

# Calpont InfiniDB® - Analytic Data Platform

## InfiniDB Enterprise Key Features

- 100% Columnar architecture
- Multi-threaded, distributed database operations
- Scale-out MPP
- UDFs for In-database Analytics
- Integrated Map-Reduction
- Shared Nothing data cache
- Real-time compression
- Automatic partitioning
- Partition drop
- High speed data loading
- Query snapshot read
- Performance diagnostic utilities
- Transactional Insert/Update/Delete
- Insert into Select From
- Auto Increment
- View support
- Linux and Windows platforms
- Hadoop™ Connectivity

**“InfiniDB delivers important benefits for our research and analytics processes. Compared to our legacy MySQL based data warehouse, we can process data an order of magnitude faster and use a lot less computing resources.”**

**Andy Lucas  
CTO, Cognitive Match**

## The Database Conundrum - Exploding Data and Deep Analytics Latency

In today’s competitive business climate, organizations have become more analytical in the way they look at business operations, customer interactions, and expansion into new markets. Executives push for increased visibility and accountability to key business metrics, driving greater operational integration of processes and data systems. Data capture is exploding as e-commerce, blogs and forums, social networking, mobile media, and online customer interactions have become mainstream. As a result, line of business managers, analysts and IT departments have matured in their use of Business Intelligence (BI), analytics, and data warehouse systems.

BI and analytics have become the most strategic weapons for managing business. The promise of real-time analytics has become a necessity for many organizations, but is often compromised by the enormous volume of data needed for analysis at a deep, granular level. Traditional database and data warehouse technologies are unable to keep pace with both data volume and rapid decision making. This has led to the emergence of new, analytic-specific database technologies.

## Calpont InfiniDB Enterprise - The Next Generation Data Platform for Deep Analytics

### Scalable, Fast, and Simple

InfiniDB Enterprise is a high performance, scalable database built from the ground up for analytics, BI, data warehousing and read intensive applications. Designed for data professionals who need to augment or replace their traditional RDBMS technologies, InfiniDB is a column-oriented, massive parallel processing (MPP) technology that processes data queries extremely fast and scales linearly with any type of storage hardware, growing as analytics needs and data grow. It deploys quickly, without requiring the creation of indexes, materialized views, or custom database tuning.

### The Columnar Advantage

InfiniDB’s column-oriented architecture overcomes query limitations that exist in traditional row-based DBMS’s by storing, managing, and querying data based on columns rather than rows. Only the necessary columns in a query are accessed, reducing I/O activities by circumventing unneeded rows. This makes InfiniDB ideal for BI and analytics because query processing and results response against very large data occur in much less time than standard OLTP and OLAP databases, as well as multidimensional cubes, MapReduce, and non-optimized NoSQL solutions. InfiniDB also has high query response predictability, providing dependability in meeting service-level requirements imposed by the business.

## InfiniDB Enterprise Advantages

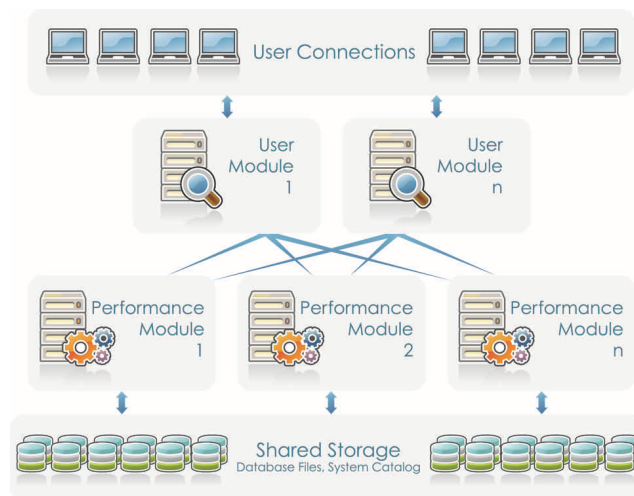
- Query performance 10x to 1000x over row-oriented technologies
- High speed data loading—millions of rows per second
- Very large data scaling on commodity hardware
- Consistent, linear performance
- Self learning and managing
- No indexes, materialized views or summary tables required
- High concurrency
- High availability
- Fast and easy to deploy
- Price performance value

**InfiniDB delivers fantastic price versus performance for our MySQL data intensive application. With our recent FCC partnership, we are faced with a significant data collection task in analysing end user broadband experience. InfiniDB takes away the scalability concerns we had with our previous MySQL database, whilst at the same time requiring little or no redevelopment effort.”**

**Sam Crawford,  
Founder, SamKnows**

## Scale-out MPP Architecture

InfiniDB scales out in MPP fashion across multiple hardware machines to achieve linear increases in overall performance. Adding inexpensive commodity hardware to an InfiniDB configuration allows the database to increase processing power, cutting response times in half with each successive doubling of the number of nodes. The result is the ability to adjust for growing data volumes, increased user activity, or the desire to meet better overall performance goals. What’s more, scale out occurs dynamically, without the need to take InfiniDB offline as nodes are added.



## Distributed Performance

InfiniDB has a two-tiered architecture unique to column database platforms. InfiniDB’s User Module breaks SQL requests into their respective computational elements and distributes these elements to one or more Performance Modules. The Performance Modules manage data storage and retrieval, after which the User Modules assemble all the query results from participating Performance Modules to complete the query that is returned to the user. This design supports expanded dimensionality of deep interrelated variables, enabling IT and decision support organizations to provide their businesses with micro-targeted, granular investigations of billions of individual data elements across any number of dimensions very quickly.

## In-Database Functions and Integrated Map-Reduction

InfiniDB enables creation of fully parallel and distributed user defined functions (UDFs) that execute as integrated operations within the storage engine. This enables implementation of custom analytic functionality that leverages the full benefits of InfiniDB’s integrated map-reduction capability, spreading the custom functions across all available cores within the distributed layer.

## Calpont InfiniDB® Enterprise

**The High Performance, Scalable Data Platform that enables Deep Analytics**

To learn more, please visit [www.calpont.com/infinidb](http://www.calpont.com/infinidb) or call (972) 999-1355

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