DATABASE CONSOLIDATION WITH ORACLE DATABASE 12C

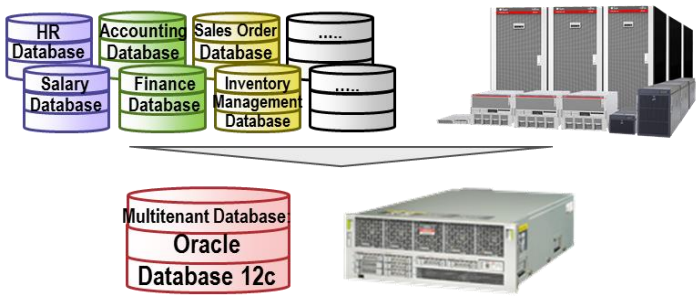
UNMATCHED SCALABILITY, MAINFRAME RELIABILITY, AND INDUSTRY-LEADING VIRTUALIZATION

KEY FEATURES

- This enterprise server has up to 64 processors (up to 1,024 cores) and huge memory capacity (up to 64 TB) for superior enterprise application performance.
- The new SPARC64 X+ processor up to 3.7 GHz and 3.0 GHz SPARC64 X processor, with supercomputer technology, provides the highest level of performance for resource intensive enterprise workloads such as OLTP, ERP, BIDW, SCM, and CRM.
- The CPU core activation feature economically and rapidly delivers on capacity requirements along with increases in throughput, making it possible to have gradual increases in performance.
- With Fujitsu M10-4S, performance can be further enhanced by connecting multiple units together like building blocks. Furthermore, Fujitsu M10-4S supports mixed SPARC64 X unit and X+ unit in a single system.
- Software-on-chip instructions on the SPARC64 X and X+ processor accelerate key database functions.
- Flexible resource configuration using, physical partitioning, Oracle VM Server for SPARC and Solaris Zones virtualization technologies

Fujitsu M10 server is a flexible and scalable system that delivers high performance and high availability for mission-critical enterprise applications. It is the ideal platform to grow with expanding business requirements.

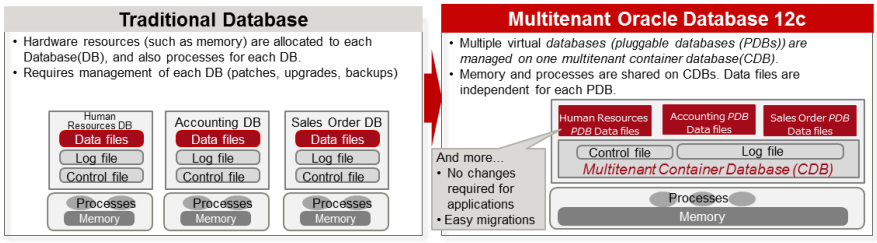
As companies grow, IT departments typically respond to increasing or changing demands for services by adding more servers to their environment, creating a heterogeneous and sprawling data center landscape. These complex IT infrastructures are difficult to manage and hinder application performance and business agility. Consolidating multiple workloads onto a smaller number of more powerful systems can simplify data center infrastructure, resulting in increased business agility and operational efficiency. Operational expenses are also reduced through lower acquisition costs and decreased floor space, power and cooling requirements.
The combination of Oracle Database 12c with the latest database virtualization technology and Fujitsu M10 is the best solution to meet such requirements.



Consolidate databases with Oracle Database 12c on Fujitsu M10

Putting multiple virtual databases, called *pluggable databases (PDBs)*, on one large database, called a *multitenant container database (CDB),* provides more flexible and efficient database consolidation.

- Improve server resource utilization efficiency
  - Resource utilization efficiency is improved as memory and processes previously managed for each database are now shared on the multitenant CDB. With higher density, more databases can be consolidated.
  - Dynamic resource allocation using PDBs.
- Big reduction in operation management costs
  - With management performed on a multitenant CDB, patches, upgrades, and backups can be applied to all PDBs at one time.
- Easy database addition and expansion
  - PDBs can be easily connected or disconnected from the multitenant CDB, and also cloned. This makes flexible database addition and expansion possible, while the migration load from development environment to production environment is also reduced.



Best Platform for Oracle Database 12c: Fujitsu M10

■Flexibility and scalability, “start small and grow big”

- From a minimum of 4 cores to a maximum of 1,024 cores. Allow for step-by-step consolidation and building of new databases.
- Supports up to 64 TB of large-capacity memory
- CPU core activation and Oracle VM for efficient database licensing

■Software on Chip for high performance

- The Software on Chip drives exceptionally high-performance by carrying out the decimal arithmetic operations and encryption processing formerly performed by software, directly on the hardware. In addition, support for Oracle Number, which is a data format used in Oracle Database, makes Oracle Database even faster.
- Includes vector calculation functions (which process instructions for multiple data sets simultaneously) inherited and enhanced from supercomputer technology. This accelerates columnar databases* suitable for analytical processing of big data.

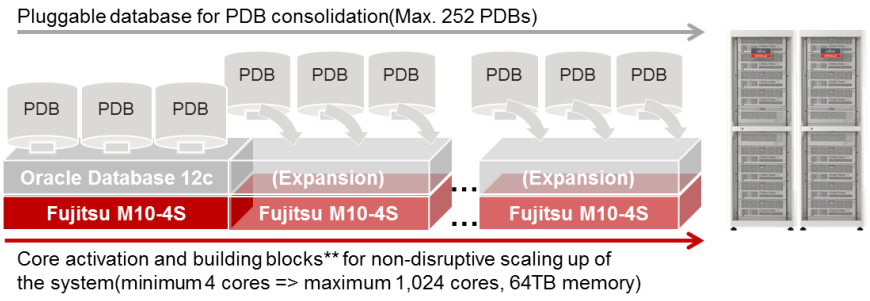
■Providing the high reliability required for database consolidation

- Hot hardware addition**, Hot-swap maintenance**, Zero single point of hardware failure
- Fujitsu SPARC server DNA, boasting mainframe-class high reliability

■Oracle Solaris, the best OS for Oracle Database 12c

- Oracle Solaris has evolved as the best OS for Oracle Database. Features only Oracle Solaris OS can achieve are being continuously added, such as online resizing of the system global area(SGA) in Oracle Database and accelerating database startup/shutdown

Proposal Example of Fujitsu M10 + Oracle Database 12c



* Columnar database is planned to be supported in the future.
** For the configuration conditions and other details, see the manual and other documentation.

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