

Database Servers: Highlights And Conclusions

SQL Server - Strengths

- Multi-threaded/multi-server architecture
- Stored procedures
- DBMS enforced integrity
- Portability
- Open Server
- Front-end tool partners
- Good track record

SQL Server - Weaknesses

- OS/2 not coordinated with Unix versions
- Microsoft emphasis on NT (less on OS/2)
- No position updates
- Complex administration
- OS/2 version requires named pipes; Netware OS/2 requestor needed for Netware LANs
- SQL implementation deviates from standard

SQL Server - Scenario

- Mission critical applications
- Heterogeneous environments
- Limited distributed transactions
- Requirement for front-end tools
- 40+ users on OS/2, 40 - 100+ on Unix/VMS
- 1+ gigabyte on OS/2; 10+ gigabyte on Unix/VMS

SQL Server - Commentary

Good track record. Good performance. Able to support a large number of users. Concern about MS/Sybase coordination of efforts and Microsoft's changing commitment. Needs position update support (cursor).

Oracle - Strengths

- Portability
- Communications support
- Multi-versioning reads (reads not blocked by updates)
- Row-level locking
- Third-party application support

Oracle - Weaknesses

- High resource requirements
- Lacks cost-based optimizer
- Complex architecture: delays application implementation; adds to development and administration costs
- Credibility and quality of products

Oracle - Scenario

- Oracle already in organization
- Netware NLM
- Portability to MVS: decision support applications
- Less than 10 users on OS/2; 10+ on Unix/VMS
- 1+ gigabyte on Unix/VMS

Oracle - Commentary

Interview references and verify all claims.
References should have exactly the same
configuration. Understand costs thoroughly.
Count on using C language programming.

Database Manager - Strengths

- DB2 compatibility
- Key component of IBM's distributed data architecture
- Referential integrity
- Database remote application interface
- SAA language support
- Row level locking
- Very-low cost (under \$400)
- Peer-to-peer architecture

Database Manager - Weaknesses

- No forward recovery
- Hardware sensitive
- Limited front-end tools
- Unproven in transaction environment

Database Manager - Scenario

- Decision support systems
- Transaction application deployed in 1992
- Support for strategic distributed databases
- OS/2 CICS development

Database Manager - Commentary

Looks like a winner long term but needs more proving and OS/2 success.

SQLBase - Strengths

- DOS and OS/2 database server
- Easy installation and administration
- Programming options: backward/forward fetch, context preservation,
- restriction mode
- Multi-versioning reads (reads not blocked by updates)
- SQLWindows, Quest, and SQLNetwork integration

SQLBase - Weaknesses

- Early versions and problems
- Company supports several leading edge products (stresses development)
- Limited performance enhancement options
- Limited third-party support

SQLBase - Scenario

- Smaller networks
- DB2 connectivity
- Windows development
- 10 - 30 users
- 1 gigabyte and less databases

SQLBase - Commentary

Products exhibit excellent technological foresight and are well tuned for PC environment. Needs more proving after shaky start. Version 4.1 appears to have addressed problems. Novell ownership interesting to watch.

XDB - Strengths

- Very high DB2 compatibility
- Easy installation and administration
- DOS, OS/2, Windows implementations
- Referential integrity
- Row level locking
- Good performance
- Tuned for PCs (e.g. backward scrolling)

XDB - Weaknesses

- Front-end tools
- Administration tools (e.g. no online backup)
- Limited performance enhancement mechanisms
- Limited portability/connectivity

XDB - Scenario

- Smaller organizations
- Departmental applications
- DB2 workstation development
- C, COBOL, Windows development
- 3 - 20 users; 500 meg databases

XDB - Commentary

Good technology. Easy to learn. Needs front-end tools.

Netware SQL - Weaknesses

- No portability/connectivity
- Limited front-end tools
- Table level locking
- Weak space management (indexes stored in table space)
- No cost-based optimization
- Poor performance (uses Btrieve record-oriented API)
- Buggy
- Novell's intentions unclear

Netware SQL - Commentary

Weak compared to other database servers.

Netware SQL - Scenario

- SQL support for Btrieve (possible performance degradation)
- Requirement for NLM DBMS

Ingres - Strengths

- Portability (currently emphasizing 9 platforms)
- Multi-threaded/multi-server architecture
- Stored procedures
- DBMS enforced integrity
- Tightly integrated application toolset
(Ingres/4GL, 4GL/Windows)
- Query optimization

Ingres - Weaknesses

- Weak PC support
- Previous versions unstable (V.6.1, 6.2)
- Uncertain future with ASK takeover
- Documentation
- Weak pre/post sales support
- Marketing

Ingres - Scenario

- VAX/Unix emphasis
- Fast development
- 20 - 100 users; 1 - 10 gigabytes

Ingres - Commentary

Good all-around Unix/VAX solution. ASK needs to solidify and articulate plans to current and potential customers.

Informix - Strengths

- Portability
- Large installed base on low-end Unix
- Good OLTP features (index clustering, SMP support)
- Variable level locking
- Disk mirroring

Informix - Weaknesses

- PC support lags (still Informix-SE)
- Weak customer support
- No VAX/VMS support
- Weak front-end tools support

Informix - Scenario

- Low-end Unix and SMP
- Upgrade from Informix C-ISAM
- VARs

Informix - Commentary

Good track record on Unix machines. 4GL tools O.K. but badly needs upgrade. Customer support perpetually poor. Seems to be losing momentum and customer mind-share.