CLOUD COMPUTING VENDORS COMPARISON

CLOUD COMPUTING VENDORS

- Amazon Web Services (AWS)
- Microsoft Azure
- Google Cloud

MARKET SALES COMPARISON

AWS

- AWS: Currently Leading

- In November 2006, Amazon AWS cloud services accounted for 45% of the global IaaS (Infrastructure as a Service) open market, up from the quarterly share of Microsoft, Google and IBM, according to quarterly data from Synergy Research Group, a market research firm.

- By the 1st quarter in 2017, AWS public cloud revenue was $ 3.66 billion and operating profit was $ 890 million, an increase of 42%. At present, AWS's annual revenue has reached 14 billion U.S. dollars, making it the most profitable business of Amazon.

- Entering database workload fields, at great speed offering a variety of services

Microsoft Azure

MARKET SALES COMPARISON

- Azure: Solid Hybrid Deployment Service
- Comparing to the strength of IaaS of AWS, Microsoft is in advantage of PaaS
- Satya Nadella, the CEO of Microsoft, indicated that Microsoft has scored hybrid deployment and cloud migration fields, which might be the most exiting news on the telephone conference on Q3 2017.
- In fact, Microsoft is one of the few traditional players who have the potential for growth in on-premise and cloud computing.

Google Cloud Platform

MARKETING SALES

- Google Cloud: Entering the market with a great potential

- Relatively week among these tycoons. Has being long paid less attention to cloud computing. The technology of cloud computing is mainly "used internally" and Google is not good at doing business services.

- Heavy betting cloud computing, including expanding the data center network, adjusting marketing strategy, the introduction of more advanced technical services, hybrid cloud information security, etc.

BIG DATA SERVICES

AWS

- Offering a wide range of big data services. For example, Amazon Elastic MapReduce runs Hadoop and Spark, while Kinesis Firehose and Kinesis Streams provide a way to import large data sets into AWS. Users can store data in Redshift, a PB-level data warehouse, and compare data for cost reduction.

- Amazon Elasticsearch enables a service that deploys the open source Elasticsearch tools in AWS for analytical applications such as CTR and log monitoring. Kinesis Analytics helps to achieve this goal by analyzing data flow.

BIG DATA SERVICES

AWS

- Unlike Google, AWS offers a whole host of larger data storage options.
- A low-latency NoSQL database, DynamoDB, in addition to a number of AWS simple storage services
- DynamoDB's Titan Edition provides storage services for the Titan graphical database
- ApacheHBase, a PB-level NoSQL database; and relational databases.

BIG DATA SERVICES

AWS

- Business intelligence (BI) service, in-memory parallel processing for high-speed operation.
- Implemented primarily through Amazon Machine Learning and IoT platforms that connect many devices to the cloud and can scale to connect billions of devices and process teraflops of messages.
- While Google has a significant advantage in search and analytics engines, AWS has a broader portfolio of services, BI, and graphics processing units (GPUs).

Microsoft Azure

BIG DATA SERVICES

- Data Lake Analytics for analytics applications, which uses dedicated U-SQL (SQL and C ++) and a Hadoop-based service, HDInsight.

- Azure Stream Analytics service which has a Data Catalog that uses a global metadata system to identify data assets and a Data Factory that connects internal and cloud data sources and manages data pipelines.

Microsoft Azure

BIG DATA SERVICES

- Using a Dadoop file system called Data Lake Store for Big Data Storage Services. The cloud service provider offers a variety of common storage products, including StorSimple, SQL and NoSQL databases, and storage blocks.

- Providing Power BI and machine learning services with an IoT hub. Its cloud platform also includes a search engine. Microsoft's Cortana suite and Cognitive Services provide more advanced intelligence.

Google Cloud Platform

BIG DATA SERVICES

- Google's BigQuery data service uses a majority of users (even non-technical staff) can be intuitive to learn to use, similar to the SQL interface.

- Supports PB-level databases, which stream data at 100,000 lines per second and serve as an alternative to running data in cloud storage.

- BigQuery also supports geo data replication, where users can choose where to store their data.

Google Cloud Platform

BIG DATA SERVICES

- BigQuery is on-demand paying service that does not require a dedicated infrastructure instance, enables Google to use a large number of processors to maintain low latency, fast query responses.

- Integrated with Spark, it also supports Hadoop, Pig, and Hive. Business users can also use Google Analytics and DoubleClick as a data source, a tool for advertising users to collect data for use by BigQuery.

- Google's Cloud Dataflow also allows users to sort cloud data services.

Google Cloud Platform

BIG DATA SERVICES

- Other Big Data services from Google include a NoSQL database Cloud Datastore for relational data; Cloud BigTable, a massive, scalable NoSQL database; Cloud Machine Learning, a hosted platform for machine learning applications; and applications such as translators and Auxiliary tools such as voice converter.

- One of Google's obvious shortages in big data services is the GPU instance. Given the incredible performance improvements GPU brings, writing GPU code for data analytics applications is truly a skill with high added value. Google's lack of GPU instance product line is a bit confusing, especially since AWS launched the service in 2011, and Azure added the service in 2015.

Google Cloud Platform

BIG DATA SERVICES

- In many aspects of big data services, the three giants of cloud vendors are in step with each other, but there are some differences in performance and ease of use that need to be distinguished by actual testing.

- While Google may have a search technology advantage, it lags behind BI front-end applications, Microsoft, which owns Cortana, is in the lead. The absence of a Google company GPU instance is also a significant difference.