

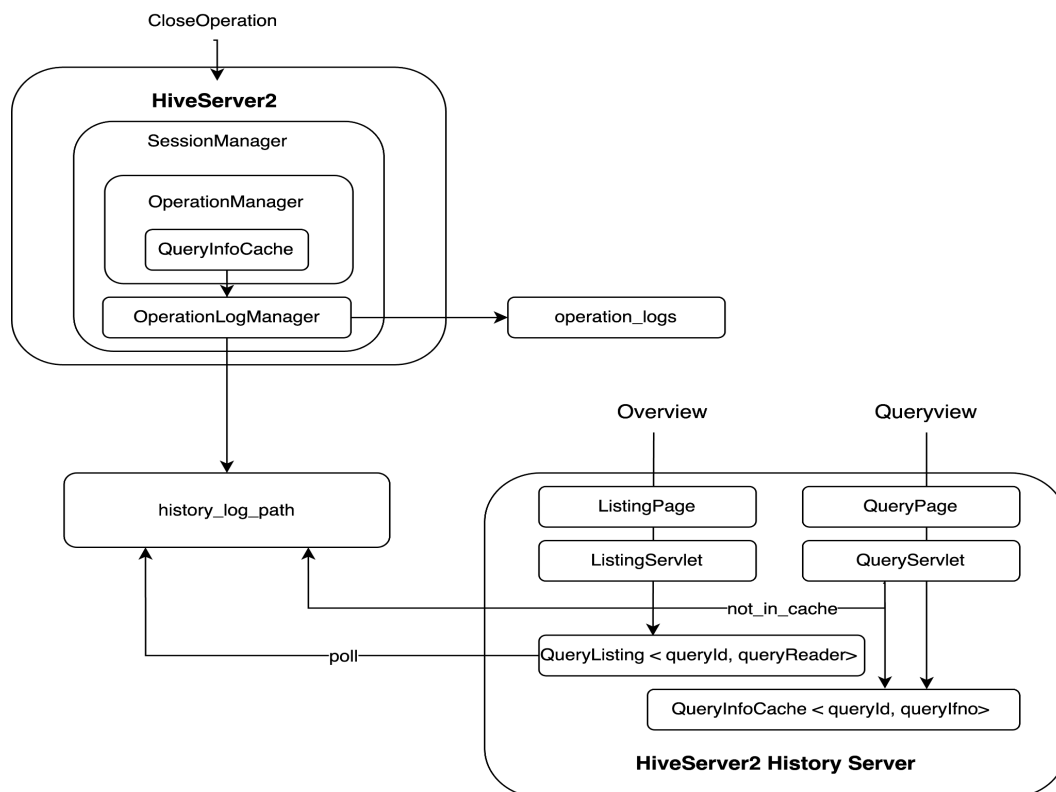
## Proposal: HiveServer2 History Server

A stand-alone server that provides Web UI on historical queries. Similar to Spark history server. The history server Web UI will have the same look and feel as the HiveServer2 Web UI.

There are mainly 2 type of pages in the Web UI:

- ListingPage: listing queries, indexed by HiveServer2 instances, sorted by sessions and query startTime. Each query is linked to its query page.
- QueryPage: This will be identical as the query page of HiveServer2 Web UI.

The work will be mainly 2 parts: add in HiveServer2 a feature to persist query information to storage, and add a stand-alone HiveServer2 History Server daemon.



Current HiveServer2 Web UI gets query information from cached `QueryInfo` and optionally reads from local query operation log files. This data will be encapsulated in a new `QueryLog` class, we will add a `ServerInfo` field.

<b>QueryLog</b>	<pre>QueryInfo { userName, executionEngine, beginTime, operationId, runtime, endTime, State, operationLogLocation, sessionId,     QueryDisplay{queryId, queryString, queryPlan, queryProfiling, etc } }  ServerInfo {hiveVersion, instanceName,instance_startup_timestamp }</pre>
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Persisted data layout is similar to hiveserver2 local operation log layout:

```
<persist_path>/hiveserver2_history_log/<hs2_instance_start_timestamp>/<session_id>/<query_id>/{querylog.json|operation.log}
```