GORDA

technology map

Funded by:
FP6 IST2 004758

Partners :

http://gorda.di.uminho.pt

scenarios

platforms

packages

interfaces

CLIENT

TPC-B
Simple benchmark used for loading implementations while testing

TPC-W
Industry standard benchmark simulating a web application

TPC-C
Industry standard benchmark simulating a write-intensive OLTP application

PolePosition
Micro-benchmark collection used for measuring overhead of the GAPI

Carob
http://carob.continuent.org
C/C++ binding to the middleware wrapper
D4.4

ODBC
The standard database access interface in the Windows platform is supported natively or through Carob

Other
Proprietary database access interfaces (DBMS specific or Perl, PHP, Python, etc) are supported natively or through Carob

JDBC
Standard database access interface in the Java platform

MANAGEMENT

Jade
http://jade.objectweb.org
Autonomic management environment
D5.4

Fractal
http://fractal.objectweb.org
Modular, extensible and programming language agnostic component model

Centralized Management
Observation and control of the replicated database system from a central location

GORDA Management
Interfaces for deploying and managing replicated database management systems
D6.4c

jManage
http://www.jmanage.org
The GORDA Management Console builds on the jManage Open Source Application Management system

JMX
http://java.sun.com
Interoperability builds on Java Management Extensions

Autonomic
Ensuring self-repair, self-tuning and self-management of the replication database system.

SERVER

RDBMS and SQL
The GORDA project targets relational database management systems exposing a SQL interface

Oracle Berkley DB
http://oss.oracle.com/berkeley-db.html
Work-in-progress native implementation

Apache Derby
http://db.apache.org/derby
Reference implementation of GORDA protocols in a flexible and modular replication suite
D4.3

in-core

GAPI
http://gorda.di.uminho.pt/community/gapi
Database reflection interface to observe and modify transaction processing
D6.4a

hybrid

MonetDB
http://monetdb.cwi.nl
Joint work with CWI for hybrid implementation

PL/J
Support for Java triggers and stored procedures in PostgreSQL

middleware

PostgreSQL
http://www.postgresql.org
Full support with a hybrid implementation
D4.5

MySQL Server
http://www.mysql.com
Fully supported by the middleware implementation

Oracle 11g
http://oracle.com/
Work-in-progress support by the middleware implementation

Sequoia
http://sequoia.continuent.org
Middleware implementation wrapping legacy database management systems
Implements RAIDb protocols
D4.4

ESCADA Replication Server
http://escada.sf.net
Reference implementation of GORDA protocols in a flexible and modular replication suite
D3.3

MinhaSSF
Extensive testing and benchmarking built on a centralized simulation platform
D5.1

Spring IoC
http://www.springframework.org
Communication, database support and protocols are assembled using the Spring Container

Embedded Replication
GORDA-enabled DBMS servers can be closely coupled with replication code to minimize overhead

COMMUNICATION

jGCS
http://jgcs.sourceforge.net
Abstract group communication service interface
D6.4b

Appia
http://appia.di.fc.ul.pt
Reference implementation of GORDA protocols in a flexible and modular replication suite
D3.5

Spread Toolkit
http://www.spread.org
Portable group communication that can be used through the jGCS interface

SSL/TLS
End-to-end security builds on standard secure socket protocols

JGroups
http://www.jgroups.org
Group communication in Java that can be used through the jGCS interface

LAN
Group communication in clusters

WAN
Group communication in wide area networks poses additional challenges to latency sensitive replication protocols

REPLICATION

Shared-nothing Cluster in LAN
Replication for scalability and high availability.

Inter-replication in WAN
Replication for disaster recovery and geographical distribution

Built by GORDA
Enhanced by GORDA
Used by GORDA
Dx.y Deliverable number
Work in progress
Technological boundary

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