

MySQL unter OS/2

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Übersicht

- OS/2 MySQL-Server
- SQL-REXX-Schnittstelle
- Beispiel 1: Externe Bücherdatenbank
- Beispiel 2: Interne Musikdatenbank

MySQL-Server

- Installation
- Konfiguration

MySQL-Server installieren

- Quelle: Hobbes
- Installation des WPI-Archives:
 - mysql-3-23-50-b1.wpi
 - alle drei Pakete installieren
 - original-LW C belassen! (bzw. anderes Boot-LW)
 - Laufwerke können später in my.cnf konfiguriert werden

MySQL-Server konfigurieren

- Anpassen der Datei %etc%\my.cnf

```
[client]
compress
user=root
```

```
[mysqld]
user=mysql
preload-client-dll
server-id=94920
basedir=C:/usr/local/mysql
datadir=C:/usr/local/mysql/data
```

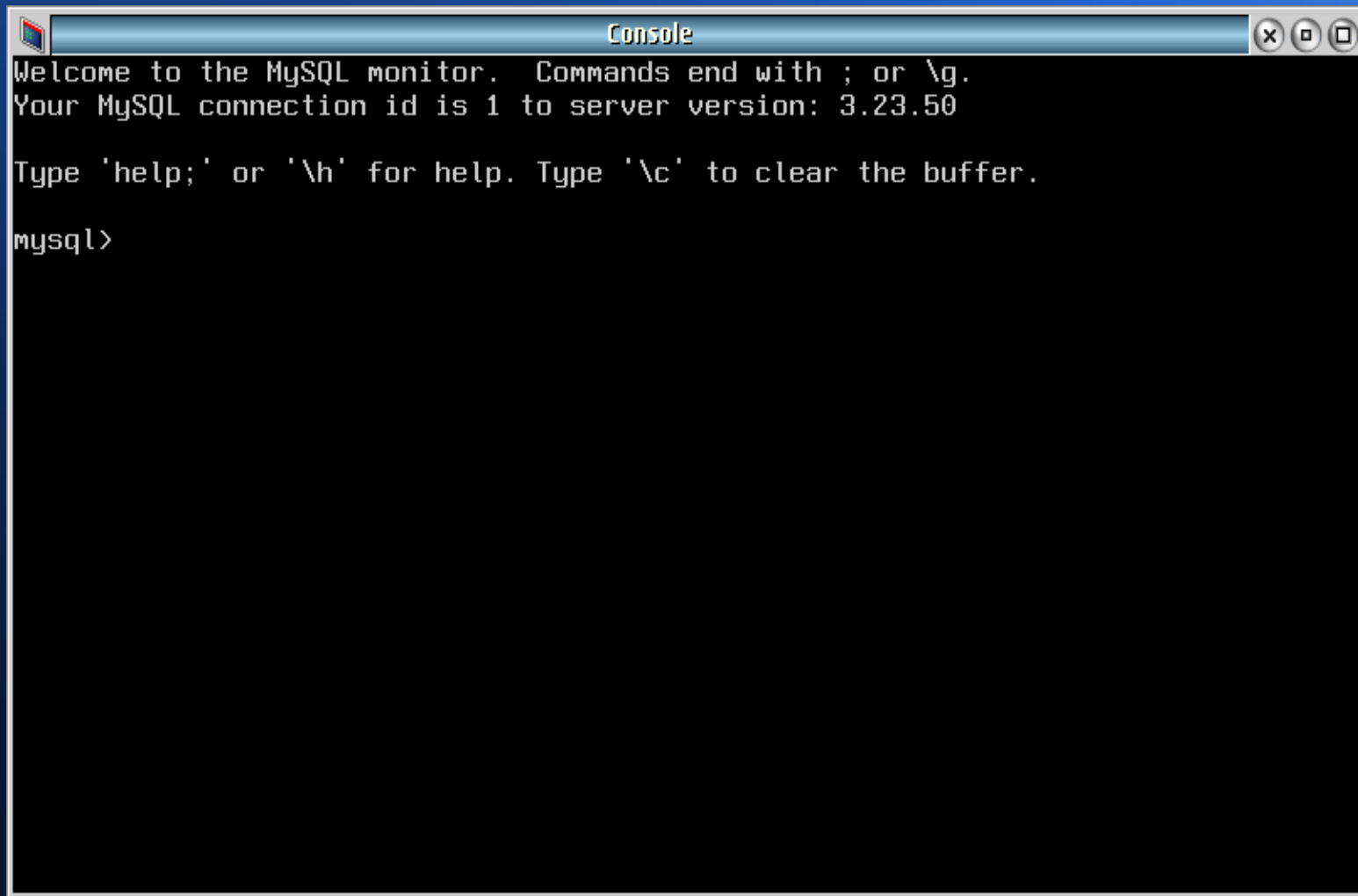
- ggf. Anlegen eines neuen Datenverzeichnisses und Ändern des Eintrages in der my.cnf
- Verschieben des Inhaltes von c:/usr/local/mysql/data in das neu erstellte Verzeichnis

MySQL-Server starten



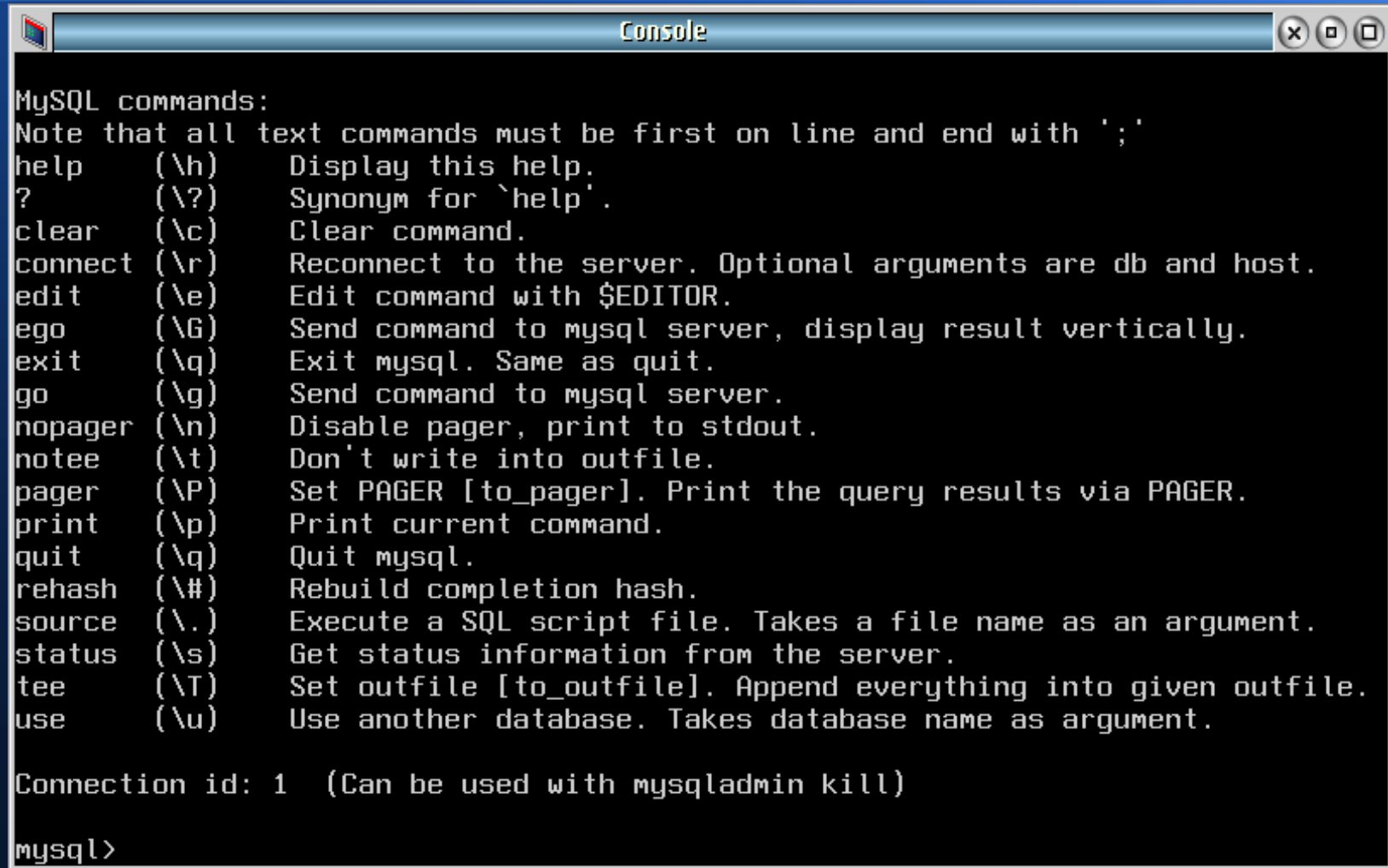
- Server durch Klick auf Icon starten und stoppen
- Aufruf der mitgelieferten Console zur Eingabe von Datenbankstrukturen und Inhalten

MySQL Console

A screenshot of a Windows-style console window titled "Console". The window has a standard title bar with minimize, maximize, and close buttons. The text inside the console is as follows:

```
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 1 to server version: 3.23.50  
  
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.  
  
mysql>
```

MySQL Console



```
Console

MySQL commands:
Note that all text commands must be first on line and end with ';'
help      (\h)      Display this help.
?         (\?)      Synonym for 'help'.
clear     (\c)      Clear command.
connect   (\r)      Reconnect to the server. Optional arguments are db and host.
edit      (\e)      Edit command with $EDITOR.
ego       (\G)      Send command to mysql server, display result vertically.
exit      (\q)      Exit mysql. Same as quit.
go        (\g)      Send command to mysql server.
nopager   (\n)      Disable pager, print to stdout.
notee     (\t)      Don't write into outfile.
pager     (\P)      Set PAGER [to_pager]. Print the query results via PAGER.
print     (\p)      Print current command.
quit      (\q)      Quit mysql.
rehash    (\#)      Rebuild completion hash.
source    (\.)      Execute a SQL script file. Takes a file name as an argument.
status    (\s)      Get status information from the server.
tee       (\T)      Set outfile [to_outfile]. Append everything into given outfile.
use       (\u)      Use another database. Takes database name as argument.

Connection id: 1  (Can be used with mysqladmin kill)

mysql>
```


MySQL Server - Bemerkungen

- case-insensitiv
- Console hat feste Fenstergröße 80x25 und keine Scrollmöglichkeit
- Abhilfe: Ausgabeumlenkung mit \T <datei> und Betrachten dieser Datei mit less
- Beispiele:

```
\T log.txt  
use mysql  
show tables;  
select * from user;
```

```
less c:\usr\local\mysql\bin\log.txt
```

REXX-Bibliothek für SQL-Zugang

- Installation
- Funktionsaufrufe
- Beispiele

RxSQL Installation

- Quelle: Hobbes
- Installation
 - Entpacken der Datei rxsql24rc1_my_os2.zip in ein beliebiges Verzeichnis
 - Kopieren aller Dateien *.exe in ein Verzeichnis der PATH-Variable
 - Kopieren aller Dateien *.dll in ein Verzeichnis des LIBPATH

RxSQL Funktionsaufrufe

- `Call RxFuncAdd 'SQLLoadFuncs', 'rexxsql', 'SQLLoadFuncs'`
`Call SQLLoadFuncs`
- `If SQLConnect(var , user , pwd , db, srv) < 0 Then`
`Abort('connecting')`
- `if SQLCommand(var, sqlcommand) <0 Then Abort('select')`
- `If SQLDisconnect(var) < 0 Then Abort('disconnecting')`
- `Call SQLDropFuncs 'UNLOAD'`
- `Prozeduren Abort und Syntax` aus mitgelieferten Beispielen
- `var:` REXX-Variable, wird bei Funktionen unterschiedlich verwendet
- `user, pwd:` Authentifizierung an der Datenbank
- `db:` Name der Datenbank
- `srv:` URL oder IP-Adr. des DB-Servers, localhost bei lokaler DB
- `sqlcommand:` Kommando nach SQL-Syntax

RxSQL Beispielaufrufe

- Verbinden zu einer lokalen und entfernten Datenbank und Öffnen dieser DB

```
If SQLConnect( 'c1', 'root', , datenbank, ) < 0 Then Abort('connecting')  
If SQLConnect( 'c1', 'wolfie', password , datenbank, 'raid-array' ) < 0  
    Then Abort( 'connecting' )
```

- SELECT-Statement

```
if SQLCommand( 'c2', 'select * from boeredans;')<0 Then Abort('select')
```

ID	name
1	Wals
2	Polka
3	Masurka
4	Settees
5	Vastrap
6	Kwadriel

```
c2.ID.0=6    c2.name.0=6  
  
c2.ID.1=1    c2.name.1='Wals'  
c2.ID.2=2    c2.name.2='Polka'  
c2.ID.3=3    c2.name.3='Masurka'  
c2.ID.4=4    c2.name.4='Settees'  
c2.ID.5=5    c2.name.5='Vastrap'  
c2.ID.6=6    c2.name.6='Kwadriel'
```

RxSQL Beispielaufrufe

- UPDATE-Statement

```
if SQLCommand( 'b3', 'update folge set Kommentar = "'KommentarF'"  
               where ID='c2.ID.j';') <0 Then Abort( 'update' )
```

- b3: REXX-Variable, hat keine Bedeutung
- folge: Tabellenname
- Kommentar: Tabellenfeld
- KommentarF: REXX-Variable
- ID: Tabellenfeld
- c2.ID.j: REXX_Variable

Bsp. 1: Externer SQL-Server

raid-array:81 / localhost | phpMyAdmin 3.2.2 - Mozilla Firefox

File Edit View History Bookmarks Tools Help

raid-array:81 / localhost | phpMyAd...

raid-array:81/phpMyAdmin/index.php?token=106b0e1f82c629d1d138840ffa62ce05

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phpMyAdmin

- Buecher (7)
- information_schema (16)
- mysql (17)
- phpmyadmin (8)

Please select a database

Server: localhost

Databases SQL Status Variables Charsets Engines Privileges Binary log Processes

Export Import

Actions

- Change password
- Log out

MySQL localhost

Create new database ?

Collation Create

MySQL connection collation: utf8_general_ci

Interface

Language English

Theme / Style: Original

Custom color: Reset

Font size: 82%

MySQL

- Server: Localhost via UNIX socket
- Server version: 5.0.70-log
 - Protocol version: 10
 - User: admin@localhost
- MySQL charset: UTF-8 Unicode (utf8)

Web server

- lighttpd/1.4.32
- MySQL client version: 5.0.70
- PHP extension: mysql

phpMyAdmin

- Version information: 3.2.2
- Documentation
- Wiki
- Official Homepage
- [ChangeLog] [Subversion] [Lists]

Open new phpMyAdmin window

Bsp. 1: Externer SQL-Server

The screenshot shows the phpMyAdmin 3.2.2 interface in a Mozilla Firefox browser. The address bar shows the URL: `raid-array:81/phpMyAdmin/index.php?db=Buecher&token=106b0e1f82c629d1d138840ffa62ce05`. The interface displays the 'Buecher' database structure with a table listing 7 tables: Autor, Buch, Ort, Raum, Regal, Titel, and Verlag. The 'Verlag' table is highlighted in green. Below the table list, there is a 'Create new table on database Buecher' form with fields for 'Name' and 'Number of fields'. A yellow warning box at the bottom states: '1 May be approximate. See FAQ 3.11'.

Table	Action	Records ¹	Type	Collation	Size	Overhead
<input type="checkbox"/> Autor		3	MyISAM	utf8_general_ci	2.1 KiB	-
<input type="checkbox"/> Buch		3	MyISAM	utf8_general_ci	2.1 KiB	-
<input type="checkbox"/> Ort		3	MyISAM	utf8_general_ci	2.1 KiB	-
<input type="checkbox"/> Raum		1	MyISAM	utf8_general_ci	2.0 KiB	-
<input type="checkbox"/> Regal		1	MyISAM	utf8_general_ci	2.0 KiB	-
<input type="checkbox"/> Titel		3	MyISAM	utf8_general_ci	2.1 KiB	-
<input checked="" type="checkbox"/> Verlag		3	MyISAM	utf8_general_ci	2.1 KiB	-
7 table(s)	Sum	17	MyISAM	utf8_general_ci	14.5 KiB	0 B

Check All / Uncheck All With selected: ▾

Print view Data Dictionary

Create new table on database Buecher

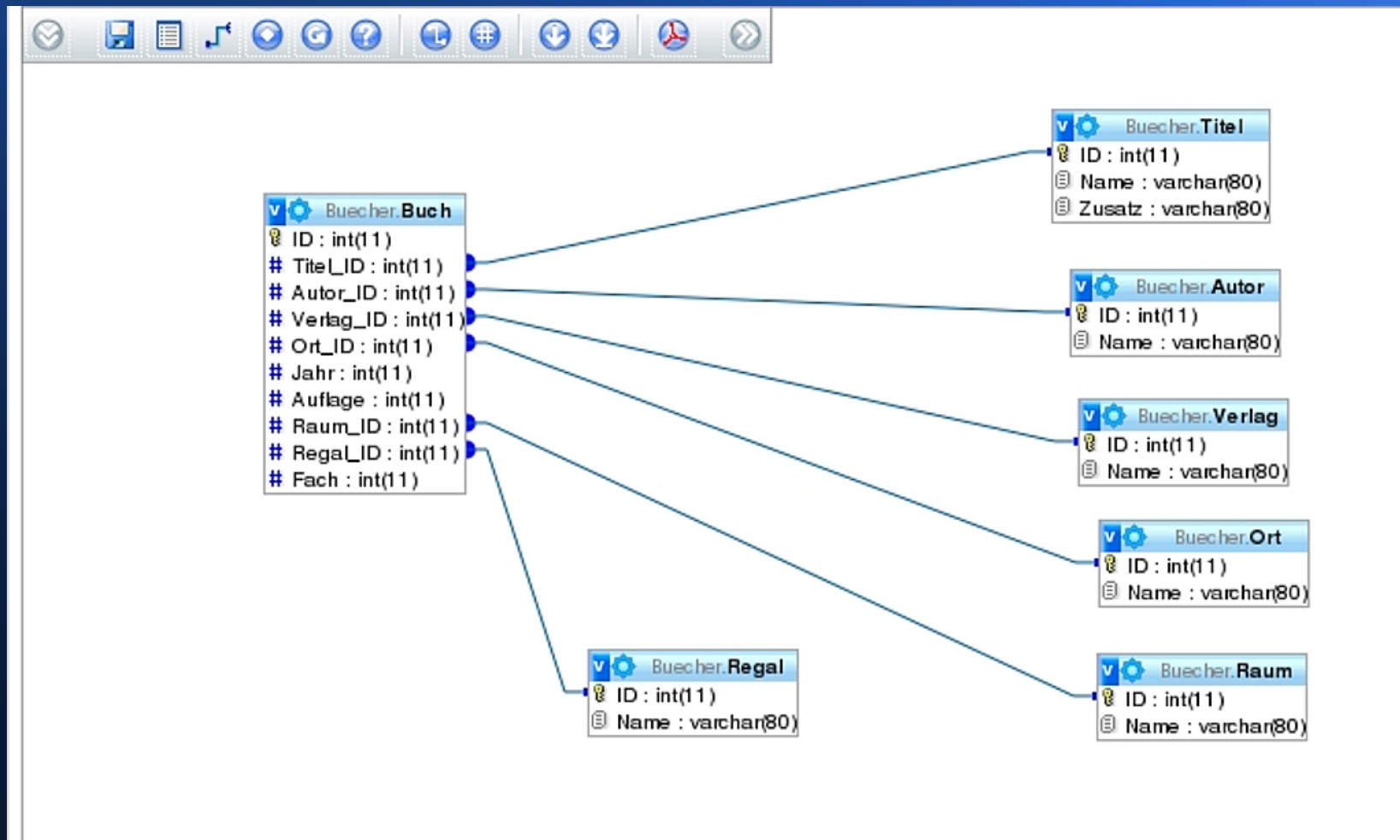
Name: Number of fields:

Go

¹ May be approximate. See [FAQ 3.11](#)

[Open new phpMyAdmin window](#)

Bsp. 1: Externer SQL-Server



Bsp. 1: Externer SQL-Server

raid-array:81 / localhost / Buecher | phpMyAdmin 3.2.2 - Mozilla Firefox

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raid-array:81 / phpMyAdmin/index.php?db=Buecher&token=106b0e1f82c629d1d138840ffa62ce05

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phpMyAdmin

Database: Buecher

Buecher (7)

- Autor
- Buch
- Ort
- Raum
- Regal
- Titel
- Verlag

Server: localhost Database: Buecher

Structure SQL Search Query Export Import Designer

Operations Privileges Drop

Run SQL query/queries on database Buecher: ?

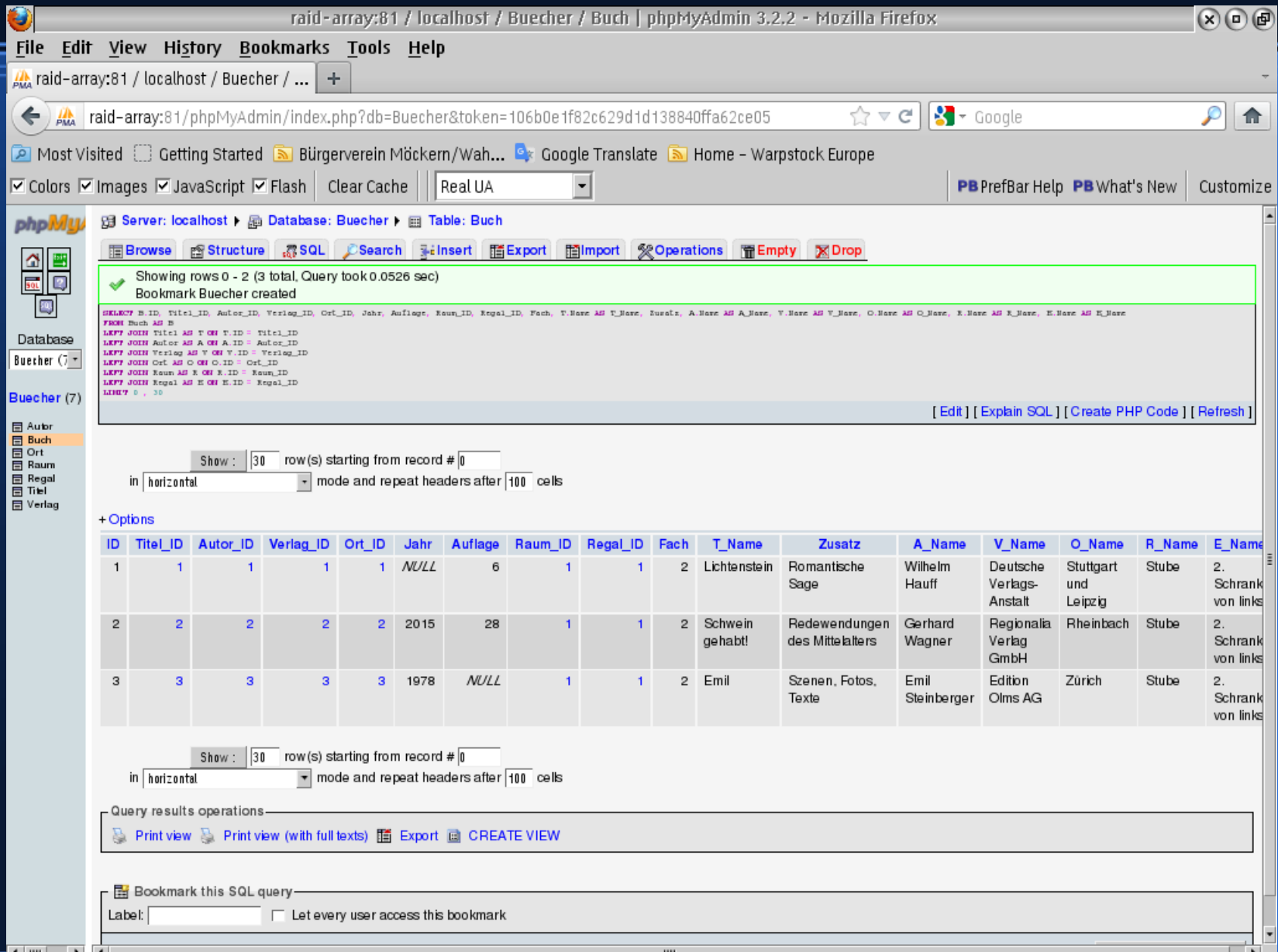
```
SELECT
B.ID, Titel_ID, Autor_ID, Verlag_ID, Ort_ID, Jahr, Auflage, Raum_ID, Regal_ID,
  Fach, T.Name as T_Name, Zusatz, A.Name as A_Name, V.Name as V_Name,
  O.Name as O_Name, R.Name as R_Name, E.Name as E_Name from Buch as B
left join Titel as T on T.ID=Titel_ID
left join Autor as A on A.ID=Autor_ID
left join Verlag as V on V.ID=Verlag_ID
left join Ort as O on O.ID=Ort_ID
left join Raum as R on R.ID=Raum_ID
left join Regal as E on E.ID=Regal_ID;
```

Bookmark this SQL query: ☐ Let every user access this bookmark
☐ Replace existing bookmark of same name

[Delimiter ;] ☒ Show this query here again

[Open new phpMyAdmin window](#)

Bsp. 1: Externer SQL-Server



raid-array:81 / localhost / Buecher / Buch | phpMyAdmin 3.2.2 - Mozilla Firefox

File Edit View History Bookmarks Tools Help

raid-array:81 / localhost / Buecher / ...

raid-array:81 / phpMyAdmin/index.php?db=Buecher&token=106b0e1f82c629d1d138840ffa62ce05

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Server: localhost Database: Buecher Table: Buch

Browse Structure SQL Search Insert Export Import Operations Empty Drop

Showing rows 0 - 2 (3 total, Query took 0.0526 sec)
Bookmark Buecher created

```
SELECT B.ID, Titel_ID, Autor_ID, Verlag_ID, Ort_ID, Jahr, Auflage, Raum_ID, Regal_ID, Fach, T_Name AS T_Name, Zusatz, A_Name AS A_Name, V_Name AS V_Name, O_Name AS O_Name, R_Name AS R_Name, E_Name AS E_Name  
FROM Buch AS B  
LEFT JOIN Titel AS T ON T.ID = Titel_ID  
LEFT JOIN Autor AS A ON A.ID = Autor_ID  
LEFT JOIN Verlag AS V ON V.ID = Verlag_ID  
LEFT JOIN Ort AS O ON O.ID = Ort_ID  
LEFT JOIN Raum AS R ON R.ID = Raum_ID  
LEFT JOIN Regal AS E ON E.ID = Regal_ID  
LIMIT 0, 30
```

[Edit] [Explain SQL] [Create PHP Code] [Refresh]

Show: 30 row(s) starting from record # 0
in horizontal mode and repeat headers after 100 cells

+ Options

ID	Titel_ID	Autor_ID	Verlag_ID	Ort_ID	Jahr	Auflage	Raum_ID	Regal_ID	Fach	T_Name	Zusatz	A_Name	V_Name	O_Name	R_Name	E_Name
1	1	1	1	1	NULL	6	1	1	2	Lichtenstein	Romantische Sage	Wilhelm Hauff	Deutsche Verlags-Anstalt	Stuttgart und Leipzig	Stube	2. Schrank von links
2	2	2	2	2	2015	28	1	1	2	Schwein gehabt!	Redewendungen des Mittelalters	Gerhard Wagner	Regionalia Verlag GmbH	Rheinbach	Stube	2. Schrank von links
3	3	3	3	3	1978	NULL	1	1	2	Emil	Szenen, Fotos, Texte	Emil Steinberger	Edition Olms AG	Zürich	Stube	2. Schrank von links

Show: 30 row(s) starting from record # 0
in horizontal mode and repeat headers after 100 cells

Query results operations
Print view Print view (with full texts) Export CREATE VIEW

Bookmark this SQL query
Label: ☐ Let every user access this bookmark

Bsp. 1: Abfrage ext. SQL-Server

- REXX-Programm (Abfrage)

```
Buecher_Felder= "B.ID,Titel_ID,Autor_ID,Verlag_ID,Ort_ID,Jahr,Auflage" || ,
                "Raum_ID,Regal_ID,Fach,T.Name as T_Name,"          || ,
                "Zusatz,A.Name as A_Name,V.Name as V_Name,"        || ,
                "O.Name as O_Name,R.Name as R_Name,E.Name as E_Name"

-

if SQLCommand( 'c2', ,
' select 'Buecher_Felder' from Buch as B '                          || ,
' left join Titel as T on T.ID=Titel_ID '                          || ,
' left join Autor as A on A.ID=Autor_ID '                          || ,
' left join Verlag as V on V.ID=Verlag_ID '                        || ,
' left join Ort as O on O.ID=Ort_ID '                              || ,
' left join Raum as R on R.ID=Raum_ID '                            || ,
' left join Regal as E on E.ID=Regal_ID '                          || ,
' ; ' ) <0 Then Abort( 'select' )
```

Bsp. 1: Abfrage ext. SQL-Server

- REXX-Programm (Ausgabe)

```
do i=1 to c2.ID.0
  say "Buch "c2.ID.i
  say "  Titel/Zusatz:  "c2.T_Name.i" - "c2.Zusatz.i
  say "  Autor:        "c2.A_Name.i
  say "  Verlag/Ort/Jahr: "c2.V_Name.i" - "c2.O_Name.i" - "c2.Jahr.i
  say "  Raum:         "c2.R_Name.i
  say "  Regal/Fach:    "c2.E_Name.i" / "c2.Fach.i
  say
end
```

Bsp. 1: Abfrage ext. SQL-Server

```
JP 4052 D:\WOLFGANG\BUECHER
Buch 1
Titel/Zusatz: Lichtenstein - Romantische Sage
Autor: Wilhelm Hauff
Verlag/Ort/Jahr: Deutsche Verlags-Anstalt - Stuttgart und Leipzig -
Raum: Stube
Regal/Fach: 2. Schrank von links / 2

Buch 2
Titel/Zusatz: Schwein gehabt! - Redewendungen des Mittelalters
Autor: Gerhard Wagner
Verlag/Ort/Jahr: Regionalia Verlag GmbH - Rheinbach - 2015
Raum: Stube
Regal/Fach: 2. Schrank von links / 2

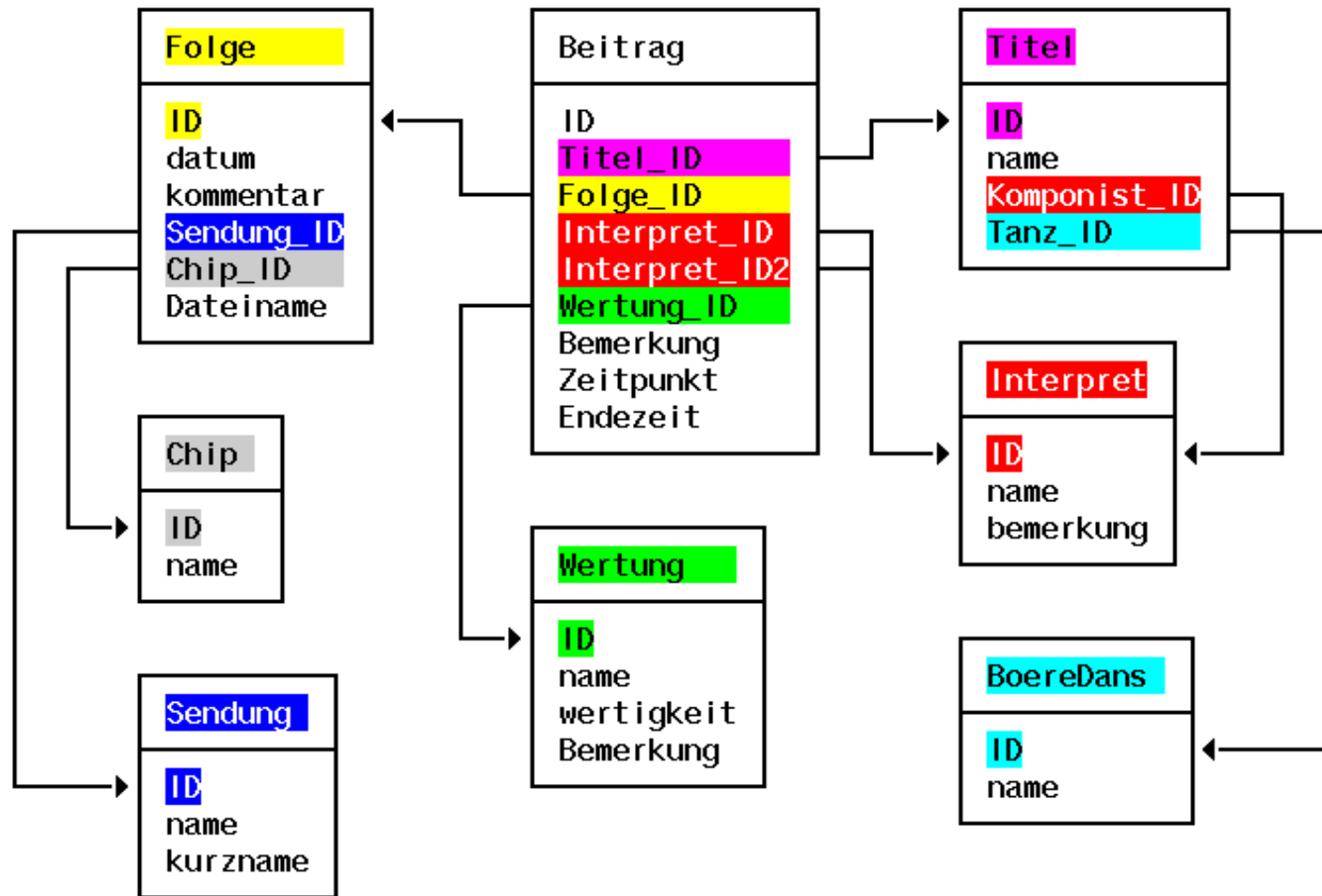
Buch 3
Titel/Zusatz: Emil - Szenen, Fotos, Texte
Autor: Emil Steinberger
Verlag/Ort/Jahr: Edition Olms AG - Zürich - 1978
Raum: Stube
Regal/Fach: 2. Schrank von links / 2

Disconnect succeeded!

[d:\wolfgang\buecher]
```

Beispiel 2: interner SQL-Server

Tabellenstruktur
=====



Beispiel 2: interner SQL-Server

- Demo Musikdatenbank

MySQL unter OS/2

Vielen Dank für die Aufmerksamkeit.

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