Multiple Components in One Database - Technical Implementation on Different Databases

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Technical Setup

The following slides show for all databases supported by SAP the technical setup of an MCOD installation containing two systems.

The systems are named C11 and C12.

The part of the database that is used by system C11 is marked in BLUE, parts of the system C12 are marked in RED, and commonly used parts of the database are marked in YELLOW.

For more information about the actual supported mySAP.com components and details about the possible combination of components visit the quicklink MCOD on the SAP Service Marketplace.

http://service.sap.com/mcod
Technical Implementation:

- One database will contain the data of all systems

- The first system works with the user SAPR3 (R/3 4.6) as database schema/database user, each additional system creates its own database schema/database user SAP<SID>
  With the SAP Web Application Server 6.10 and higher, every system creates a schema/user SAP<SID>

- For each additional system an own set of Stogroups will be created (SAP will be substituted by <SID>)

- The VCAT identifier differs from system C11 to C12

- All systems will share the DB2 catalog as common resource

- The R/3 specific database administration tools can be configured to work on any system, if they access the database to monitor DB2

- Strong recommendation for using a data sharing system with one data sharing member handling one SAP component
SAPSYSTEMNAME 1 : C11

R3C11DATA
QSQJRN

R3C11JRN

Operation System
Database

R3C12DATA
QSQJRN

R3C12JRN

SAPSYSTEMNAME 2 : C12
Technical Implementation:

- All mySAP components use the single integrated database DB2 UDB for iSeries

- There is no special implementation for the “Multiple Components in One Database” solution

- Each SAP system on iSeries stores tables, indexes and views in a separate library

- A library corresponds to a SQL schema

- Each SAP system has its own database journal

- Additional information is available with SAP note 443925
**DB2/UDB Unix & Windows**

- **SAPSYSTEMNAME 1 : C11**
  - DB – User: sapc11
- **SAPSYSTEMNAME 2 : C12**
  - DB – User: sapc12

```
db2
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- **C11**
  - sapdata1
  - PSAPDDIC
  - SYSCATSPACE
  - PSAPTEMP
  - C11#DDIC

- **C12**
  - sapdata1
  - sapdata2
  - sapdatat
  - sapdata1
  - sapdata2
  - sapdata<n>
Technical Implementation:

- One database will contain the data of all systems.

- The first system works with the user sapr3 as database schema/database user, each additional system creates its own database schema/database user sap<sid>.
  With the SAP Web Application Server 6.10 and higher, every system creates a schema/user sap<sid>.

- For each additional system an own set of tablespaces will be created (PSAP will be substituted by <SID>#).

- All systems will share the tablespaces SYSCATSPACE and PSAPTEMP.

- The R/3 specific database administration tools only works on the first system (administrative definition of leading system).
Microsoft SQL Server

SAPSYSTEMNAME 1 : C11
DB – User: C11

/ 

C11DATA1

C11 Tables

C12 Tables

Catalog ...

C11DATA2 ...

... C11DATA<n>

C11 Tables

C12 Tables

Roll, Temp, ...

C11LOG1 ...

C11LOG<m>

log

log

SQL Database C11

SAPSYSTEMNAME 2 : C12
DB – User: C12
Technical Implementation:

- One database will contain the data of all systems
- In the past, all tables were owned by a single DB user dbo
- Now each SAP system will create its own database schema with database user <SID> which owns all the tables and views
Informix

SAPSYSTEMNAME 1 : C11
DB – User: SAPR3

SAPSYSTEMNAME 2 : C12
DB – User: SAPR3

Informix Database
C11

Informix Database
C12

* Separated physdev

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Implementation on Informix

Technical Implementation:

- One database server for all SAP systems
- Each SAP system will create its own database with own dbspaces
- No additional database/os users, each database will be owned by the user sapr3
Technical Implementation:

- One database will contain the data of all systems
- Each SAP system will create its own database schema/database user sap<SID>
- Each SAP system will create its own set of tablespaces
- The new tablespace layout is described in SAP note 490365
Technical Implementation:

- One database instance will contain the data of all systems

- Each SAP system will create its own database schema with database user sap<SID> all other resources within the database are shared (catalog, devspaces, caches, ...)

- Tables of the SAP systems and database system tables are spread across all available data files without a definitive distribution.
Installation:

- For mySAP components that are based on SAP Web Application Server 6.20 and higher the MCOD installation option can directly be chosen during the installation process.

- For mySAP components that are build on basis 4.6C and the SAP Web Application Server 6.10, some modifications of the setup scripts have to be done before starting the installation. These modifications are described in detail for the different database/operation system platforms in several SAP notes that can be accessed on the SAP Service Marketplace.
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