

Couchio

Mu Dynamics – CouchDB JS3 Stack

Situation

Mu Dynamics uses network packet captures (pcaps) a lot, both in their product and for everyday work. The Mu Studio product line converts any network capture into a set of stateful test cases for functional, regression, interoperability and fuzz testing. This is a radically new and powerful approach to testing since end users no longer have to wait for the test tool vendor to provide them with test-cases that are relevant and targeted to their environment.

All this collecting, sharing, and working with pcaps littered their wikis, laptops, and public folders with packet traces, so it was painful to keep them organized, indexed and searchable. Of course, they are not the only ones with this problem. They decided to build a community site specifically for sharing packet captures, learning about protocols and collaborating on test cases.

On their new site, pcapr.net, they wanted the ability to automatically generate a rich set of metadata on each uploaded pcap and have it be fully tagged, indexed and searchable. They didn't want to be bothered by tables, joins and normalization issues. At about the same time they discovered Helma, a JavaScript middle tier based on Rhino. Thus was born the [JS3 stack](#) - CouchDB, Helma and jQuery.

Solution

Using CouchDB, it took them just one month from conception to launch. They could now rapidly add new views to slice and dice the packet data, add new information about the packets with the schema-less JSON document store, and never had to worry about migration or normalization. When they decided to add user profiles on pcapr, it only took them two days and everything worked right away.

CouchDB, on pcapr, serves both as a persistent store as well as an event queue. Invites, registrations and uploads all write event documents to CouchDB which persist across shutdowns, crashes, etc. Asynchronously these events are retrieved, processed and deleted.

Results

Kowsik Guruswamy, Founder/CTO of Mu Dynamics, says “The ability to dream of an application and bring it to life with CouchDB has just been an incredible, heady experience. With valuable utilities such as [Collaborative Network Forensics](#) and [xtractr](#), pcapr has evolved to become the largest repository of packets on the Internet with around 60 million packets.”

About Mu Dynamics

Mu Dynamics' adaptive approach to testing Next-Generation Network (NGN) services enables customers to dramatically reduce the time to test and deliver higher quality IP services. Mu's unique approach uses service traffic from a customer's environment as the basis for the testing solution, enabling the rapid generation of test cases that accurately and thoroughly test customer's services as a single system – both at the application and infrastructure level. Since its inception, Mu's focus has been to drive the complexity out of NGN services testing for its customers. Founded in 2005, Mu today has over 100 deployments including within the top five global service providers, the top five networking technology companies, and numerous government agencies. www.mudynamics.com

Quote

Kowsik Guruswamy, Founder/CTO of Mu Dynamics, says “CouchDB puts the data in the hands of the user in a transparent way. No longer do we have to wonder which fields to index and why and how it best fits certain queries. The incrementally updated view paradigm is a powerful one which scales wonderfully.”

Who we are



About CouchDB

Apache CouchDB bridges the cloud and the local network by making it simple to write web apps that can scale up to the datacenter and scale down for local use on a smartphone. The synchronization engine (inspired by Lotus Notes) allows sharing of data and applications across ad-hoc groups. Offline replication gives mobile devices better performance (lower latency) while saving battery life by avoiding radio usage. With offline replication solved in a simple way, application developers are free to focus on the code that matters

CouchDB is popular with developers because its document model is a closer fit for many domains, leading to less overall complexity. The JSON HTTP API allows developers to write dynamic database-backed applications without a middle tier: 2-tier CouchApps require only a web-browser and a CouchDB, and can be written by anyone with Ajax / jQuery experience. We firmly believe that empowering people to share data and custom applications at the edge of the network will lead to a more humane web.

Apache CouchDB is currently deployed by the BBC, Meebo, Assay Depot, Engine Yard, (among others) and is an integral part of the Ubuntu operating system.

Couchio

About Couchio

Couchio <http://couch.io> (founded by 3 CouchDB core committers) offers support, hosting, and professional training for CouchDB.

Contact CouchDB

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