

CE Science Updater



CE SCIENCE, INC.

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Recruiting Highlights



CE Science Table Top Display

Game Night in June

Our next recruiting event will be on June 24 from 3pm to 6 pm at Café Joe's on National Business Parkway. This will be a fun event with food, games, and a chance to meet the CE Science team. Bring your friends and your resume. We are recruiting for Java and C++ programmers, Systems Engineers, Sys-

tem Administrators, Database Analysts and administrators, and other technical position.

Ft. Meade Technical Job Fair

On February 24th, CE Science was on the scene at the Ft. Meade Technical Job Fair. The job fair was jointly hosted by Fort George G. Meade FMWR, DLLR/ Anne Arundel One Stop Career Centers, Army Community Services (ACS), and Navy Fleet & Family Support Center.

The hosts did an excellent job organizing and advertising the job fair. Many highly qualified candidates came by the CE Science table. Many of them were current or former military from all branches of service.

Upcoming Events:

- GAME NIGHT, JUNE 24TH AT CAFÉ JOE'S (SEE RECRUITING HIGHLIGHTS)
- FT. MEADE TECHNICAL JOB FAIR, SEPT. 15TH @ CLUB MEADE

Technology Corner



Cassandra; A high level overview

Cassandra is an open source database which draws from Amazon's Dynamo and Google's BigTable. Cassandra was originally written by Facebook to solve their email inbox search problem. Cassandra was open sourced to Google by Facebook in 2008. It was moved to Apache in 2009 and has been rapidly

gaining the attention of many of the biggest players in the internet. Current users include Digg, Facebook, Twitter, Reddit, and Rackspace. The common problem that all of them are solving is large volumes of data (100's of TB), distributed across many data centers with hundreds or thousands of nodes, operating under extreme read/write loads (approaching 1 billion per day). Among Cassandra's many

high-level features are; it is Fault Tolerant, Decentralized, Tunable, has a Rich Data Model, is Elastic, and Durable. Fault Tolerance is achieved by immediate persistence of all writes followed by replicating across multiple nodes. Decentralization is achieved through every node being identical. No node can be a bottleneck or single point of failure. It is Tunable via parameters which control the balance between the speed of both reads and writes, consistency, and availability. Cassandra's Data Model is

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based around Key Spaces, Column Families, Super Columns, and Columns. The Data Model strikes a middle ground between the rigidity of Relational Databases and wide-open flexibility of a pure key/value hash-mapped data store. It is Elastic in that its performance increases with each new node added to the cluster and it handles nodes coming in and out of the cluster with no manual intervention. Its Durability is derived from its tunable replication (across Rack or

Data Center), Hinted Handoff (which handles down nodes), and built in Read Repair whenever inconsistency is found. Cassandra is written in Java and is currently at version 0.6.2. Its API is implemented in Thrift which has the one advantage of supporting a wide array of languages including Java, C/C++, Python, Perl, PHP, and JavaScript. The current version of Cassandra has some limitations in the size of the data it can handle. It cannot handle a Row which is larger than its memory space. This restriction will be

removed in 0.7. The Cassandra developers also intend to release a pure Java API which will remove some of the memory restrictions of Thrift. The release of 0.7 will bring some API changes as well. If you find technologies like this exciting then CE Science, Inc. has work for you! Please visit us at www.cescience.com
Contributor: Scott Stewart

Remember to check us out at cescience.com

From the President



8105 Tamar Drive
Suite 001
Columbia, MD 21045
Phone: 443-812-9705
Fax: 866-821-9238
E-mail: info@cescience.com

First of all, I would like to say how proud I am of the talented and dedicated professionals that make CE Science such an exciting and well-respected technology company. I am honored to serve you. We are known for excellence in data mining, data modeling and data visualization, but we are certainly much more. We are a dynamic and growing team offering unparalleled work opportunity, rewards for your effort, and the opportunity to give back to the community. We can do these things because CE Sci-

ence has a clear mission to provide the best computer technology solutions for our customers. I believe the next several months will be challenging for companies in our industry, but CE Science is already meeting the challenges by pursuing and staffing new contracts, identifying exciting programs and projects, and generating a continuous stream of high-quality applicants for those opportunities. If you think CE Science is the kind of company you want to be associated with, we want

to hear from you. We have opportunities for programmers, systems engineers, system administrators, data base engineers, network engineers, and web developers. We can offer you rewarding work with a great team of people. We can provide you with the opportunity to make your best ideas a reality. Again, I am grateful to all our colleagues and friends, who have helped us get this far. Now together, let's create the future.

Garland Jackson



Chris, Ty, Garland, Ernie, Brian before the start.

CE Science in the Community

On Saturday, May 8, CE Science colleagues Garland Jackson and Chris Childs participated in the American Diabetes Association Tour de Cure. It was a beautiful day for a 30 mile bike ride through the gently rolling hills of western Howard County. They were joined by

friends Ty, Ernie, and Brian. Although there was a threat of rain at the start, the clouds moved out and the day was sunny and dry. In spite of wind gusts of 50 miles per hour, the team finished without incident or injury. Next year we hope to have an even bigger team on the road.