The Apache Software Foundation Announces Apac?he™ Cassandra™ v2.0

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Highly-performant, Open Source Big Data distributed database in use at Adobe, CERN, Comcast, eBay, GoDaddy, HP, IBM, Instagram, Netflix, Plaxo, and Sony, among others, to create modern, data-driven applications

Forest Hill, MD –4 September 2013– The Apache Software Foundation (ASF), the all-volunteer developers, stewards, and incubators of nearly 150 Open Source projects and initiatives, today announced Apache Cassandra v2.0, the latest version of the highly-scalable, Big Data distributed database.

Apache Cassandra powers massive data sets quickly and reliably without compromising performance, whether running in the Cloud or partially on-premise in a hybrid data store. Its fully distributed architecture provides unparalleled fault tolerance to ensure applications will not go offline, and its linear scalability allows them to reach massive sizes while successfully handling thousands of requests per second.

"In five years, Apache Cassandra has grown into one of the most widely used NoSQL databases in the world and serves as the backbone for some of today's most popular applications," said Jonathan Ellis, Vice President of Apache Cassandra.

Under the Hood

New features in Apache Cassandra v2.0 include lightweight transactions, triggers, and CQL (Cassandra Query Language) enhancements that increase productivity in creating modern, data-driven applications.

"Cassandra 2.0 makes it easier than ever for developers to migrate from relational databases and become productive quickly," added Ellis.

New features and improvements include:

• Lightweight transactions allow ensuring operation linearizability similar to the serializable isolation level offered by relational databases, which prevents conflicts during concurrent requests
• Triggers, which enable pushing performance-critical code close to the data it deals with, and simplify integration with event-driven frameworks like Storm
• CQL enhancements such as cursors and improved index support
• Improved compaction, keeping read performance from deteriorating under heavy write load
• Eager retries to avoid query timeouts by sending redundant requests to other replicas if too much time elapses on the original request
• Custom Thrift server implementation based on LMAX Disruptor that achieves lower message processing latencies and better throughput with flexible buffer allocation strategies

Strong Community Engagement and Adoption

The Apache Cassandra developer community includes some of the brightest minds in Big Data. Hundreds of organizations, from startups to large-scale enterprises such as Adobe, Cisco and IBM, rely on Cassandra to power their mission-critical applications online.

"At Ooyala, we're building some of our most ambitious projects to date on top of Apache Cassandra," said Al Tobey, Tech Lead, Compute and Data Services, Ooyala. "The maturation of CQL3, vnodes, and new features such as the PAXOS-backed compare-and-set (CAS) added in Cassandra 2.0 will help us build and deploy those projects confidently."

Apache Cassandra is used by many highly-visible organizations such as Accenture, CERN, Cloudkick, Comcast, Constant Contact, Dell, Digg, Ericsson, Eventbrite, GoDaddy, Houghton Mifflin Harcourt, HP, Instagram, Intuit, Mahalo, Microsoft MetricsHub, Morningstar, NASA, Netflix, Nextag, OpenWave, PBS Kids, Pitney Bowes, Plaxo, Polyvore, Real Networks, Reddit, Sony Network Entertainment, SoundCloud, Spotify, Squidoo, Stormpath, Symantec, Twitter, Wildfire, WSO2, and ZoomInfo. A listing of where Apache Cassandra is used and deployment details can be found at

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"We are excited about the future Apache Cassandra 2.0 makes possible. Paying down a lot of the technical debt accumulated over 5 years of intense Open Source development, and solidifying the Native Binary Transport for CQL 3, has put the project on a great footing," said Aaron Morton, Apache Cassandra committer and Co-Founder & Principal Consultant of The Last Pickle. "The addition of Lightweight 'Compare-and-Set' Transactions and Cursors brings another set of features that make it easier for developers to harness the performance and scale of Cassandra. And the experimental Trigger support will allow Open Source contributors to provide feedback for this often requested feature."

"It'll be really helpful to have conditional updates built into Cassandra," explained Jon Haddad, Senior Architect at Shift. "Right now there's a few places where we have to use external locking to manage isolation, and having built in support in the database will be amazing."

"We feel this release will delight existing users and tempt those on the sidelines," added Morton.

Availability and Oversight

As with all Apache products, Apache Cassandra v2.0 is released under the Apache License v2.0, and is overseen by a self-selected team of active contributors to the project. A Project Management Committee (PMC) guides the Project's day-to-day operations, including community development and product releases. Apache Cassandra source code, documentation, and related resources are available at http://cassandra.apache.org/.

About The Apache Software Foundation (ASF)

Established in 1999, the all-volunteer Foundation oversees nearly one hundred fifty leading Open Source projects, including Apache HTTP Server --the world's most popular Web server software. Through the ASF's meritocratic process known as "The Apache Way," more than 400 individual Members and 3,500 Committers successfully collaborate to develop freely available enterprise-grade software, benefiting millions of users worldwide: thousands of software solutions are distributed under the Apache License; and the community actively participates in ASF mailing lists, mentoring initiatives, and ApacheCon, the Foundation's official user conference, trainings, and expo. The ASF is a US 501(c)(3) charitable organization, funded by individual donations and corporate sponsors including AMD, Basis Technology, Budget Direct, Citrix, Cloudera, Comcast, Facebook, Go Daddy, Google, HP, Hortonworks, Huawei, IBM, InMotion Hosting, Matt Mullenweg, Microsoft, PSW Group,
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