

# DesignDocs

## Hive Design Documents



Proposals that appear in the "Completed" and "In Progress" sections should include a link to a JIRA ticket

### Completed

- Views ([HIVE-1143](#))
- Partitioned Views ([HIVE-1941](#))
- Storage Handlers ([HIVE-705](#))
- HBase Integration
- HBase Bulk Load
- Locking ([HIVE-1293](#))
- Indexes ([HIVE-417](#))
- Bitmap Indexes ([HIVE-1803](#))
- Filter Pushdown ([HIVE-279](#))
- Table-level Statistics ([HIVE-1361](#))
- Dynamic Partitions
- Binary Data Type ([HIVE-2380](#))
- Decimal Precision and Scale Support
- HCatalog (formerly Howl)
- HiveServer2 ([HIVE-2935](#))
- Column Statistics in Hive ([HIVE-1362](#))
- List Bucketing ([HIVE-3026](#))
- Group By With Rollup ([HIVE-2397](#))
- Enhanced Aggregation, Cube, Grouping and Rollup ([HIVE-3433](#))
- Optimizing Skewed Joins ([HIVE-3086](#))
- Correlation Optimizer ([HIVE-2206](#))
- Hive on Tez ([HIVE-4660](#))
  - Hive-Tez Compatibility
- Vectorized Query Execution ([HIVE-4160](#))
- Cost Based Optimizer in Hive ([HIVE-5775](#))
- Atomic Insert/Update/Delete ([HIVE-5317](#))
- Transaction Manager ([HIVE-5843](#))
- SQL Standard based secure authorization ([HIVE-5837](#))
- Hybrid Hybrid Grace Hash Join ([HIVE-9277](#))
- LLAP Daemons ([HIVE-7926](#))
- Support for Hive Replication ([HIVE-7973](#))

### In Progress

- Column Level Top K Statistics ([HIVE-3421](#))
- Hive on Spark ([HIVE-7292](#))
- Hive on Spark: Join Design ([HIVE-7613](#))
- Improve ACID Performance – download docx file ([HIVE-14035](#), [HIVE-14199](#), [HIVE-14233](#))
- Query Results Caching ([HIVE-18513](#))
- Default Constraint ([HIVE-18726](#))
- Different TIMESTAMP types ([HIVE-21348](#))
- Support SAML 2.0 authentication ([HIVE-24543](#))

### Proposed

- Spatial Queries
- Theta Join ([HIVE-556](#))
- theta join and cross product proposal - rough draft
- JDBC Storage Handler
- MapJoin Optimization
- Proposal to standardize and expand Authorization in Hive
- Dependent Tables ([HIVE-3466](#))
- AccessServer
- Type Qualifiers in Hive
- MapJoin & Partition Pruning ([HIVE-5119](#))
- Updatable Views ([HIVE-1143](#))
- Phase 2 of Replication Development ([HIVE-14841](#))
- Subqueries in SELECT ([HIVE-16091](#))
- DEFAULT keyword ([HIVE-19059](#))
- Hive remote databases/tables

### Incomplete

- [Authorization](#) (Committed but not secure/deployable – see [Disclaimer](#))

## Abandoned

- [Hive across Multiple Data Centers \(Physical Clusters\)](#)
- [Metastore on HBase \(HIVE-9452\)](#)

## Other

- [Security Notes](#)
- [Hive Outer Join Behavior](#)
- [Metastore ER Diagram](#)