

Data Center

• A data center has masses of data and **organizes and manages data** according to its **core objective and development path**, which is more valuable than owning a **good site and resource**.



Responsibilities

- 1. Concentrated storage of data
- 2. Acquiring data
- 3. Managing data
- 4. Organizing data
- 5. Leveraging the data values and functions



Challenges to data centers by Big Data

Big data is an emerging paradigm, which will promote the explosive growth of the infrastructure and related software of data center.

Big data requires data center provide powerful backstage support.

- Enterprises must take the development of data centers into consideration to improve the capacity of rapidly and effectively processing of big data under limited price/performance ratio.
- The data center shall provide the infrastructure with a large number of nodes, build a high-speed internal network, effectively dissipate heat, and effective backup data.
- Only when a highly energy-efficient, stable, safe, expandable, and redundant data center is built, the normal operation of big data applications may be ensured

The growth of big data applications accelerates the revolution and innovation of data centers

- Many big data applications have developed their unique architectures and directly promote the development of storage, network, and computing technologies related to data center.
- With the continued growth of structured and unstructured data, and the variety of sources of analytical data, the data processing and computing capacities of the data center shall be greatly enhanced
- The scale of data center is increasingly expanding, it is also an important issue on how to reduce the operational cost for the development of data centers.

Big data endows more functions to data centers

- In the big data paradigm, a data center shall not only be concerned with hardware facilities but also strengthen soft capacities, i.e., the capacities of acquisition, processing, organization, analysis, and application of big data.
- The data center may help business personnel analyze the existing data, discover problems in business operation, and develop solutions from big data.