MATISSE

THE POST-RELATIONAL SQL DATABASE

Presented by:

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Mattise

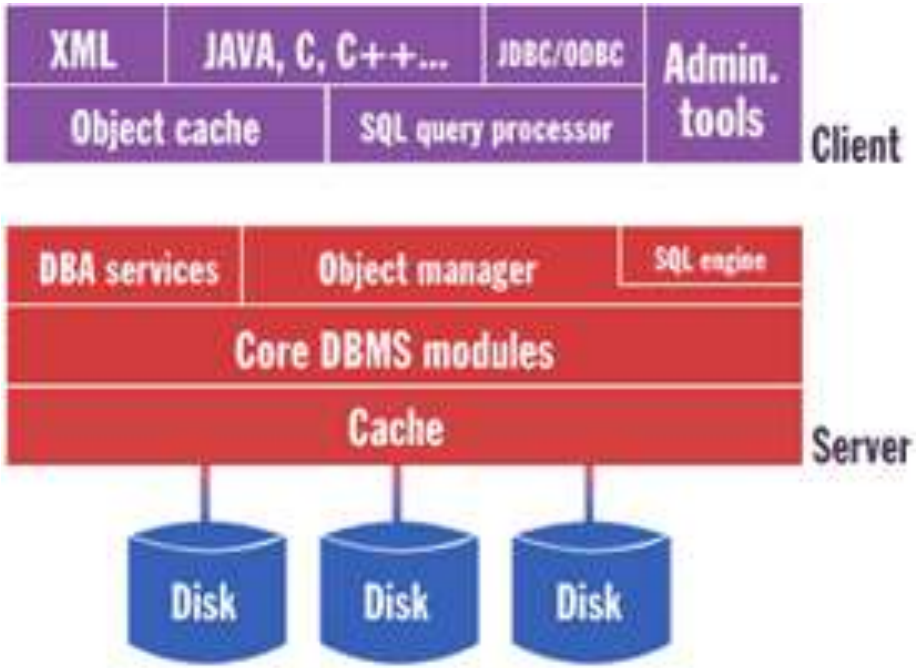
Designed to benefit both object developers and database administrators, Matisse combines native support for Object, XML and SQL within a single database.

The Matisse Server operates as a back-end server that manages a repository of persistent objects.

Architecture

Client / Server

Client applications connect to the server through the network, or through a local transport. The client and server can reside on different systems or in the same device; there is no limit to the number of clients that can communicate with a single server.



All the Language Bindings

- .NET
- Java
- C
- C++
- Python
- PHP
- Eiffel
- Objective-C

All Platform Support

- Linux 32/64 bit (Upper than 2.6.18 Kernel)
- MacOS X version for Intel
- Solaris 10 on SPARC 32/64 bit
- Windows XP/2003/2008/2012/Vista/7/8 32/64

Basic Concepts

The two primary tasks of the Matisse Server are to ensure that:

- All objects remain available in a consistent state in the presence of system failures (recovery management)

- When several clients access a shared set of objects simultaneously in read or write mode, each client gets a consistent view of the database

Basic Concepts

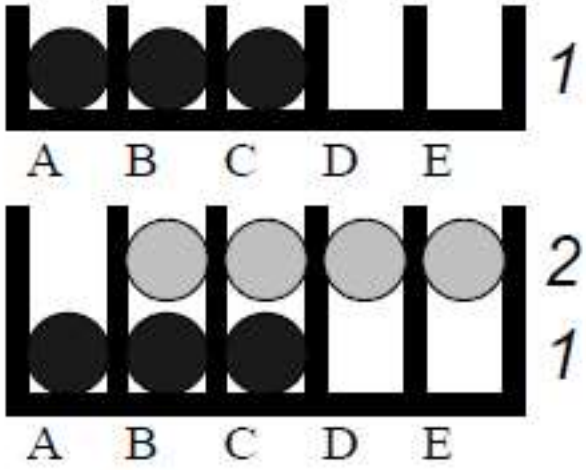
- I/O Parallelism
- Intrinsic Versioning
- Collect Versions
- Transaction Model and Concurrency Control
- Disk Fault Tolerance

I/O Parallelism

The Matisse Server provides high-end parallelism for multimedia streaming and large databases for a large number of users.

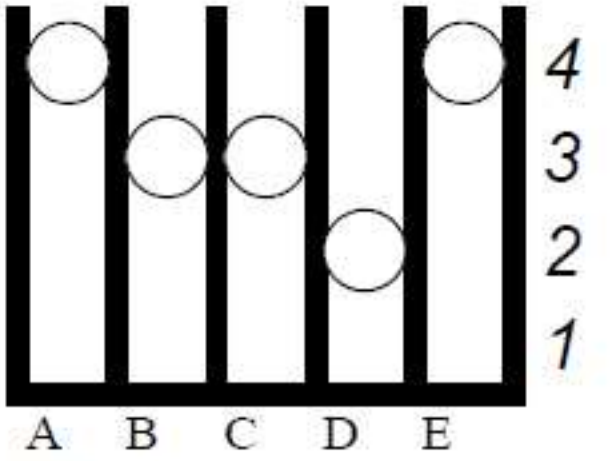
Intrinsic Versioning

The Matisse Server Intrinsic Versioning is the key underlying technology that differentiates it from other storage management systems. Intrinsic Versioning is the automatic generation and control of object versions.



Collect Versions

The collect versions mechanism is run automatically to reclaim disk space. It preserves the most recent version and the versions that have been explicitly saved.



Transaction Model and Concurrency Control

Concurrency control is enforced by read or write database locks. The locking granularity is at the sub-object level, as the Matisse Server locks separately the relationship part of an object and the attribute part of an object.

In transaction mode, the Matisse Server enforces traditional two phase locking to ensure consistent, serializable, transactions.

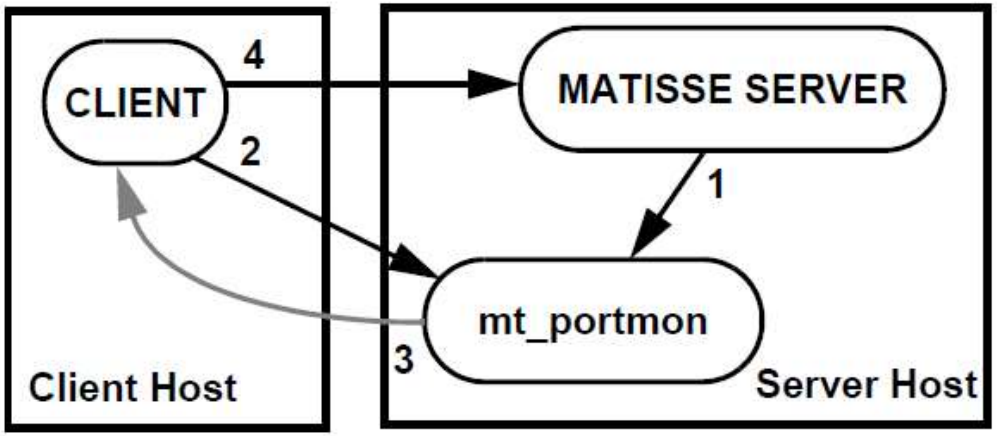
Disk Fault Tolerance

The Matisse Server provides disk fault tolerance through mirroring.

When there is a disk failure, the database remains online and Matisse Server automatically uses mirrored data as necessary. When a new disk is available, you can use the DBA Tool to reestablish mirroring. It is not necessary to stop Matisse Server to replace the failed disk.

Matisse Connections

Matisse is a multi-protocol server. For each kind of client-server transport supported, an **mt_portmon** daemon is needed. This daemon must be started before connections between the server and the client can occur.



Matisse Connections

The two different kinds of transport currently supported are **tcp** and **local**. The tcp transport is TCP/IP on a local area network (LAN). The local transport is TCP for connections between a client and server located on the same host.

Defaults are used:

- **Port 7421** for tcp transport
- **/tmp/mtportmon_local.socket** for local transport

Enterprise Manager Tool

The Matisse Enterprise Manager has been enhanced to improve the database administrators and developers experience.

- Schema Viewer
- Query Editors
- Import/Export Schema
- Import/Export Data
- Import/Export XML
- Scheduled Tasks

Customers

Following are some of the organizations that have recently built solutions based on Matisse.

Airbus	Ericsson	Fujitsu	Hitachi	NEC
Nokia	Panasonic	Philips	Siemens	
Siemens	Tokyo Hospital			

Partners

Intel Corporation

Sun Microsystems

IBM

Eiffel Software

Sun Microsystems

University College Northampton

The End

www.matisse.com