

DataStax Enterprise – Search

The ability to quickly search for and locate data is a key requirement of all web and mobile applications. While the need for search functionality may be common to all modern applications, integrating search capabilities into systems built for the always-on, high-speed Internet economy can be extremely difficult.

DataStax Enterprise supplies built-in enterprise search functionality on Cassandra data that scales and performs in a way that meets the search requirements of modern Web, mobile and IOT applications.

Enterprise Search Support

DSE Search contains everything needed for applications that require powerful search capabilities. Use cases supported by DSE search include general web, full-text, faceted (categorization), hit prioritization and highlighting, log mining, rich document (PDF, MS Word, etc.) analysis, geospatial, and social media match ups.

Distributed Enterprise Search

DSE Search is built for distributed web and mobile applications that need to easily search data contained in large data stores. The divide-and-conquer architecture allows for consistently fast response times across large data volumes that may be distributed across multiple locations.

Always-On Search

DSE Search is perfect for applications that need search functionality that is always available and never goes down. DSE's always-on architecture, built on Cassandra, ensures 100% uptime for search operations.

Online Elasticity

Additional capacity (i.e. more search nodes) can be added online so search workloads can easily scale to meet incoming data and customer demands.

Mixed Search and Analytics Workloads

DSE Search combines the power of Spark with the simplicity of search queries. Search results from operational data are processed and analyzed with a single command (combining SparkSQL with Solr Syntax), saving resources and time in systems synchronization and data transformations.

Live Indexing

DSE Search contains a unique "Live Indexing" feature that allows new data entered into the database to be instantly available for search. Whereas typical search systems may have gaps involved between when new data enters the system and when it is ready for search operations, DSE's Live Indexing feature immediately indexes fresh data making it immediately available for search.

Fault-Tolerant Search Queries

Applications submitting search queries may configure the level of resiliency and completeness of results. DSE Search enables tunable query failover resiliency in large distributed systems to ensure timely response, with applications tolerant of partial result replies can continue to serve users in the case of nodes failures.



DataStax Enterprise delivers constant uptime and linear scale performance for online applications needing transactional, analytical, search, and in-memory workload support in a single platform.

Multi-Data Center and Cloud Search

DSE Search can be easily configured to run across multiple data centers and cloud availability zones, which allows search operations on OLTP data to be carried out in different geographical regions. This allows search results to be sent back to users in those locations in the fastest possible time.

Workload Isolation and Management

Search workloads performed on OLTP data should not impact OLTP or analytic operations. Modern applications need a way to support OLTP, search and analytic workloads with isolation between them so no competition exists for either compute or data resources.

DSE Search delivers just this capability as nodes in a database cluster can be specified to run search on OLTP data. Cassandra's powerful replication automatically copies and moves data among nodes so there is no need to extract data from transactional databases and load them into another search system. Everything is contained within one database cluster.

Solr Compatible

Helping power DSE search is Apache Solr™. DSE search inherits all the power and capabilities of Solr and builds on top of it to create even more powerful enterprise search functionality. Anyone familiar with Solr can immediately begin to develop with DSE search using the same Solr API's.

Integration with Cassandra Query Language

Search/Solr syntax is integrated with the Cassandra Query Language (CQL), which enhances CQL in a way that allows it to operate as a powerful search language. Solr syntax may be passed directly through a CQL WHERE clause so that data can be searched for via CQL in addition to the native Solr API's.

Visual Management and Monitoring

Enterprise search functionality and operations can easily be visually provisioned, managed, and monitored with [DataStax OpsCenter](#).

Further Reading

The built-in enterprise search capabilities of DataStax Enterprise make it a perfect fit for Web, mobile, and IOT applications needing powerful, distributed search functionality. For more resources and [downloads](#) of DataStax Enterprise, visit www.datastax.com today.