

Multiple Components in One Database (MCOD)

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Agenda

- Introducing Multiple Components in One Database (MCOD)**

- Simplifying the SAP System Landscape using MCOD**

- Example for a Technical Realization**

- Availability**

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Introducing Multiple Components in One Database (MCOD)

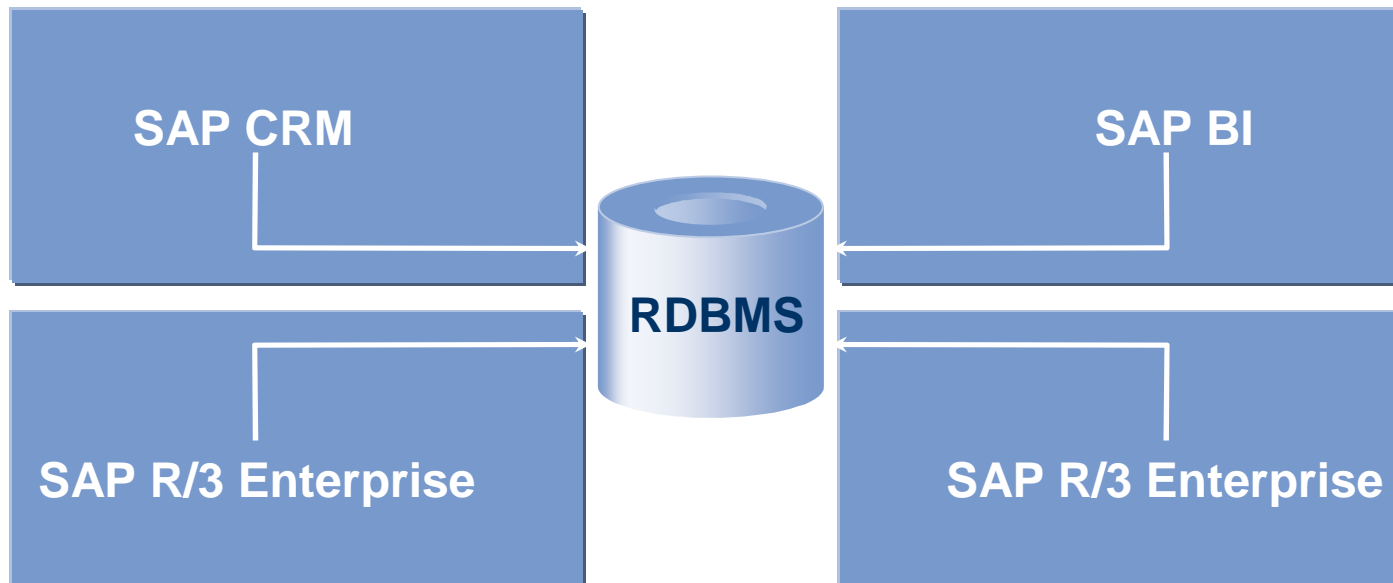
Simplifying the SAP System Landscape using MCOD

Example for a Technical Realization

Availability

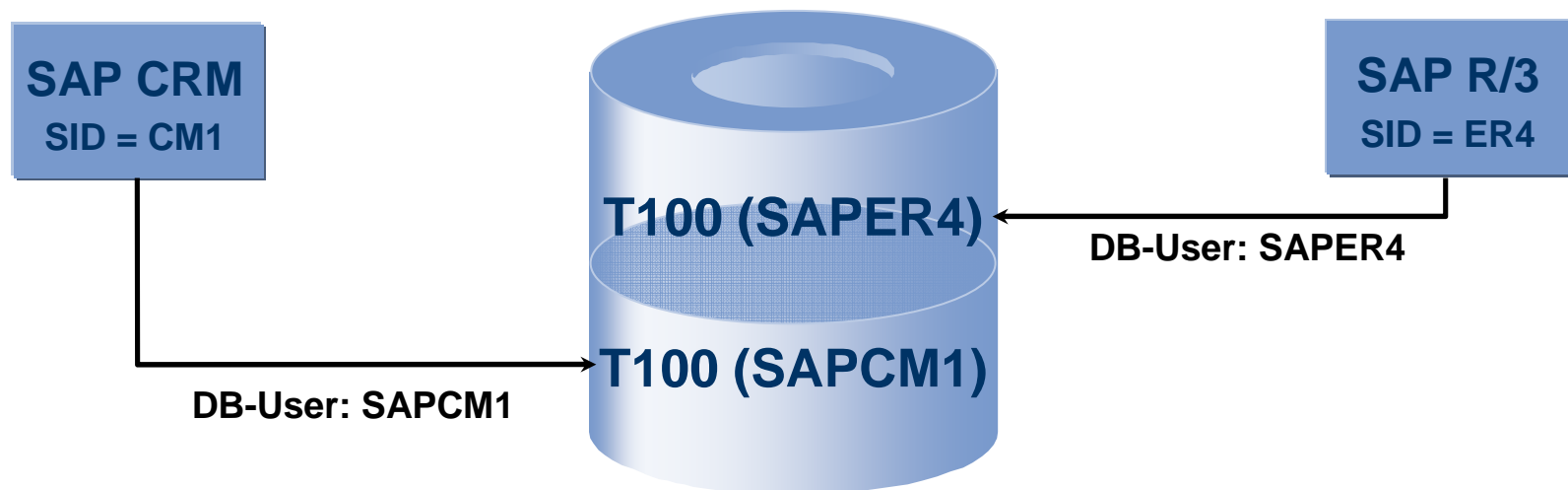
Multiple Components in One Database

- Multiple Components in One Database (MCOD) is a feature in the installation process for SAP NetWeaver based SAP components
- It provides the possibility to install several components independently in one single database



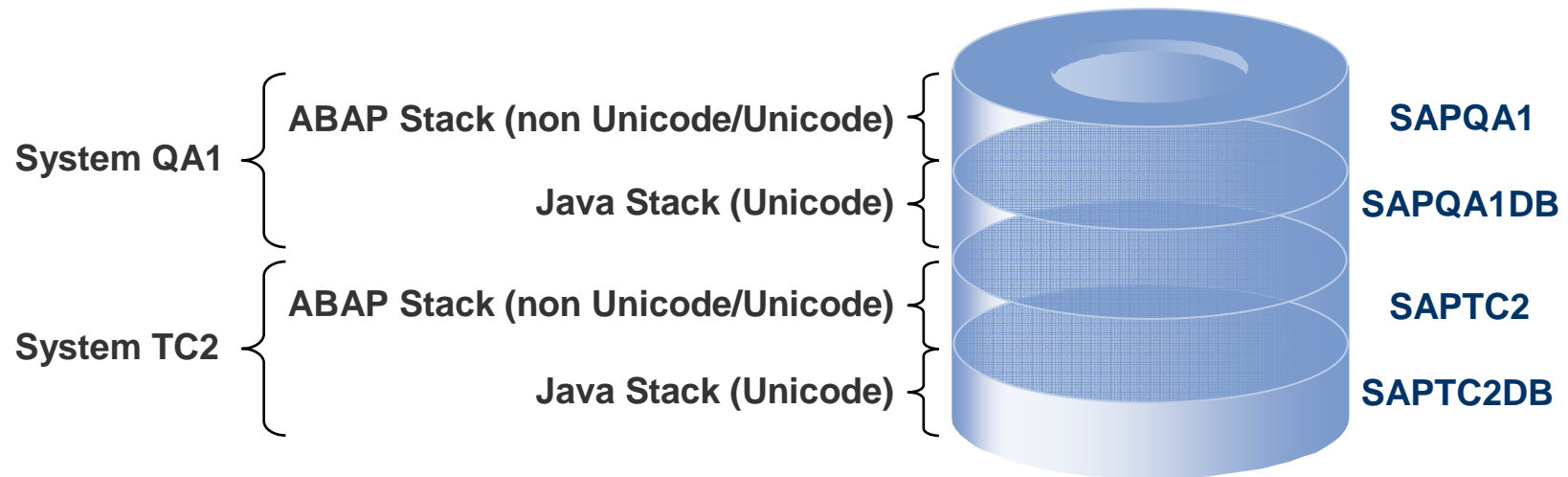
Technical Realization (1)

- The SAP WebApplication Server which is part of SAP NetWeaver provides a database abstraction layer which shields the application from the database
- Databases support schema. Tables with the same name can exist independent in different schema with different content
- The SAP WebAS ensures that a system connects only to the database schema related to the according system



Technical Realization (2)

- With SAP WebAS 6.30 a database abstraction layer for the Java stack was introduced – OpenSQL for Java
- Tables of the Java stack are stored in the same database instance like the tables of the ABAP stack in two different schema (except Informix)
- The concept of MCOD installations is fully supported by the combined stack of ABAP and Java



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Availability

Highly Flexible IT Landscape

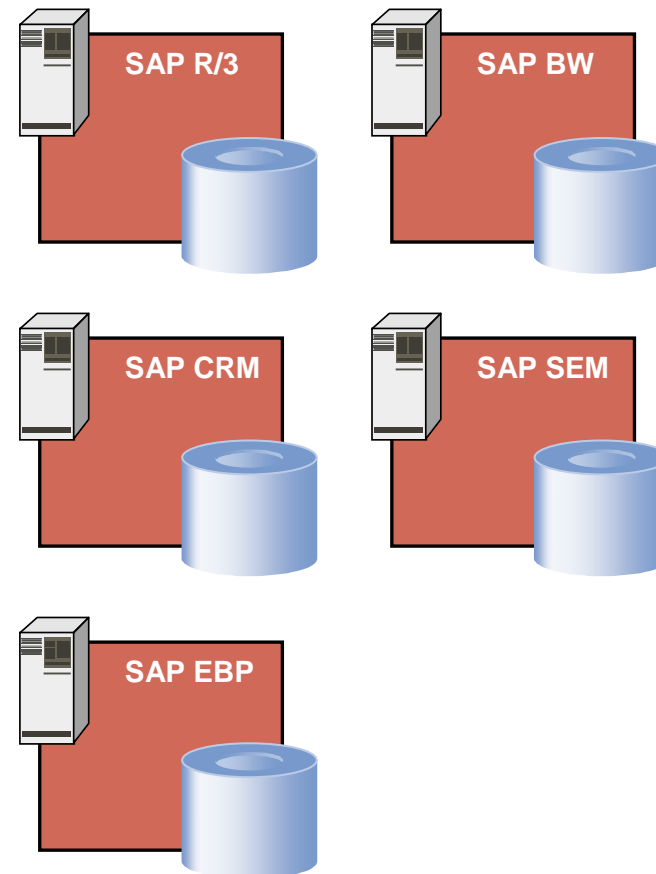
Situation: N Systems, N Databases

Benefits

- Flexibility through components
- Separate upgrades possible
- Different operating systems and databases
- Highest scalability achievable

Administrative challenges

- Maintaining different operating systems, databases
- Complicated high availability solutions
- Synchronized backup & restore



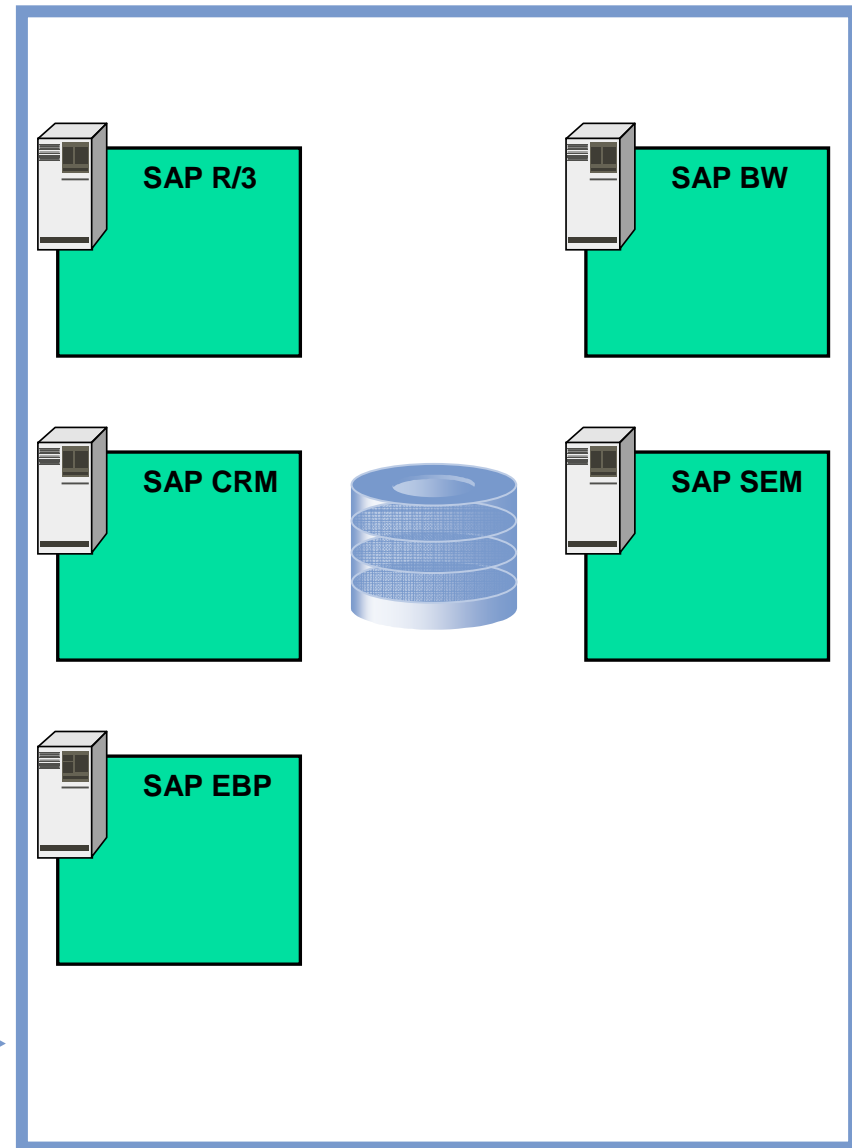
Simplification Of The System Landscape With MCOB

Situation: N Systems, 1 Database

Administrative opportunity

- Multiple independent and different software solutions are located in one database
- One logical and physical database instance
- Point in time recovery of semantically related systems e.g. R/3 and CRM possible
- Migration of existing systems is possible
- All systems use the same OS/DB release

Installable on one physical server



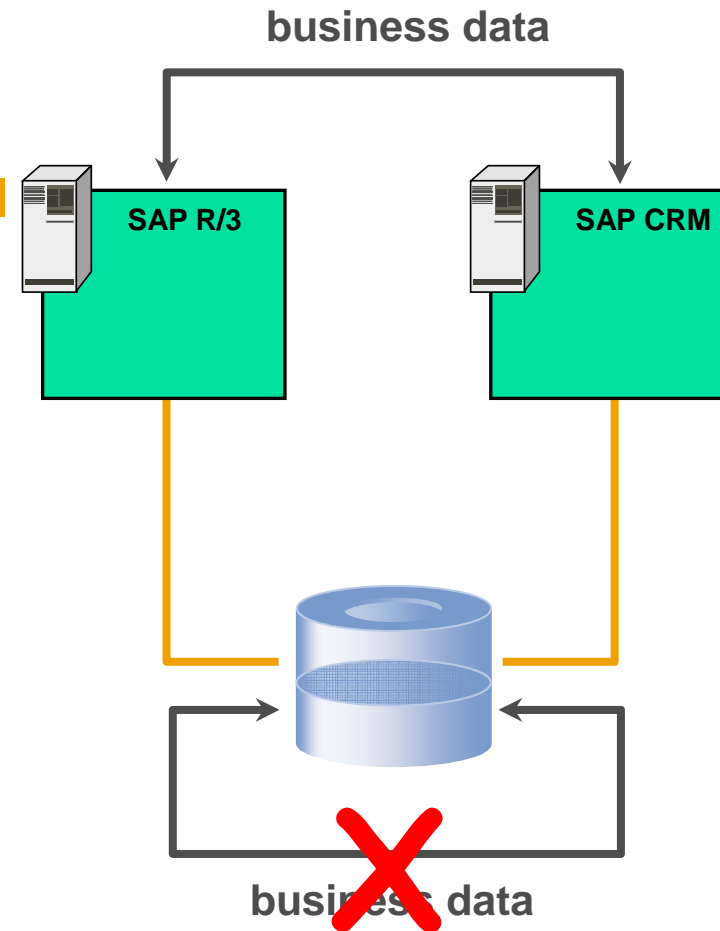
Independence Of Single Systems

(De)Installation of individual components

Upgrade of individual components

Data exchange on application level

- Integrity of business data
- No special coding for MCOD installations
- No locking conflicts on database tables



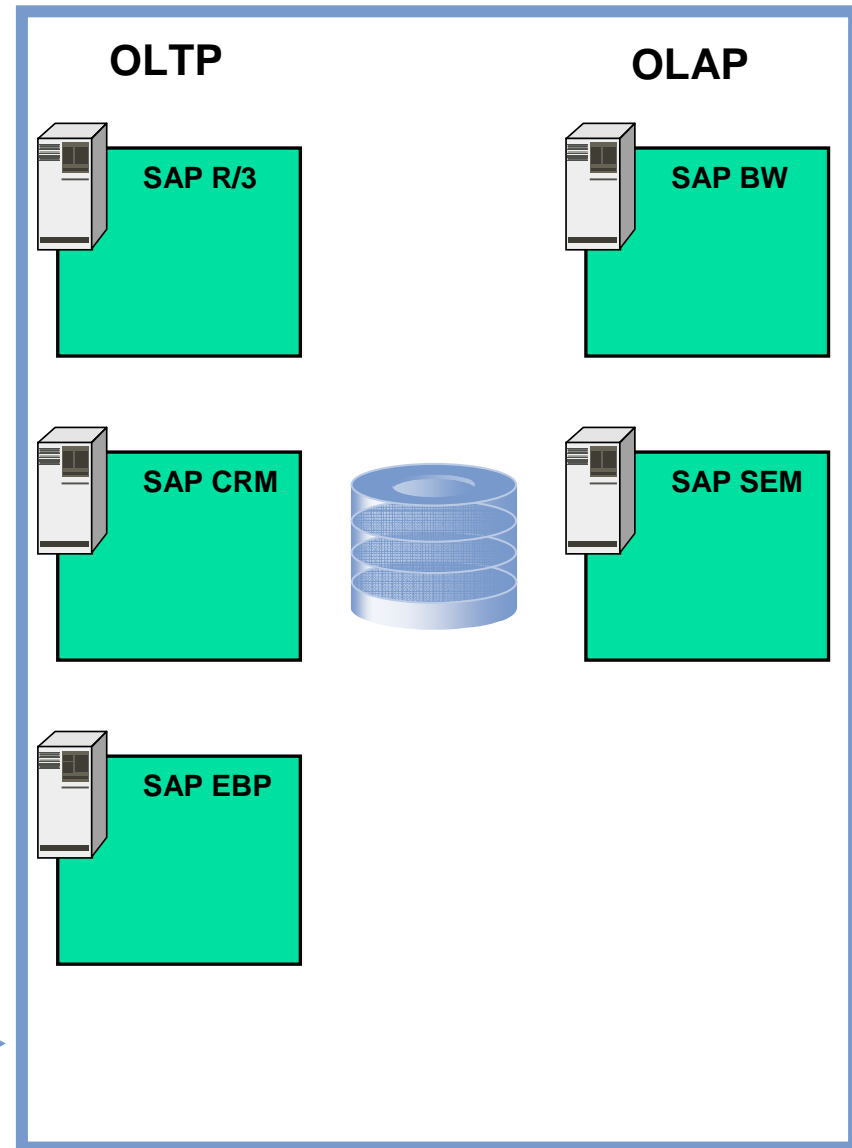
Combination Of OLTP And OLAP Systems

Performance considerations

- Former versions of database systems required an individual parameterization for OLTP and OLAP systems to achieve an optimal performance
- Latest versions of most databases used for SAP systems allow a combined installation of OLTP and OLAP systems using MCOD*

- ◆ DB2 for IBM zSeries
- ◆ DB2 for IBM iSeries
- ◆ DB2/UDB for Windows and Unix
- ◆ MS SQL Server
- ◆ MaxDB
- ◆ Oracle
- ◆ Informix

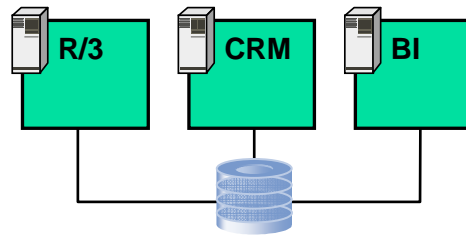
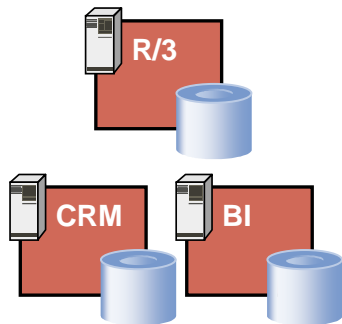
Installable on one physical server



* For details see the MCOD homepage

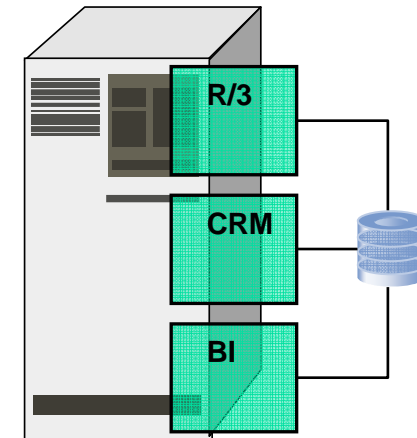
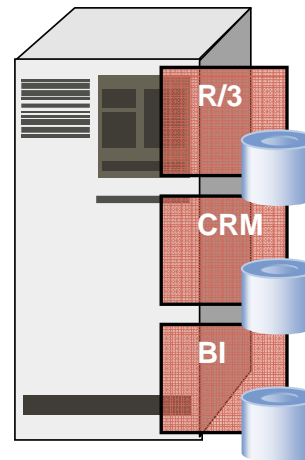
Various Deployment Options

multiple servers,
multiple databases



multiple servers,
one databases

one server,
multiple databases



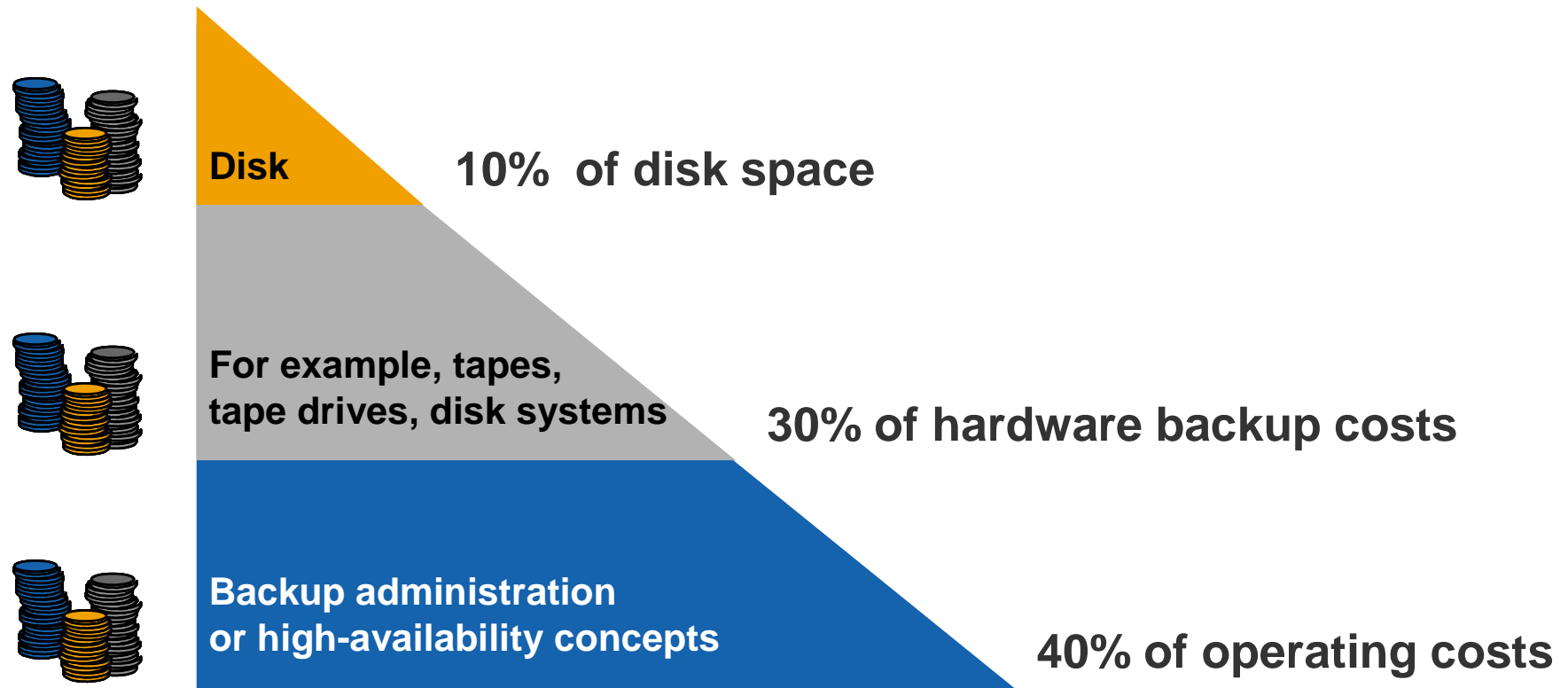
one server,
one database

Full range of scalability & flexibility

- Decide how many different systems will reside in one physical database
- Additive sizing approach

Reduced Maintenance & Operating Costs

Benefits detail: Estimated savings



Only need to administer one database

- Similar effort compared to maintain one component on one database

Sizing & Administration of an MCOD installation

- The total sizing of an MCOD installation can be achieved by an additive sizing approach of the appropriate values of the single systems

Example: Combined installation of System1 and System2 using MCOD

	System 1	System 2	MCOD Installation
Users	300	500	800
SAPS	1500	2000	3500
DB Size [GByte]	400	500	900

- Decide which systems to combine to achieve a maximum of savings in administration and system handling while keeping the flexibility of the complete installation

System Recommendations

Combination of systems with semantically related data like R/3 and CRM.

Combination of systems of the same type e.g. combination of development systems or combination of production systems.

Development System 1 ... Development System N

Test System 1... Test System N

Production System 1 ... Production System N

The combination of production and non production systems is not supported.

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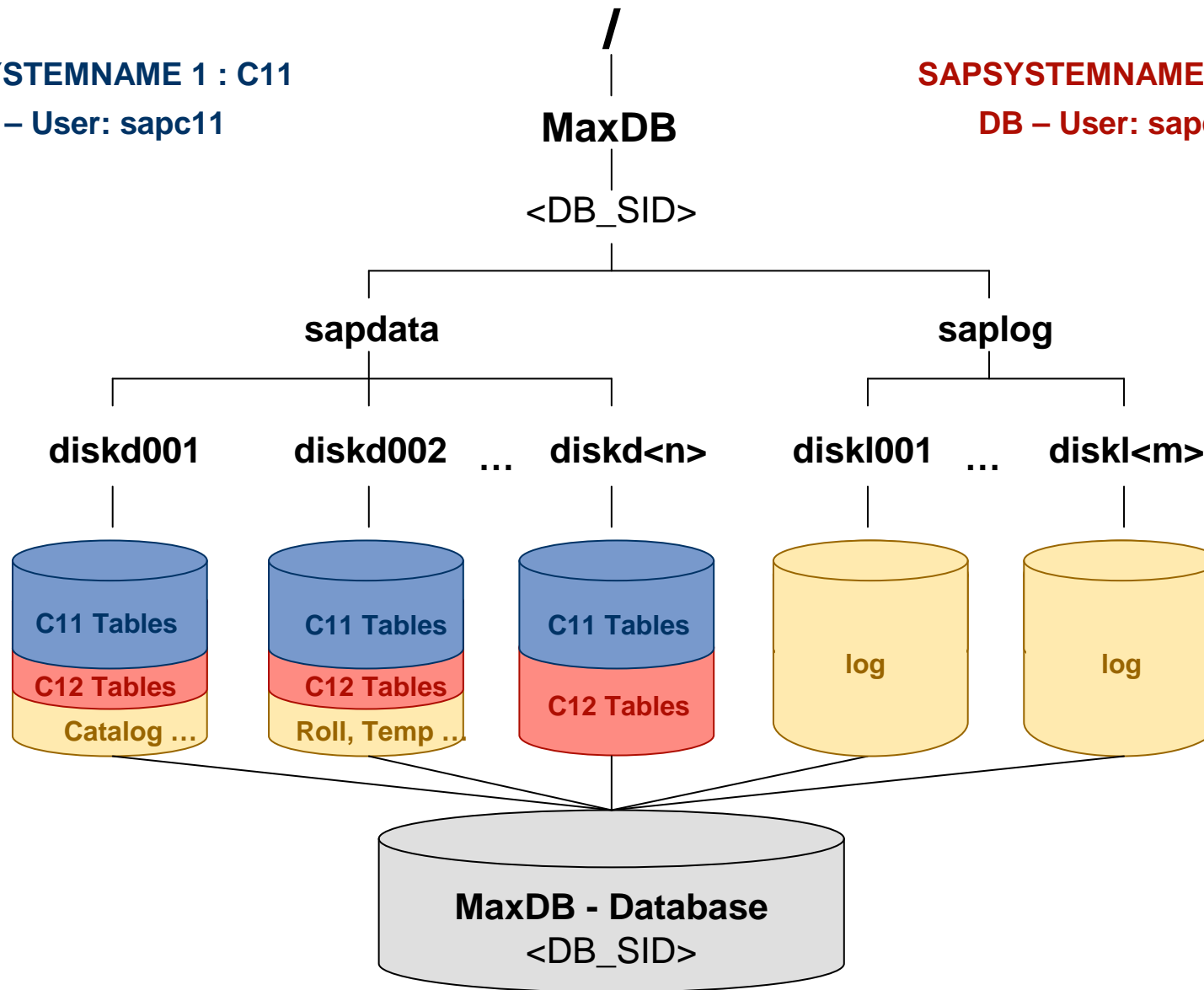
Example for a Technical Realization

Availability

MaxDB

SAPSYSTEMNAME 1 : C11
DB – User: sapc11

SAPSYSTEMNAME 2 : C12
DB – User: sapc12



Technical Implementation:

- One database instance will contain the data of all systems
- Each SAP system will create its own database schema / database user sap<sapsystemname> all other resources within the database are shared (catalog, devspaces,caches,...)

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What will be supported

- MCOD is available on all OS/DB platforms supported by SAP
- General Availability since 1st of July, 2002
- For the future all upcoming components of the Mysap Business Suite are planned to be enabled for an MCOD installation
- Information about the current available components is updated regularly and can be found at the service market place under the quicklink **MCOD**

More information

- <http://service.sap.com/mcod>

Available Components

OLTP like components

SAP WebAS 6.10 and higher

SAP R/3 4.6C SR2

SAP R/3 Enterprise

SAP Workplace 2.11 SR1

SAP CRM 2.0C SR1 and higher

SAP EBP 2.0C SR1 and higher

SAP SRM 2.0 and higher

SAP SCM 4.0* and higher

SAP Knowledge Warehouse 5.0 and higher

SAP NetWeaver 04*

OLAP like components

SAP BW 3.0A and higher

SAP SEM 3.1A and higher

SAP SCM 4.0* and higher

SAP NetWeaver 04*

* Database setup depending on the main operational area

Conclusion

Main advantages are

Full flexibility and independence of the installed components

Simplified administration, backup and recovery

Additive sizing approach

System spanning data consistency

Reduced maintenance and operating costs

With “Multiple Components in One Database” SAP offers a powerful option to install several mySAP components in one physical database

**Visit the MCOD homepage:
<http://service.sap.com/mcod>**

**Visit the SAP NetWeaver homepage:
<http://service.sap.com/netweaver>**



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