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Report/Summary:

Describe the following:

- Sink and Source connectors.

  A source connector basically regulates the flow of data going into Kafka whereas, a sink connector is responsible for getting the data out of Kafka. These connectors can only work with the help of sink tasks and source tasks respectively.

- The applications/advantages of using Kafka Connectors with data storage.

  The major advantage is the data flow from external systems can easily get into Kafka and with the same ease, it flows the other way around. Kafka connectors can be easily integrated with other external systems. One of the applications that are improved by using Kafka connectors is direct stream processing. It is also very easy to configure.

- How do Kafka connectors maintain availability?

  I'm not sure about this answer but in my opinion, it is probably because of how easy the data management is since it's handled by source and sink connectors. Also, the fact that a big cluster data can be sent to Kafka and it is easily scalable so it rebalances the partition replicas.

- List the popular Kafka converters for values and the properties/advantages of each.

- What's a key-value database

A key-value database is a non-relational db that uses a simple key-value in order to store data. The information stored is in form of key values paired in order to allow the key to serve as an identifier. Key-value databases are easily able to be partitioned and thus able to allow horizontal scaling that most databases are not able to do.

- Advantages and disadvantages of key-value databases?

Since key-value databases are easy to partition, horizontal scaling can be easily applied. Read and writing for data is accelerated making it fast and accessible. The pool of key values provides a variety hence making it flexible.
Applications that are constantly updated make it less workable because of compatibility.

- List some popular KV database

One of the most popular ones are amazons DynamoDB as well as ElastiCache, Redis, CoucheBase, SycallaDB, etc.