Actian NoSQL Database

Enterprise-class NoSQL Object Database

Managing Maximum Complexity in the Database Tier

Telecommunications infrastructure, transportation networks, financial service fraud detection and online gaming all share one of the most challenging aspects for application developers – domain complexity.

These type of application models are complex, often hierarchical, and continue to evolve together with the business. It is difficult and time consuming during development and expensive at run time to map application objects into a relational database and performance suffers. Using the Actian NoSQL Database brings powerful advantages to application developers that use complex C++ or Java object models, have high concurrency requirements, or large data sets.

Agile Development with Native Object Persistence

The impedance mismatch between object oriented programming languages and traditional relational databases is well known. There is a good reason why object to relational mapping (orm) frameworks, tools and technologies have emerged to "cover up" this problem. And it is also well known that these ORM frameworks have their limitations, e.g., adding a significant performance overhead, requiring constant tweaking and a fair amount of manual coding, and not offering support to evolve the database schema.

For true agile software development, only native object persistence services, offered by Actian NoSQL's C++ and Java APIs, will work and save up to 40% in development and maintenance costs.

High Performance Transaction Handling with Multi-Threaded and Dual Cache Server Architecture

Actian NoSQL offers all transactional capabilities of a robust Enterprise database, including the support of ACID transactions, distributed two phase commit, interfaces to third party transaction monitoring systems such as Tivoli, optimistic and pessimistic locking schemes. Actian NoSQL's two level cache and multi-session/ multi-threaded architecture is optimized for today's high performance multi-socket/ multi-core server hardware and scales linearly
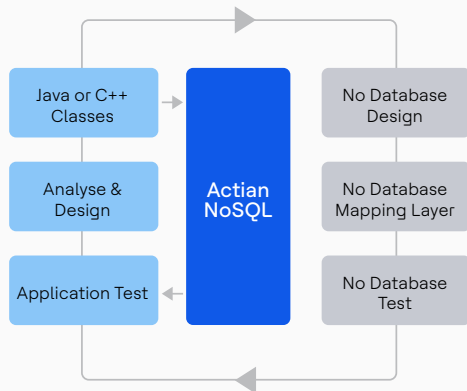
Key Benefits

- Agile Development with Object Persistence

- High Performance Transaction Handling

- Multi-Threaded and Dual Cache Server Architecture

- Big Data Management with Distributed Databases

- Mission Critical Deployments with Enterprise Toolset

- Guaranteed Business Continuity

- Full Disaster Recovery Functionality

Big Data Management
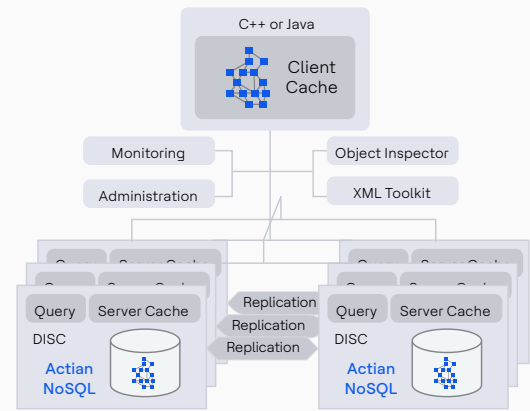## with Distributed Databases

Partitioning and replicating databases is important to horizontally scale out Big Data applications. The Actian NoSQL distributed server architecture allows the developer to design database and server architectures that expand over time as the data volume and the data access grows.

- Transparent Object Persistence
- High Performance Transaction Handling
- Support for Standards (JPA)
- Faster Development / Shorter Sprints
- Fine-Grain Concurrency Control
- More Concurrent Users
- Faster Data Access

Mission Critical Deployments
with Enterprise Toolset

Ensuring 99.99% availability of the Actian NoSQL databases is accomplished with a number of data center tools and technologies that can be deployed in addition to the Actian NoSQL Database. Actian NoSQL supports rigid Service Level Agreements (SLAs) in mission critical industries such as telecommunication, transportation and financial services.

- High Availability
- Fault Tolerant Server
- Asynchronous Replication
- Multi-Threading, Multi-Session
- Improve Multi-Core Scalability
- Improved Admin Tools (Monitoring, DBcheck, DBcompact)
- Black Box Recorder and Analysis

Business Continuity

Actian NoSQL Fault Tolerant Server (FTS) is a hot stand by back up server that continuously maintains the identical state of the primary server via a coordinated distributed two phase transaction protocol. Therefore FTS can take over database operations within a configurable timeout measured in seconds.

In addition, all database maintenance tasks such as backup and reorg can be performed while the database server stays online.

About Actian

Actian makes data easy. We deliver cloud, hybrid cloud, and on-premises data solutions that simplify how people connect, manage, and analyze data. We transform business by enabling customers to make confident, data-driven decisions that accelerate their organization's growth. Our data platform integrates seamlessly, performs reliably, and delivers at industry-leading speeds. Learn more about Actian, a division of HCLSoftware: www.actian.com.