



# GENERAL EXAM TOPICS

*Open Source Technologies for Real-Time Data  
Analytics*

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# Tools and technologies

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- Data storage solutions: MongoDB, Logstash, Cassandra, HDFS, HBase
- Data analysis solutions: MapReduce, Spark, Elasticsearch
- Streaming systems: Kafka, Storm, Spark Streaming, Flink
- Data visualization: viz types, Tableau, Datawrapper, Plotly
- Other topics: Docker, high performance computing

## Cybersecurity

- Specific topics and data types
  - Full packet capture and packet string data
  - Log data acquisition, analysis and visualization
  - Indicators of compromise
- General topics
  - Signature-based anomaly detection
  - Statistical anomaly detection
  - Machine learning-based anomaly detection (draft)

## Financial systems

- Financial market types, e.g. capital, foreign exchange, commodities, etc.
- Chart types, e.g. candlestick
- Indicator types, e.g. 20-period simple moving average (SMA-20)
- Cryptocurrency data acquisition and analysis

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**Thank you for your attention!**