Data Management Strategies

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Data Strategies

- Modern Applications require many different:
  - **Data Types** - Relational, Document, Spatial, Graph, etc.
  - **Workloads** - Transactions, analytics, ML, IoT, etc.

- Each data type and workload requires different database algorithms

- Two possible Data Strategies:
  - Use **single-purpose** “best-of-breed” database for each data type and workload
  - Use a **converged database** for all data types and workloads
Converged Database
Multi-Model and Multi-Workload

Multiple Data Types *(models and semantics)*
Relational, Document, JSON, XML, OLAP, Spatial, Graph, Object-Oriented, Text, etc.

Multiple Application Types *(workloads and technologies)*
Operational, Analytics, Transactional, IoT, ML, In-Memory, Block-Chain, etc.

Run one Converged Database that supports multiple data types and workloads
Or run many separate Specialized Databases for each data type and workload
Benefits of Converged Database

• Like a Smartphone, a Converged Database:
  • Supports mixing of workloads, data types, and algorithms
  • Enables SQL and transactions across any data type
  • Is simpler, lower cost, more reliable
  • Provides unified security and management across all data
  • Prevents data fragmentation and copy contagion
  • Removes initial and recurring integration costs
  • Enables powerful synergies across features