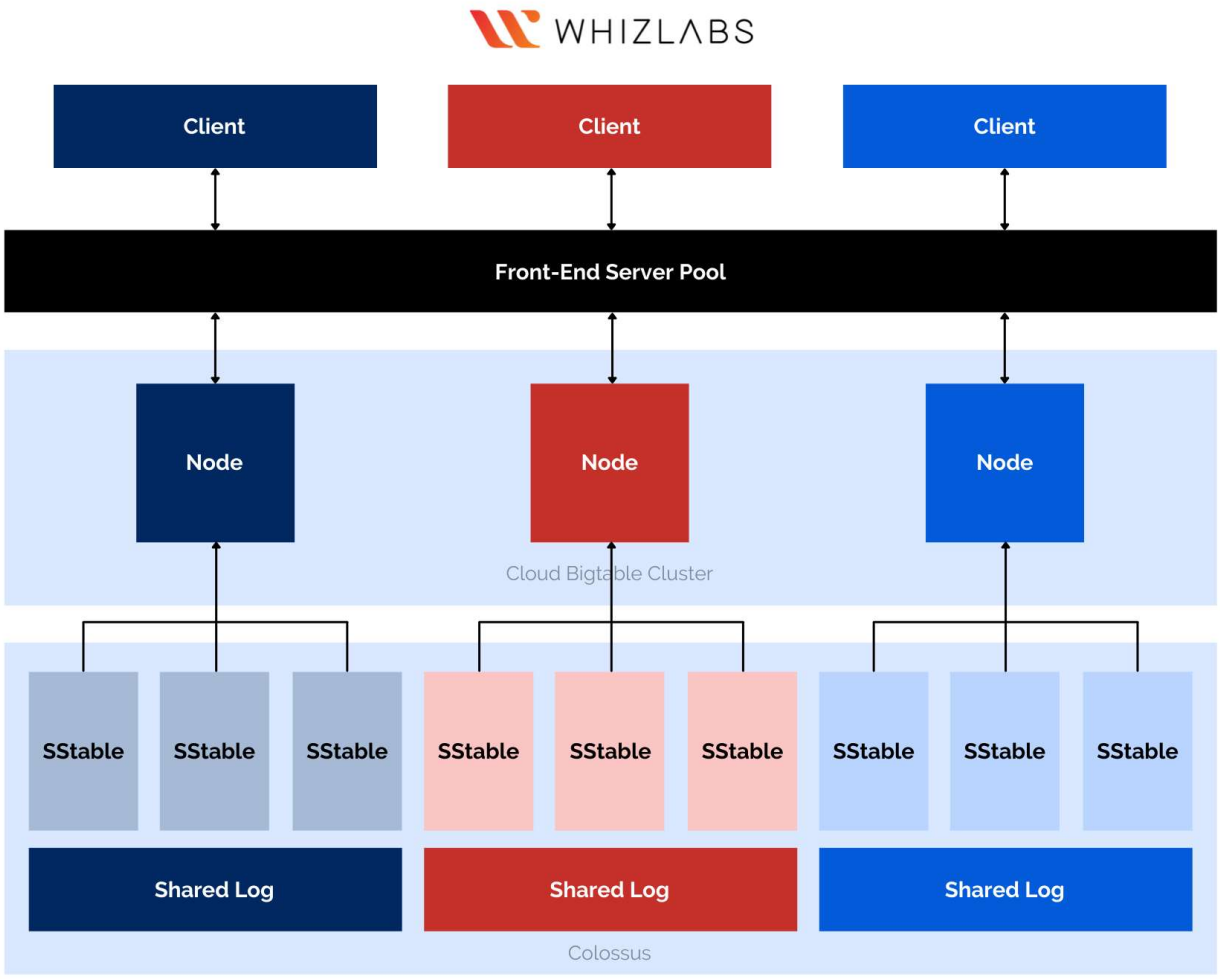
WHIZLABS
Client
Client
Client
Front-End Server Pool
Node
Node
Node
Cloud Bigtable Cluster
SStable
SStable
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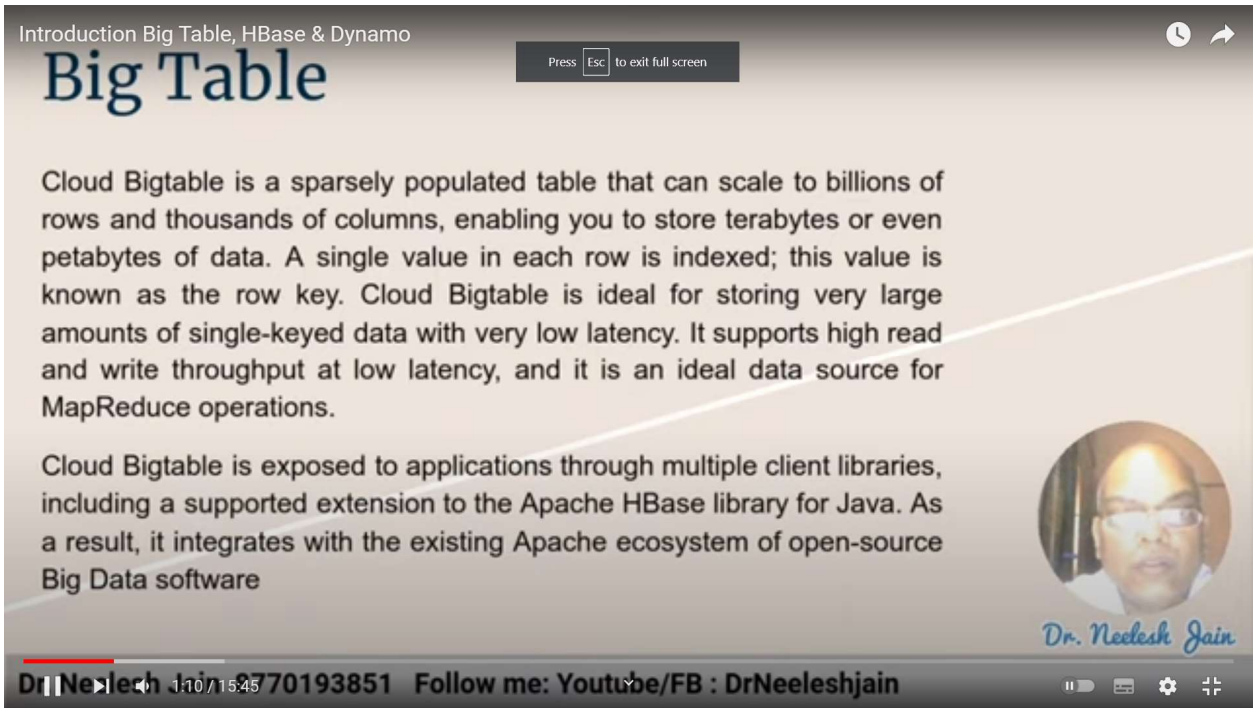
SStable
Shared Log
Shared Log
Shared Log
Colossus


Introduction Big Table, HBase & Dynamo
Press Esc to exit full screen
Big Table
Cloud Bigtable is a sparsely populated table that can scale to billions of rows and thousands of columns, enabling you to store terabytes or even petabytes of data. A single value in each row is indexed; this value is known as the row key. Cloud Bigtable is ideal for storing very large amounts of single-keyed data with very low latency. It supports high read and write throughput at low latency, and it is an ideal data source for MapReduce operations.
Cloud Bigtable is exposed to applications through multiple client libraries, including a supported extension to the Apache HBase library for Java. As a result, it integrates with the existing Apache ecosystem of open-source Big Data software
Dr. Neelesh Jain
1:10 / 15:45
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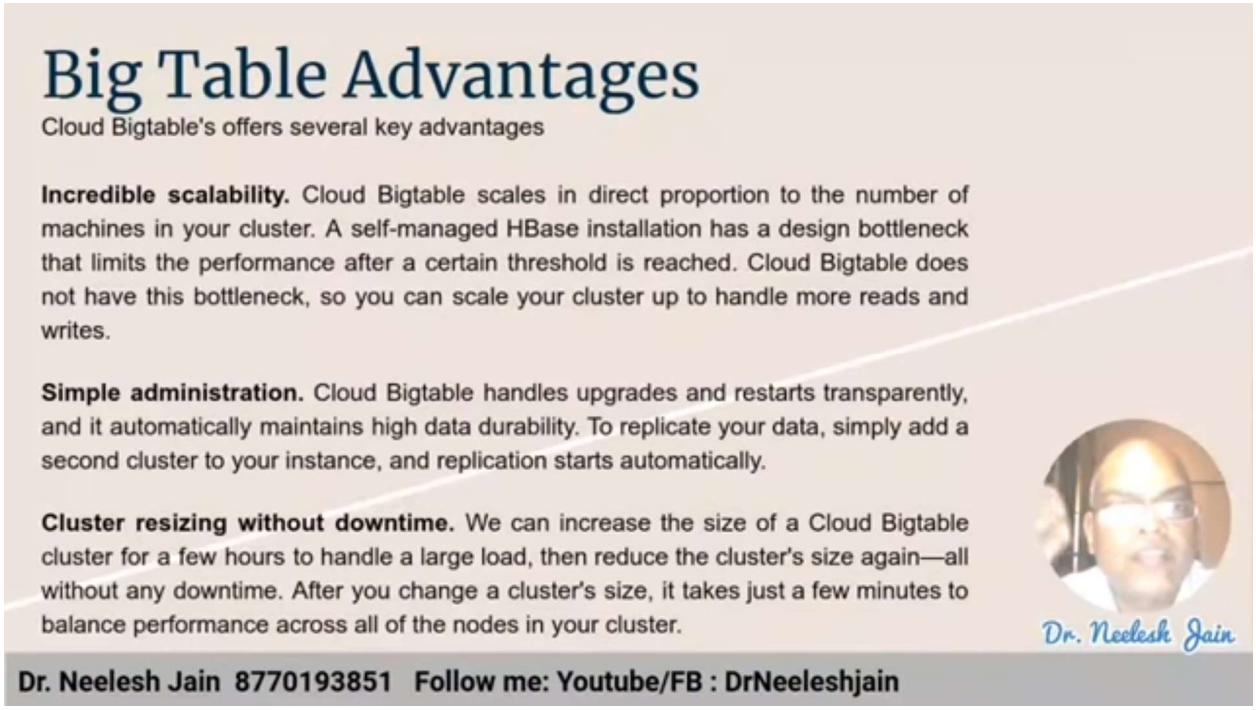
Big Table Advantages
Cloud Bigtable's offers several key advantages
Incredible scalability. Cloud Bigtable scales in direct proportion to the number of machines in your cluster. A self-managed HBase installation has a design bottleneck that limits the performance after a certain threshold is reached. Cloud Bigtable does not have this bottleneck, so you can scale your cluster up to handle more reads and writes.
Simple administration. Cloud Bigtable handles upgrades and restarts transparently, and it automatically maintains high data durability. To replicate your data, simply add a second cluster to your instance, and replication starts automatically.
Cluster resizing without downtime. We can increase the size of a Cloud Bigtable cluster for a few hours to handle a large load, then reduce the cluster's size again—all without any downtime. After you change a cluster's size, it takes just a few minutes to balance performance across all of the nodes in your cluster.
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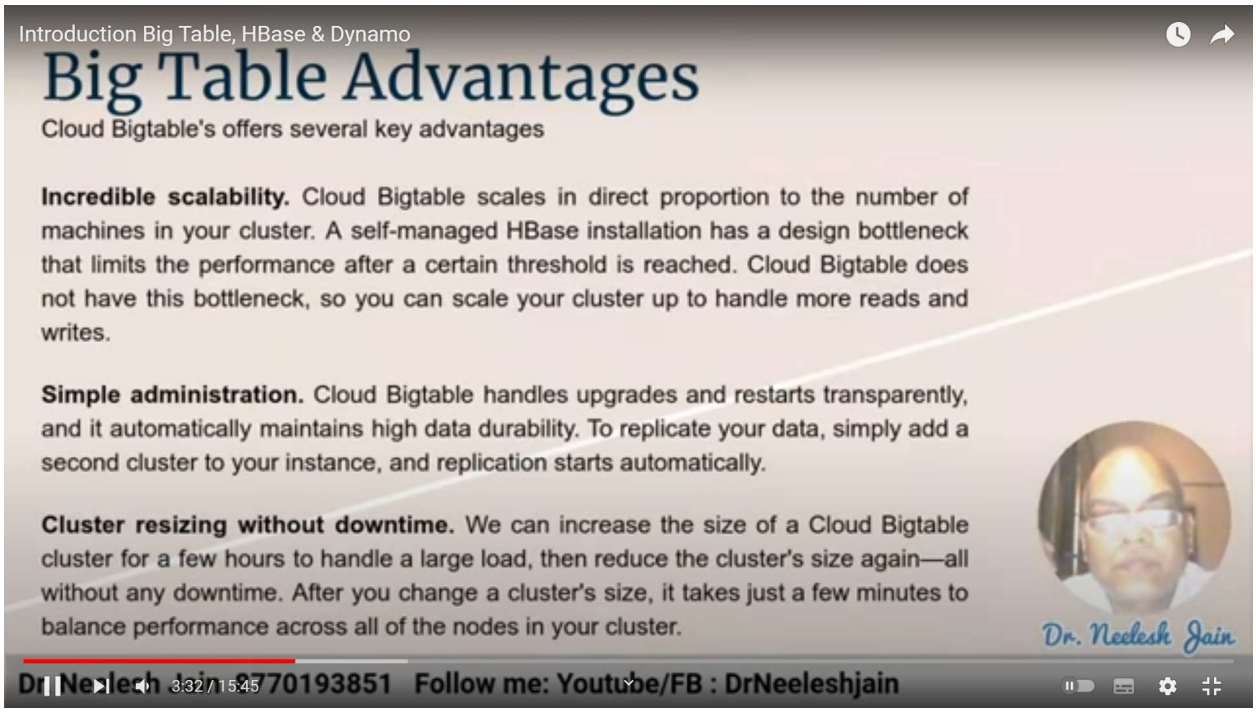
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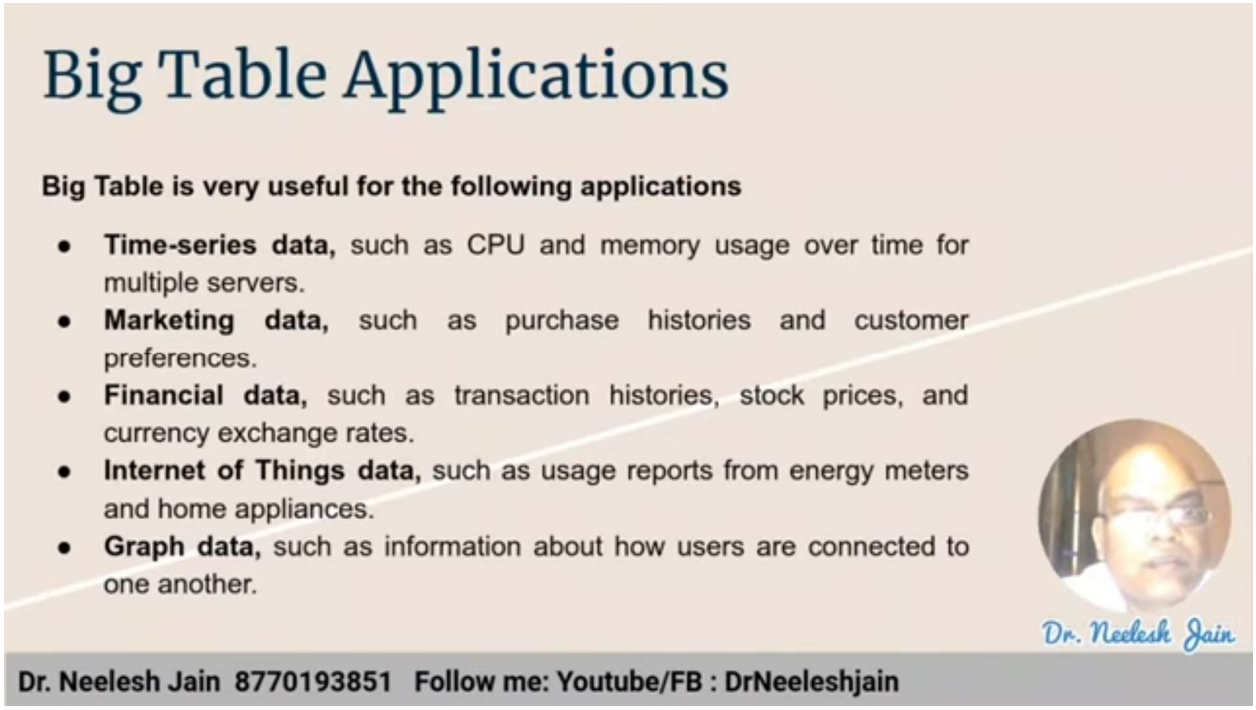
Big Table Applications
Big Table is very useful for the following applications
Time-series data, such as CPU and memory usage over time for multiple servers.
Marketing data, such as purchase histories and customer preferences.
Financial data, such as transaction histories, stock prices, and currency exchange rates.
Internet of Things data, such as usage reports from energy meters and home appliances.
Graph data, such as information about how users are connected to one another.
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