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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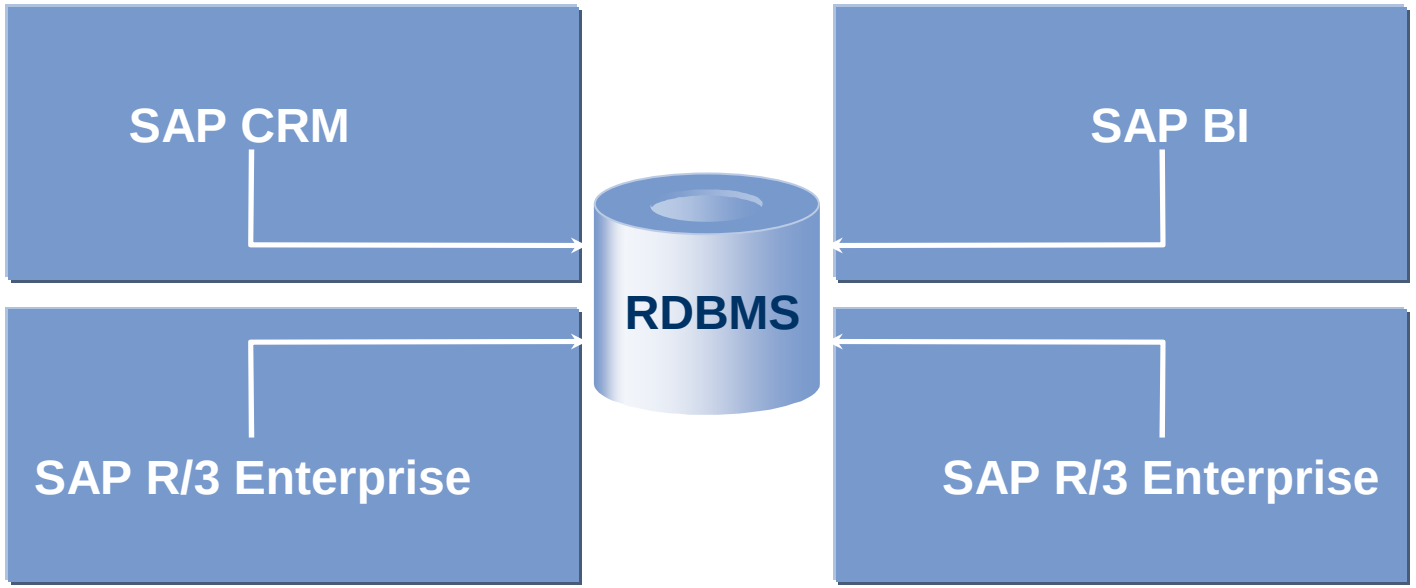
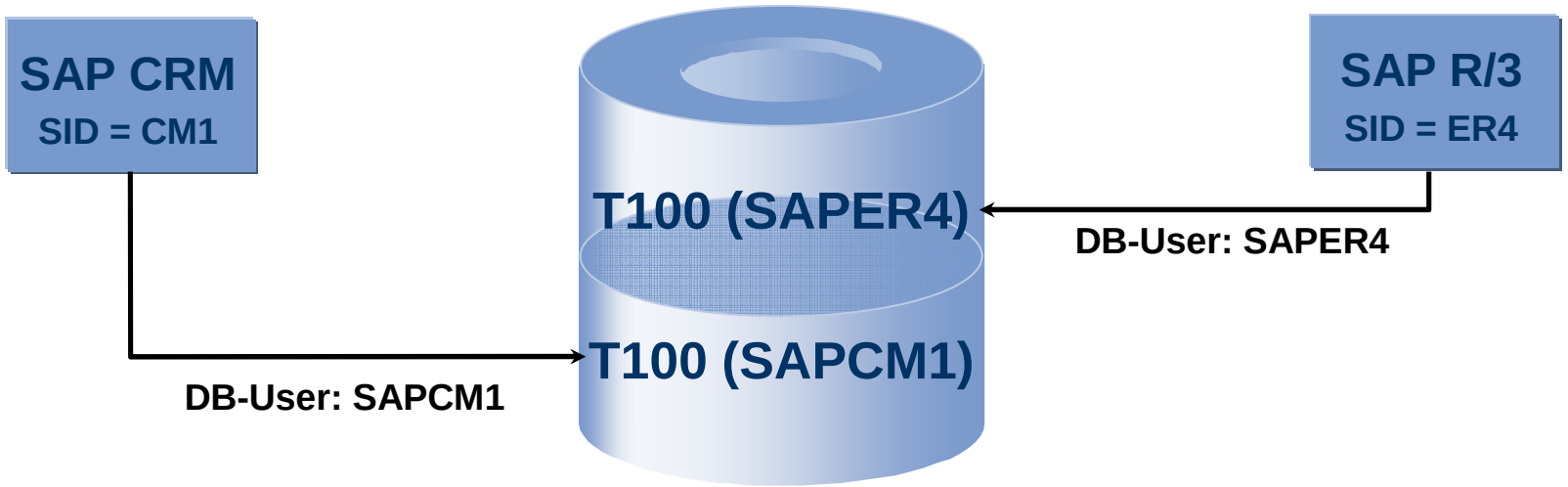
Multiple Components in One Database

- 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



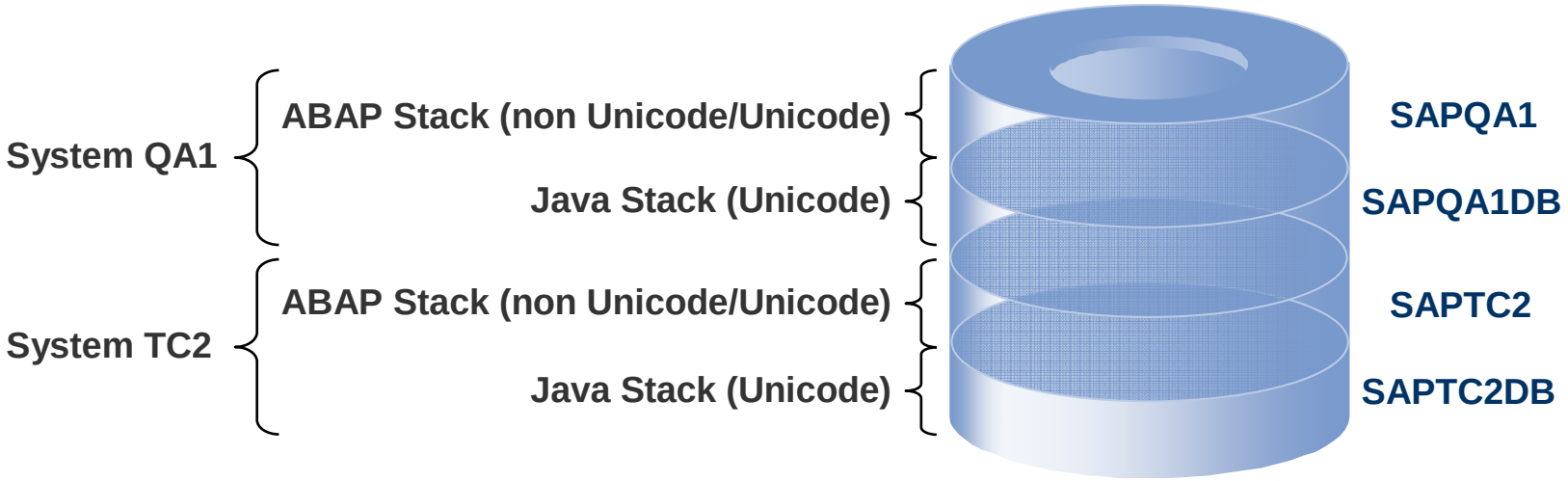
Technical Realization (1)

- 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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Highly Flexible IT Landscape

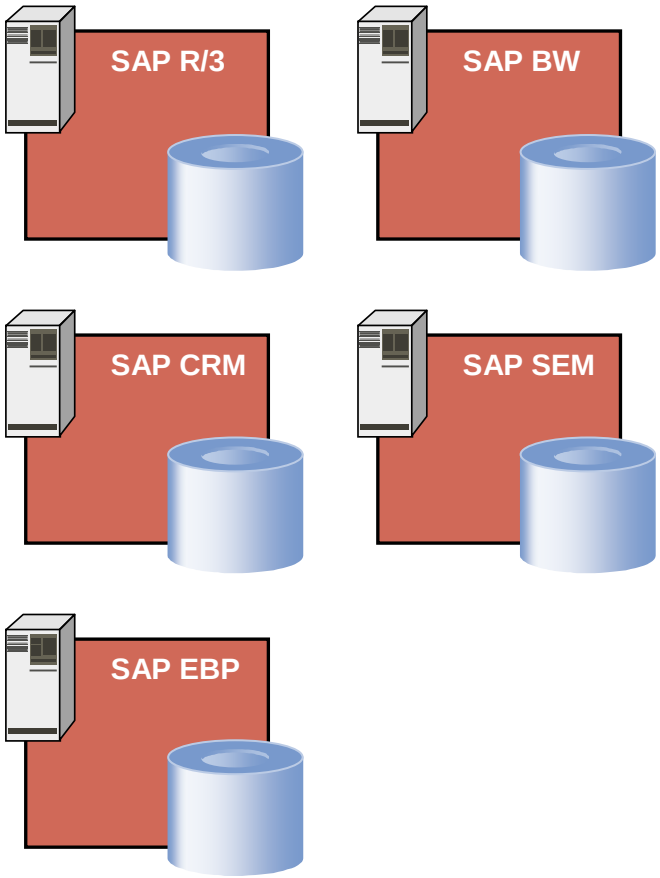
Situation: N Systems, N Databases

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



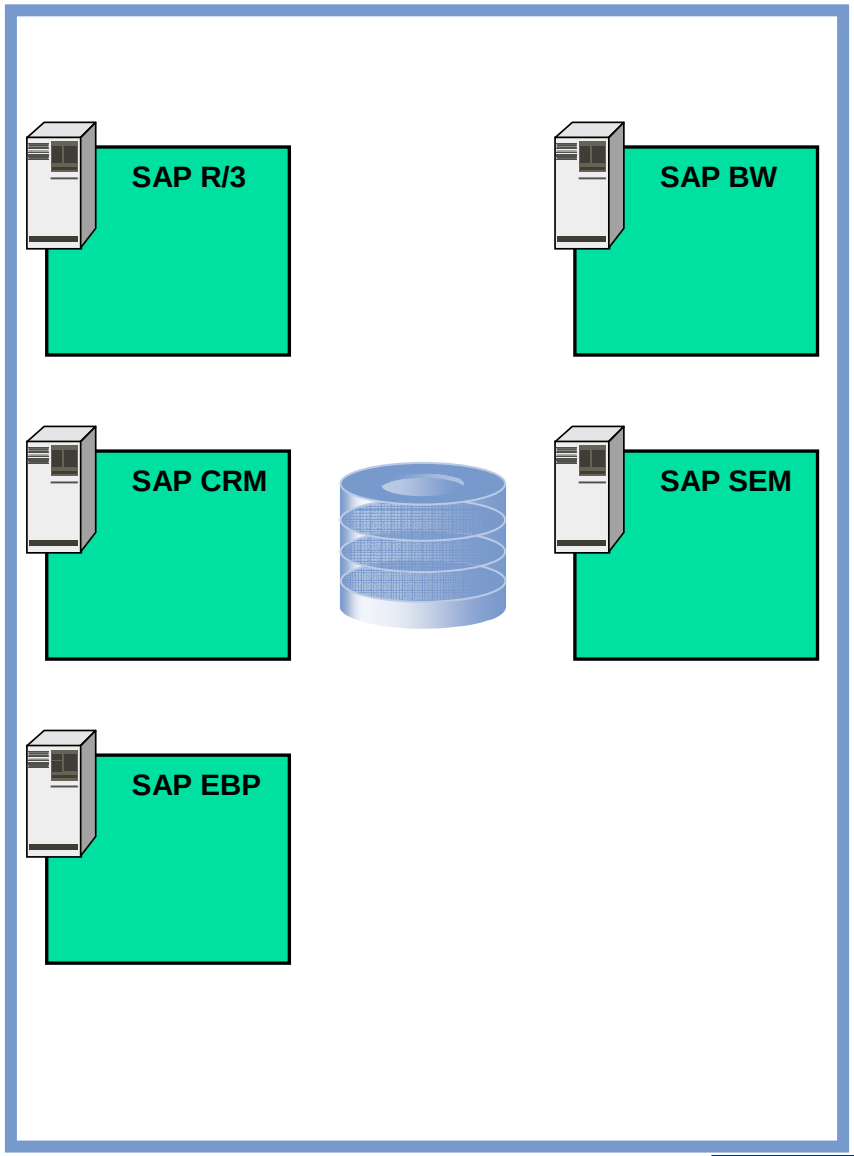
Simplification Of The System Landscape With MCOD

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



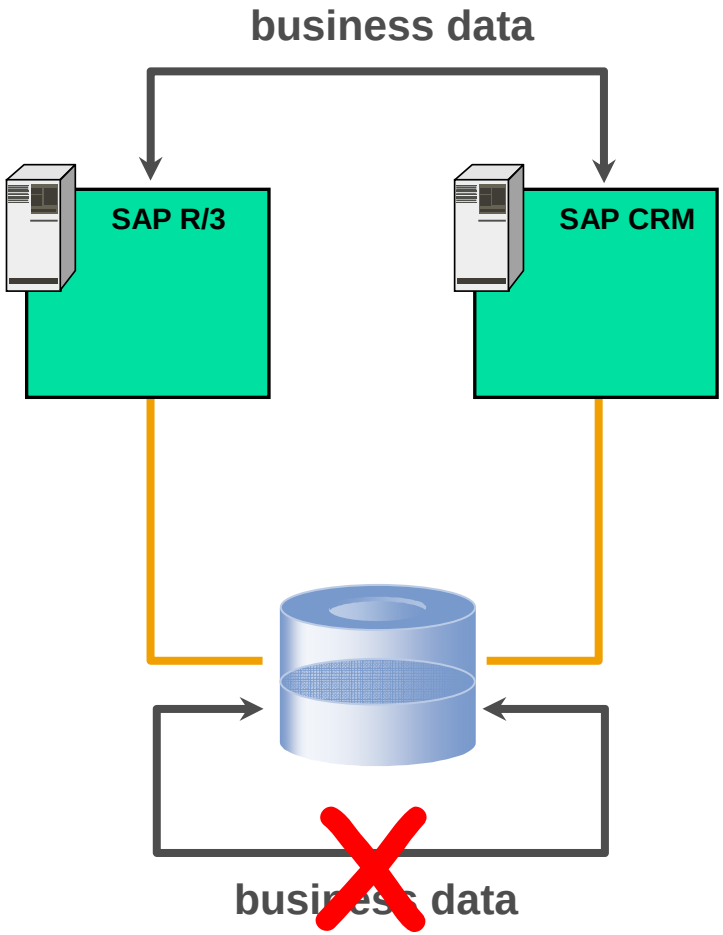
Independence Of Single Systems

(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

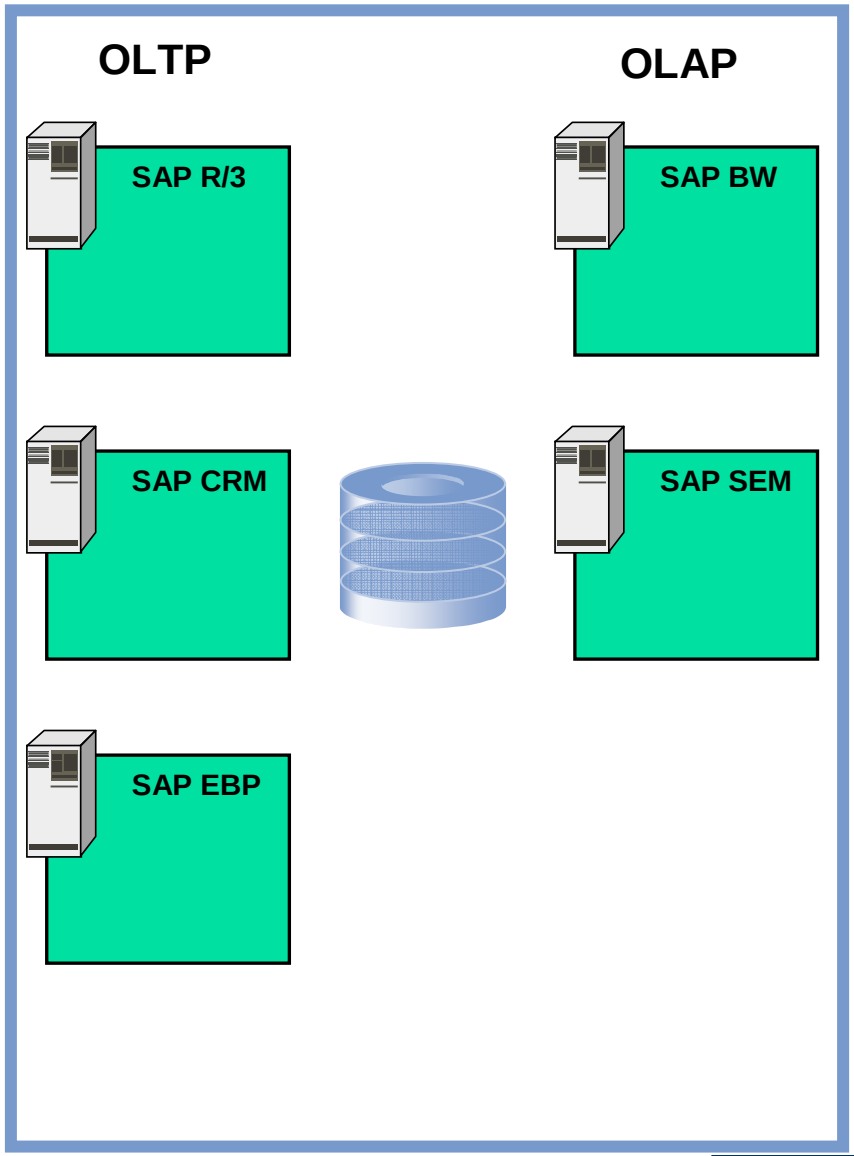


Combination Of OLTP And OLAP Systems

Performance considerations

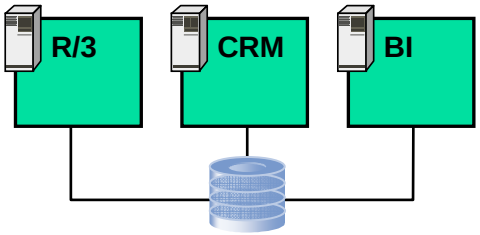
- Former versions of database systems required an individual parameterization for OLTP and OLAP systems to achieve an optimal performance
- Latest versions of most databases used for SAP systems allow a combined installation of OLTP and OLAP systems using MCOD*
  - DB2 for IBM zSeries
  - DB2 for IBM iSeries
  - DB2/UDB for Windows and Unix
  - MS SQL Server
  - MaxDB
  - Oracle
  - Informix

Installable on one physical server



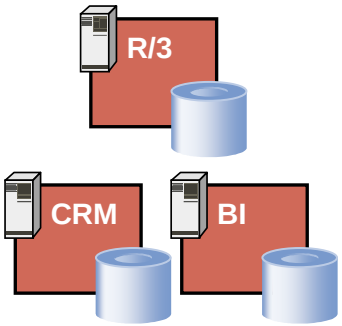
* For details see the MCOD homepage

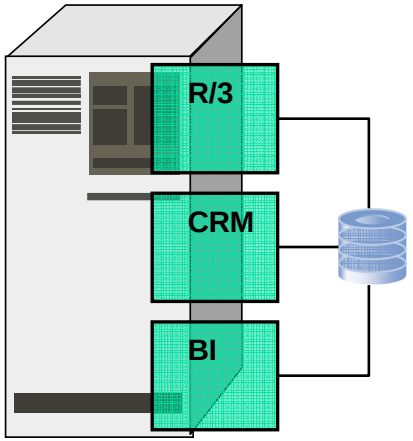
Various Deployment Options



multiple servers,
one databases

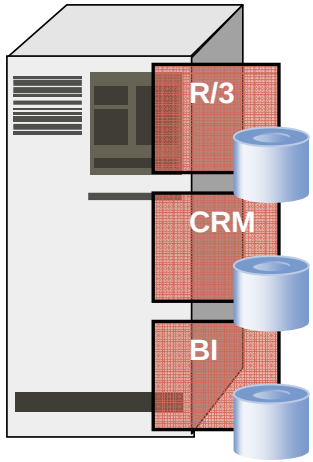
multiple servers,
multiple databases





one server,
one database

one server,
multiple databases

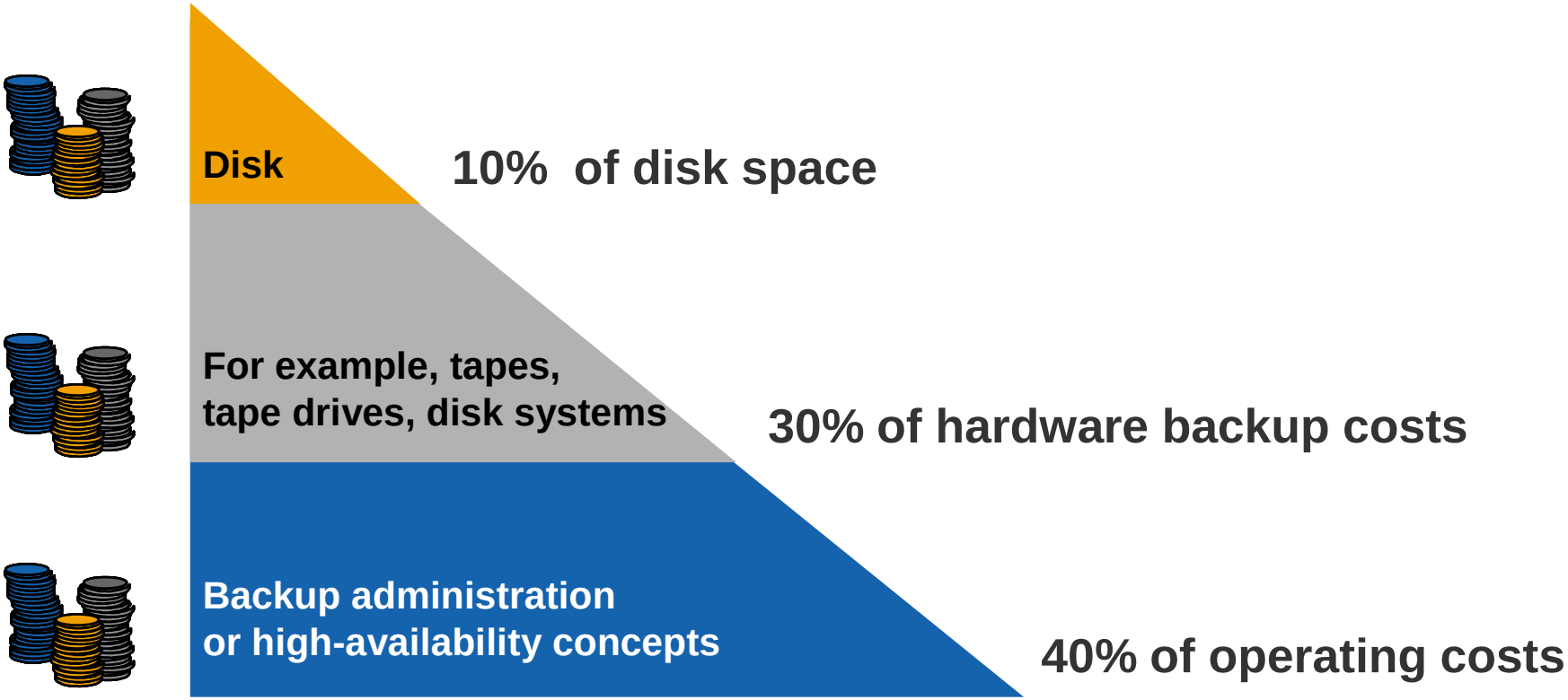


Full range of scalability & flexibility

- 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

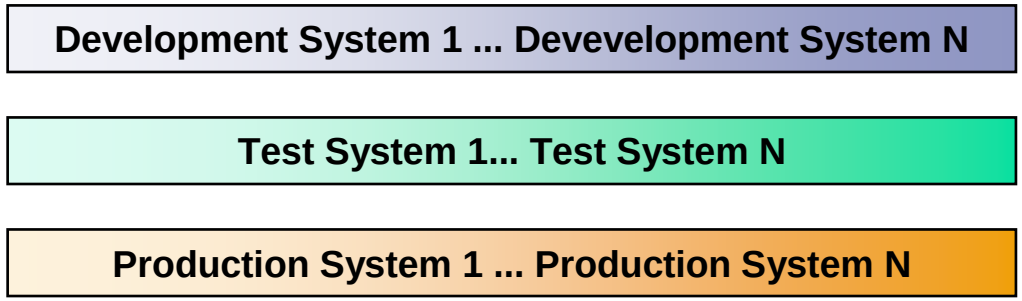
	System 1	System 2	MCOD Installation
Users	300	500	800
SAPS	1500	2000	3500
DB Size [GByte]	400	500	900

- 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.



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

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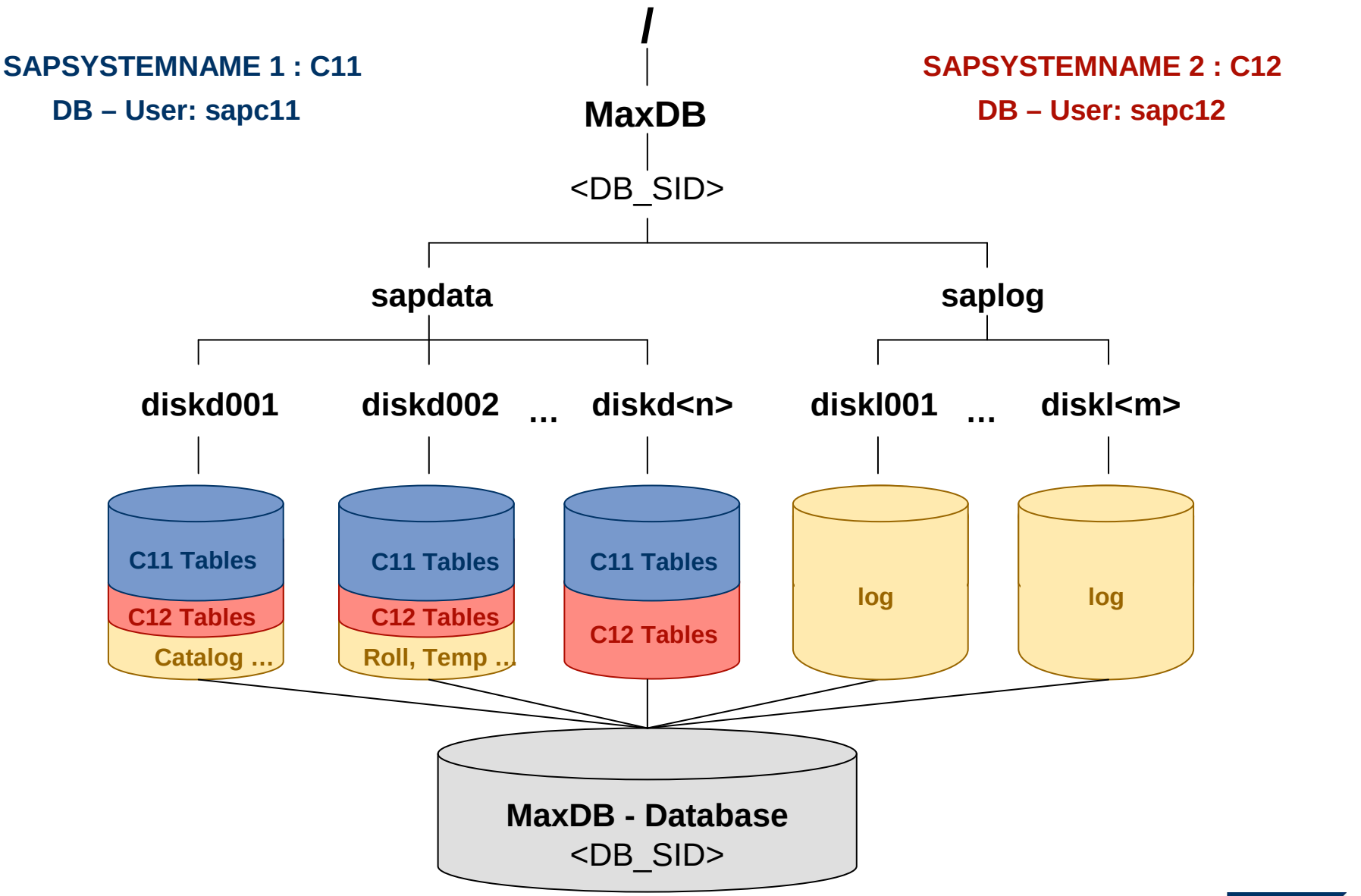
MaxDB



Implementation On MaxDB

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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More Information

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	OLAP like components
SAP WebAS 6.10 and higher	SAP BW 3.0A and higher
SAP R/3 4.6C SR2	SAP SEM 3.1A and higher
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 SCM 4.0* and higher
SAP Knowledge Warehouse 5.0 and higher	
SAP NetWeaver 04*	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

More Information

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

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

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