

# Ben Cottrell

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## 1. Skills

- Operating systems: Unix
- Languages: Python, C, C++, Bourne/sed/awk/etc, some Java
- Protocols: SMTP, DNS, DHCP, HTTP, SSL/TLS, SSH, LDAP, SNMP
- Crypto: OpenSSL, PKCS11, Thales nCore
- Databases: SQL (joins, transactions, nested queries, indexes, partial indexes)

## 2. Experience

### **Akamai Technologies Inc. — 11/2017 - current**

Software Engineer II

Maintained legacy products that came to Akamai via the Nominum acquisition (see below).

### **Nominum Inc. (acquired by Akamai Technologies) — 09/2011 - 11/2017**

Staff Software Engineer

Worked on the HTTP proxy team, and before that the Data Engineering team. I wrote code in C, C++, and Python, I wrote software to interface with and to run inside HSMs (Hardware Security Modules), and I worked closely with the Support team on customer issues.

Accomplishments:

- Wrote an online X.509 Certificate Authority with custom business logic preventing certificates from being issued unless they met certain criteria.
- Helped add HTTPS support to Nominum's HTTP proxy product.
- Built a system for normalizing, transforming, and publishing large amounts of DNS and IP address data, both to support Nominum's web site blocking solution and also to feed internal data science processes.

### **Riverbed Technology Inc. — 12/2010 - 08/2011**

Senior Software Engineer

Worked on the Cloud Steelhead team.

### **Nominum Inc. — 11/2006 - 12/2010**

Senior Software Engineer

Worked on general engineering projects in Python and C.

Accomplishments:

- Helped build a hosted DNS service. I worked on the publishing of configuration deltas out to the edge servers, and the collection and processing of statistics and aggregated query-log data from those edge servers.
- Found and fixed threading-related bugs in the Python interpreter. Submitted patches upstream.

### **IronPort Systems Inc (later acquired by Cisco Systems) — 06/2003 - 11/2006**

Software Engineer

Worked on the Mail Gateway Appliance team. Wrote code in Python and C using cooperative multithreading. Debugged complex failure modes of distributed systems.

Accomplishments:

- Took the peer-to-peer clustering feature from a prototype to production. Configuration could be pushed from any node in the cluster, administrative and monitoring commands could be run remotely against any node, and nodes that came back online after being down would be brought back in sync.

## 3. Ancient History

Mail Abuse Prevention System (MAPS) LLC — Software Developer — 01/2003 - 06/2003

Nominum Inc. — Software Engineer — 12/2000 - 01/2003

Stockmaster.com / Red Herring Magazine — Software Engineer — 06/1999 - 12/2000

Realize Communications — Software Engineer — 12/1997 - 06/1999

## 4. References

Available on request.