSIONAL EXPERIENCE

AKAMAI - Apr 2023 to present, San Jose, CA

**SRE Principal Site Reliability Engineer - Compute Technology Group**

**SRE Senior Site Reliability Engineer II - Compute Technology Group**

Improving reliability, metrics, observability and tooling for Akamai's Linode cloud services to enable projected 50x scaling of server fleet.

META (formerly FACEBOOK) - Jan 2021 to Apr 2023, NYC and Menlo Park, CA

**Production Engineer (SWE/SRE) - Messaging Infrastructure**

Software and systems engineer responsible for writing production code solving systems problems in reliability, scalability, performance, and security for one of the world's largest distributed computer networks serving billions of people across Facebook, Instagram, WhatsApp, Oculus and other products.

- Refactored subsystems to save latency, reduce cpu usage and modernize internal APIs
- Instrumented performance metrics into messaging infrastructure
- Investigated end-to-end latency issues across complex interacting subsystems
- Testing and prep for extreme messaging traffic events such as New Years Eve and World Cup
- Instrumented feature cutoff switches for emergency response; Evangelized and organized additional cross-functional set of cutoff switches from other related teams
- Continual improvement of team's On Call processes, alerts, metrics and dashboards, including maturing the team's operational ownership by setting SLAs on core metrics.
- Member of 24/7 On Call
- **Hack** (strongly typed OO PHP), **Python**, **C++**, **Java**

TC FORENSICS INC. (formerly KLG COMPUTER FORENSICS) - Nov 2005 to Jan 2021, Syosset NY

**Computer Forensics Analyst / Founder**

Provided computer forensics services to attorneys, law firms and courts. Located hidden or destroyed data, investigated data breaches, provided expert testimony related to computer evidence. Court appointed expert in New York, Nassau and Suffolk counties.

- Wrote **Python** code to parse file formats, databases, filesystems (NTFS, HFS+, EXT), and encrypted data.
- Performed Extract, Transform and Load (**ETL**) of difficult, undocumented, partial and damaged data using a variety of tools including Open Refine and custom **Python** code
- Bitcoin (cryptocurrency) tracing, wallet recovery, transaction tax calculations
- Analyzed computer and cell-phone data (FTK, X-Ways, MPE, Scalpel, Linux, etc) in over 200 litigated matters.
- Design and admin cost-effective reliable ZFS-on-Linux SAN with snapshots and off-site replication for hundreds of Terabytes of evidence storage
- Presented seminars, **public speaking** engagements and **training** in computer forensic topics.

TURTLECOVE TECHNOLOGY, INC. - Jan 2000 to Nov 2005, Syosset NY

**Software Engineer**

Developed full-stack web sites and desktop applications. Clients included SponsorClick.com, AgencyAccess.com, DMLT (Investment Cafe), Wine Alert (eRobertParker.com) , ICS Network Systems (MailSentry), AllBooks4Less.com (Half.com) and more.

- Technologies used include Python, C++, Cold Fusion, PHP, Javascript, jQuery, SQL, Web spidering, Linux admin, Sendmail milter plugins

LI NET, INC. (Acquired by VERIO, INC.) - Nov 1995 to Oct 1999, Smithtown NY

**Co-Founder**

Founded Internet Service Provider with three partners and little capital; In the span of four years we built LI Net to the largest ISP on Long Island, NY providing high speed Internet access and web hosting to thousands of Long Islanders and hundreds of companies. LI Net was acquired by Verio/NTT, a national roll-up of the top 50 regional ISPs, for over \$7M and merged into their national network.

- Web site development (Cold Fusion, MySQL, Javascript, JQuery, HTML)
- Linux admin (Perl, Python, Bash), Apache server admin, Usenet server admin
- Sales engineer, Public speaking (seminars, presentations), Training

LEHMAN BROTHERS, INC. - Nov 1993 to Nov 1995, New York NY

**Senior Systems Analyst, Fixed-Income Derivatives**

- Supported overnight value-at-risk calculation process (C++, Perl, sh/bash, SQL/Sybase)
- Added support for Bermuda style options to Black Scholes based option pricing modules (C++)
- Supported derivatives trading desk and SUMMIT trading system (Summit, C++, Perl, Bash, SQL/Sybase)

QUOTRON SYSTEMS / CITIBANK - Jun 1993 to Nov 1993, New York NY

**Software Consultant - contractor**

- Added custom functionality (C/C++, SQL) to Quotron Trading Support System and provided training for clients eg. Credit Suisse First Boston, Paine Webber

**PATENTS**

US Patent US-20090300128-A1, "E-MAIL AUTHENTICATION PROTOCOL"

**EDUCATION AND CREDENTIALS**

- University at Buffalo: B.S. Computer Science
- AccessData Certified Examiner (ACE), AccessData Mobile Examiner (AME)
- New York Institute of Finance: Intermediate & Advanced Derivative Products

**PROFESSIONAL AFFILIATIONS**

- Board of Directors: Hacker Dojo (Silicon Valley hackerspace), Mountain View CA - Nov 2024 - Present
- Board of Advisors: SUNY Farmingdale Computer Security Department - Dec 2019 - Present
- Co-chairman of the Computer Forensics subcommittee of the American Bar Association, Section of Litigation Expert Committee - Apr 2013 – Sep 2014