



**opentext**<sup>™</sup>

## **SQLBase 12.2**

Neue Funktionen in der SQLBase 12.2

Roadshow Mai 2019 | Helmut Reimann

# Agenda

- SQLTalk-Plus Erweiterungen
- Audit Logging in SQLBase 12.2
- Neue Server – Konsole
- Neue API Funktionen
  - Offset / Limit
- .NET Core Router

# SQLTalk-Plus Erweiterungen

- DB-Verbindungen testen:

The screenshot shows a 'Connection Tester' dialog box with the following fields and results:

- Provider: <Built-in SQLBase>
- Server: SERVER1
- Database: ISLAND
- Username: sysadm
- Password: [Redacted]
- Additional: [Empty]
- Result: Pass

Server Information:

servername	SERVER1
version	12.2.0.12222
computername	HREIMANN-02
ssl	0
sslonly	0
bits	64

# SQLTalk-Plus Erweiterungen

- Server Explorer:

The screenshot displays the SQLTalk Plus application interface. The top menu bar includes 'Home', 'View', and 'Data'. Below the menu is a toolbar with buttons for 'Last Command', 'Grid Results', 'Execution Plan', 'Errors', 'Output', 'Server Explorer', 'Clear', and 'Test Connect...'. The 'Server Explorer' pane on the left shows a tree view of the server hierarchy: SERVER1 (localhost) > ISLAND > Tables > SYSADM.CC. The main editor area contains the following SQL script:

```
connect island;

select company_ID, @IFBOOL(STATUS = 'PAID', 'TRUE', 'FALSE') from invo

select company_Name, @IFBOOL(Company_ID = 101, 'TRUE', 'FALSE') from in

select Company_Name, @ISNUMERIC(Company_ID), @ISNUMERIC(STATUS) from Inv
```

The 'Grid Results' pane at the bottom shows the output of the last query, displaying a table with three columns: Company\_Name, @ISNUMERIC(Comp...), and @ISNUMERIC(STATU...). The data rows are:

Company_Name	@ISNUMERIC(Comp...)	@ISNUMERIC(STATU...)
Clothing Connoisseurs 1	1	0
Clothing Connoisseurs 1	1	0
Clothing Connoisseurs 1	1	0
Clothing Connoisseurs 1	1	0

# SQLTalk-Plus Erweiterungen

- Server Explorer:
  - DB-Schema

The screenshot displays the SQLTalk Plus application interface. The top menu bar includes 'Home', 'View', and 'Data'. Below the menu is a toolbar with icons for 'Add Row', 'Delete Row', 'Apply Changes', 'Discard Changes', 'Refresh', 'Save as CSV', 'From CSV', 'Report', 'Options', and 'Audit'. The 'Server Explorer' pane on the left shows a tree view of the database structure: SERVER1 (localhost) > ISLAND > Tables > SYSADM.COMPANY, listing columns: COMPANY\_ID, COMPANY\_NAME, ADDRESS, CITY, STATE, ZIP, COUNTRY, PHONE, and FAX. The main 'Grid Results' pane shows a table with columns: TABLE\_SCHEMA, TABLE\_NAME, COLUMN\_NAME, COLUMN\_GUID, COLUMN\_PROPID, ORDINAL\_POSITION, and CHECK. The data rows are as follows:

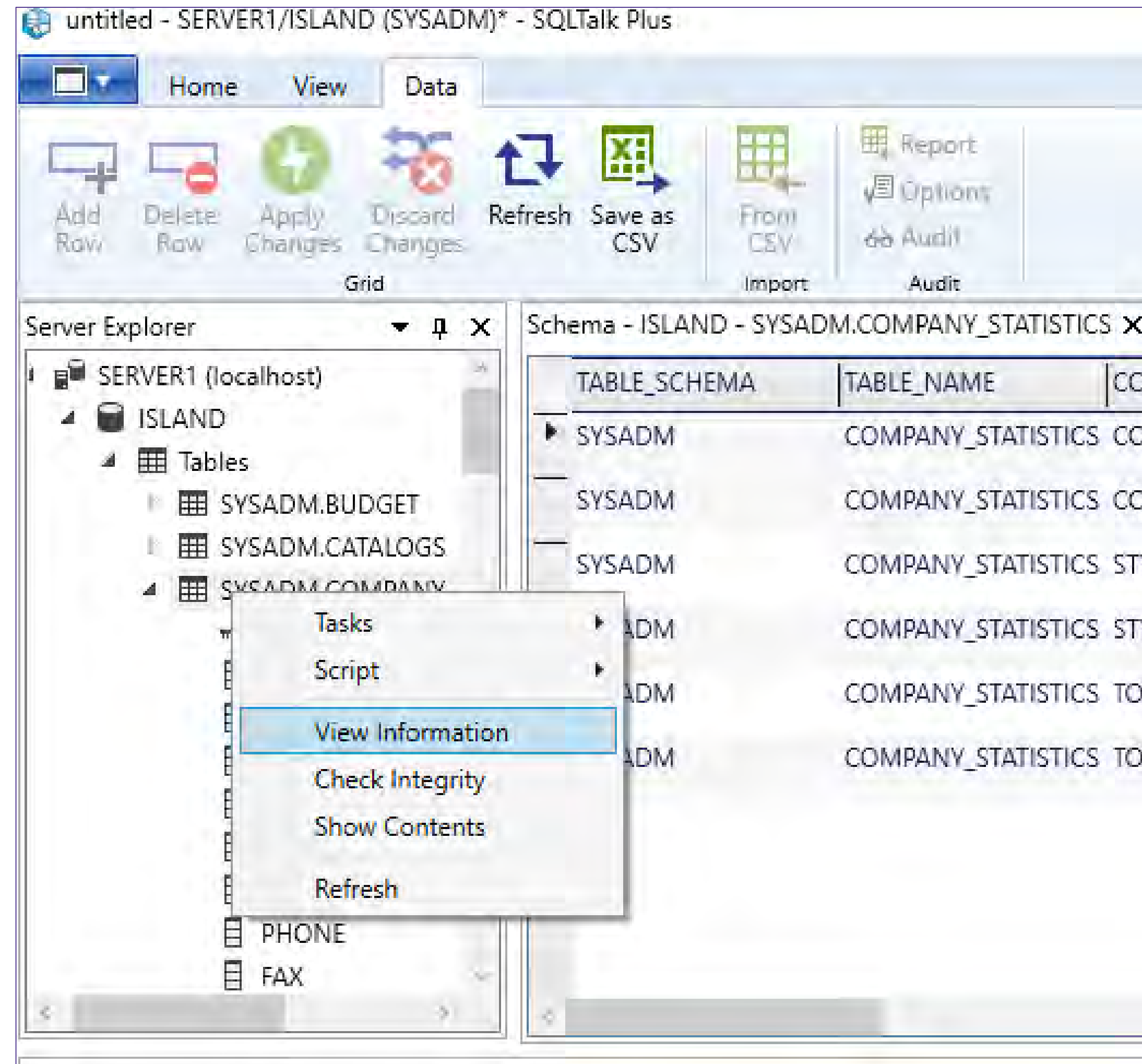
TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	COLUMN_GUID	COLUMN_PROPID	ORDINAL_POSITION	CHECK
SYSADM	COMPANY	COMPANY_ID			1	<input type="checkbox"/>
SYSADM	COMPANY	COMPANY_NAME			2	<input type="checkbox"/>
SYSADM	COMPANY	ADDRESS			3	<input type="checkbox"/>
SYSADM	COMPANY	CITY			4	<input type="checkbox"/>
SYSADM	COMPANY	STATE			5	<input type="checkbox"/>
SYSADM	COMPANY	ZIP			6	<input type="checkbox"/>
SYSADM	COMPANY	COUNTRY			7	<input type="checkbox"/>
SYSADM	COMPANY	PHONE			8	<input type="checkbox"/>
SYSADM	COMPANY	FAX			9	<input type="checkbox"/>

Below the grid, the 'Grid Results' pane shows a preview of data with columns: Company\_Name, @ISNUMERIC(Comp..., and @ISNUMERIC(STATU... The data rows are:

Company_Name	@ISNUMERIC(Comp...	@ISNUMERIC(STATU...
Clothing Connoisseurs	1	0
Clothing Connoisseurs	1	0
Clothing Connoisseurs	1	0
Clothing Connoisseurs	1	0

# SQLTalk-Plus Erweiterungen

- Server Explorer:
  - Funktionen



# Audit in SQLBase 12.2

- Datenbank Audit mit *SQLTalk Plus*
  - Verbindungs - Informationen:

The screenshot displays the SQLTalk Plus application window. The title bar reads "untitled - SERVER1/ISLAND (SYSADM)\* - SQLTalk Plus". The interface includes a menu bar (Home, View, Data), a toolbar with icons for "Add Row", "Delete Row", "Apply Changes", "Discard Changes", "Refresh", "Save as CSV", "From CSV", "Report", "Options", and "Audit".

The **Server Explorer** pane on the left shows a tree view for "SERVER1 (localhost)" with folders for "ISLAND" (containing Tables, Indexes, Views, Stored Procedures, Users), "SBTASK", and "SPORT".

The central query editor contains the SQL statement: `select * from invoice;`

The **Properties** pane on the right shows the "SQLBase Connection" configuration:

- Connection:** Database: ISLAND, DataSource: localhost, Port: 2155, Transport: TCP
- Data:** Connection String: input message size=2000;ou
- Misc:** ANSI Join Syntax: True, Default Isolation Level: RC, Default Schema: SYSADM, Input Message Size: 2000, Isolation Level: RC, Output Message Size: 1000, Server Name: SERVER1, Server Version: 12.02.0000

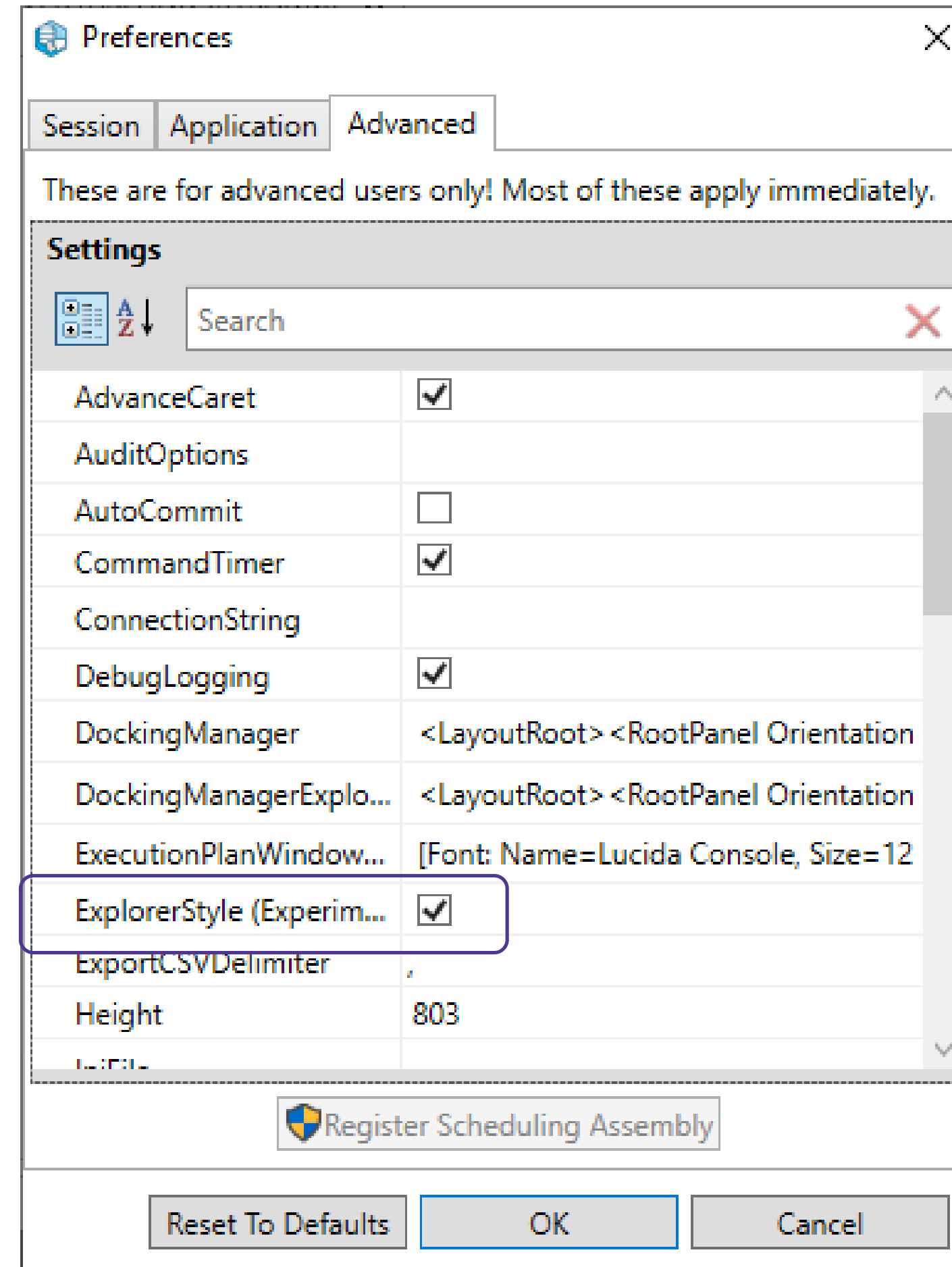
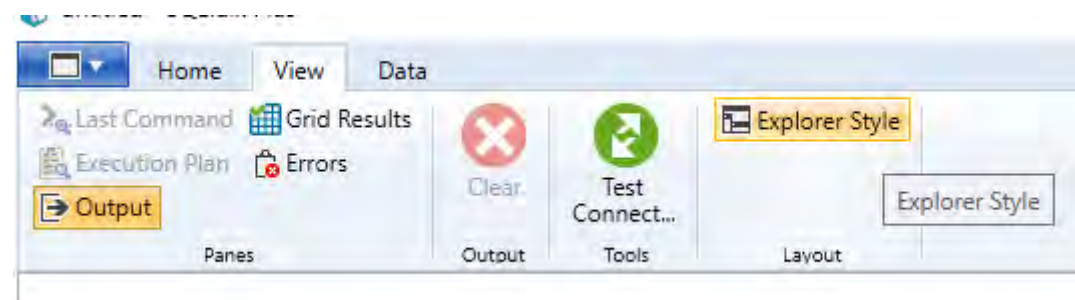
The **Grid Results** pane at the bottom shows the output of the query:

INVOICE_NO	COMPANY_ID	COMPANY_NAME	INVOICE_DATE	DATE_PAID	STATUS	AMOUNT_PAID	EMPLOYEE_ID
6	101	Clothing Connoisseurs	08.03.1995	01.04.1995	PAID	1536,75	FKB
8	101	Clothing Connoisseurs	29.03.1995	28.04.1995	PAID	1836,9	FKB

At the bottom of the window, there are tabs for "Output\*", "Grid Results", "Execution Plan", and "Last Command". The status bar at the very bottom indicates "Idle" and connection details: "localhost | 1 | ISLAND | SYSADM | 00:00:00.2810065 | 1".

# Audit in SQLBase 12.2

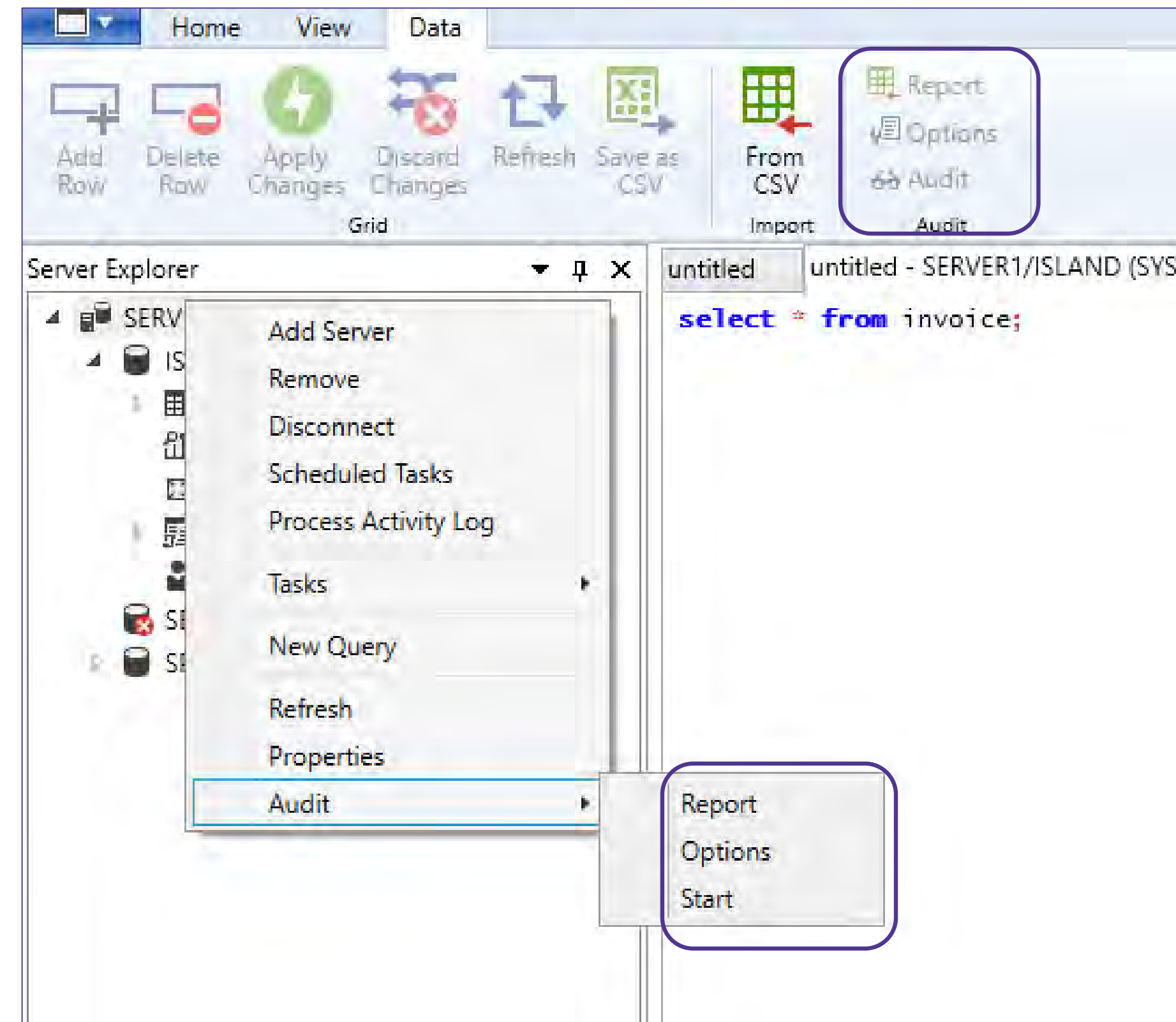
- Audit einschalten:
  - Menüeintrag in Finaler Version
  - (z.Z. Neustart Erforderlich)





# Audit in SQLBase 12.2

- Audit Menü



# Audit in SQLBase 12.2

- Menü: *Options*

SERVER1: Audit Options

Audit Types

<input checked="" type="checkbox"/>	Types	Description
<input checked="" type="checkbox"/>	Rejected logons	Records unsuccessful login attempts. Useful to s
<input checked="" type="checkbox"/>	Security violations	Tells you if a user tried to access data without p
<input checked="" type="checkbox"/>	Valid logons/logoffs	Records all valid logons, telling you when a user
<input checked="" type="checkbox"/>	Valid connects/disconnect	Records CONNECT and DISCONNECT statemen
<input checked="" type="checkbox"/>	Database operations	Records CREATE DATABASE, DROP DATABASE, II
<input checked="" type="checkbox"/>	Recovery operations	Records all ROLLBACK commands.
<input checked="" type="checkbox"/>	Backup/Restore operation	Records all BACKUP and RESTORE commands.
<input checked="" type="checkbox"/>	Deadlocks, timeouts	Records information about deadlocks and timeo
<input checked="" type="checkbox"/>	Table queries	Tells which users accessed which tables.
<input checked="" type="checkbox"/>	Table updates/inserts	Records database manipulation language comm
<input checked="" type="checkbox"/>	Connects/Disconnects per	Tells how long it takes users to connect to and c
<input checked="" type="checkbox"/>	SQL perf	Tells you how much time SQLBase takes to com
<input checked="" type="checkbox"/>	Transaction perf	Tells you when a transaction ended, and how lo

Output Directory: C:\Users\hreimann\Documents\Projects\RoadShow\_2019\SQLBase 122\Sample

Max Records: 1000

Max Old Logs: 1

Start OK Cancel

# Audit in SQLBase 12.2

- Report des Audit:

The screenshot shows the SQLBase 12.2 interface with the Audit Report window open. The report displays a table of audit results for the ISLAND database. The table has the following columns: Type, Database, Table, User, Execution, Executed On, and Dr. The data rows are as follows:

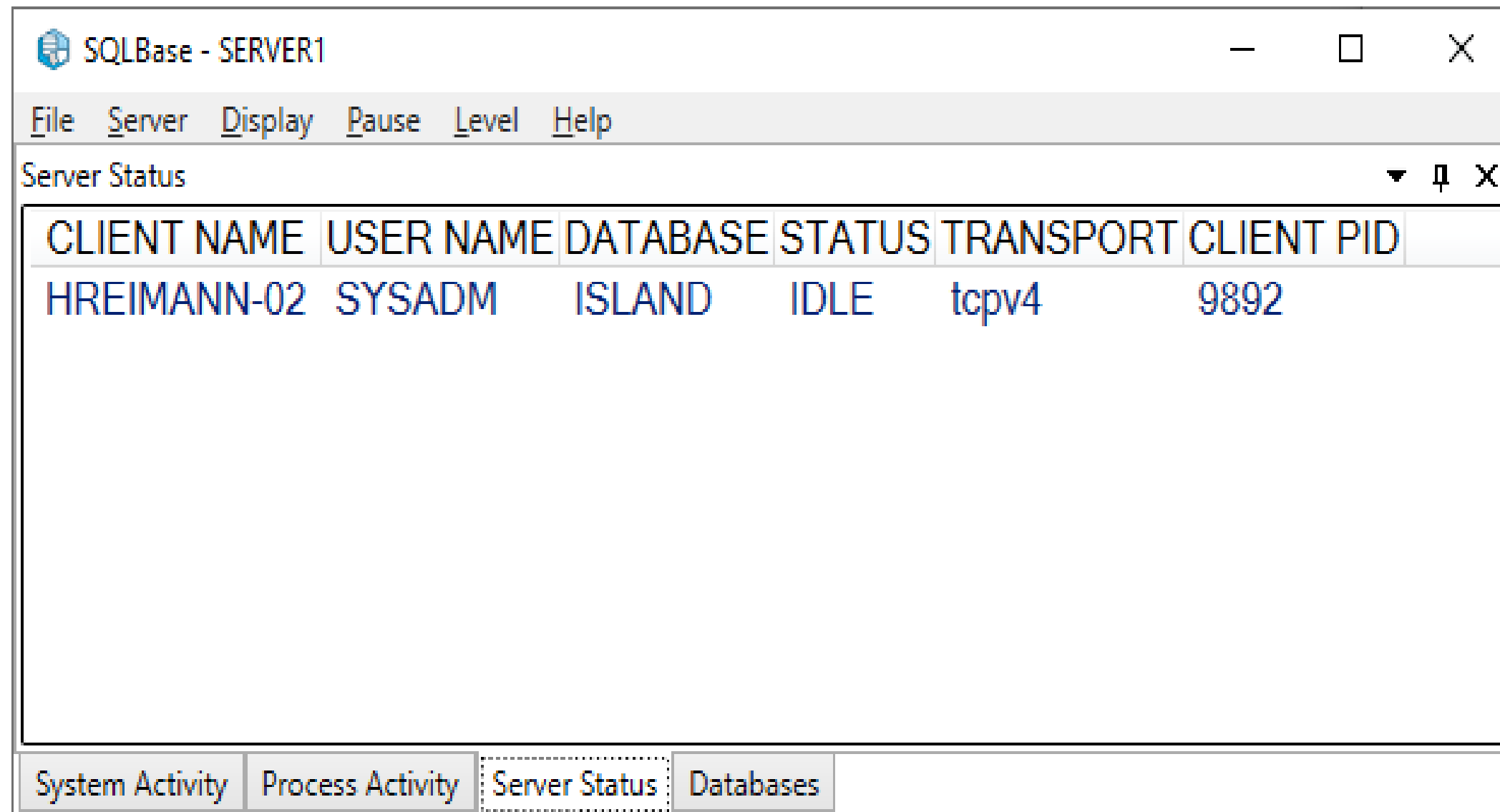
Type	Database	Table	User	Execution	Executed On	Dr
SQL perf	SERVER1			0:00:00	10.05.2019 09:57	ST
Table queries	ISLAND	INVOICE	SYSADM	0:00:00	10.05.2019 09:57	Se
Valid connects/disco...	ISLAND		SYSADM	0:00:00	10.05.2019 09:57	CC
Valid connects/disco...	ISLAND		SYSADM	0:00:00	10.05.2019 09:57	CC
SQL perf	ISLAND	INVOICE	SYSADM	0:00:00	10.05.2019 09:57	se
SQL perf	ISLAND	INVOICE	SYSADM	0:00:00	10.05.2019 09:57	se
Connects/Disconnect...	ISLAND		SYSADM	0:00:00	10.05.2019 09:57	CC
Transaction perf	ISLAND		SYSADM	0:01:11	10.05.2019 09:57	CC
SQL perf	ISLAND	INVOICE	SYSADM	0:00:00	10.05.2019 09:57	se
Connects/Disconnect...	ISLAND		SYSADM	0:00:00	10.05.2019 09:57	CC
Transaction perf	ISLAND		SYSADM	0:00:05	10.05.2019 09:57	CC
Table queries	ISLAND	SYSINDEXES	SYSADM	0:00:00	10.05.2019 09:57	Se

The interface also shows the Server Explorer on the left, the Properties window on the right, and the Grid Results window at the bottom.

# Audit in SQLBase 12.2

- SQLTalk Plus
  - Ein Werkzeug für (fast) alle Datenbank Operationen
  - Umfangreiche Audit Funktionen
  - Anzeige des DB-Schemas erleichtert die „SQL – Erstellung“
  - Überprüfen der Verbindungseinstellungen zu Datenbanken
  - Terminieren von Aufgaben (Tasks)
  - ...

# Neue Server – Konsole



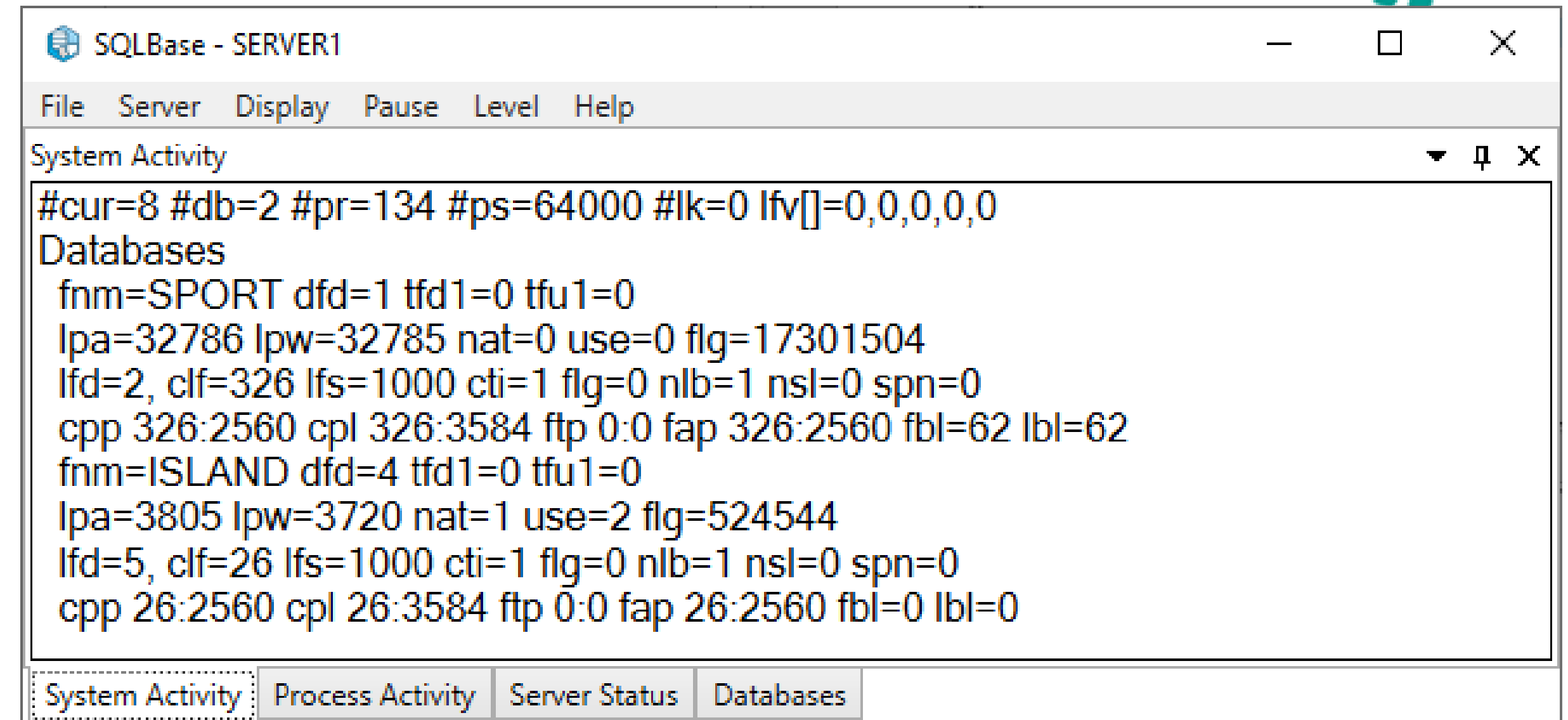
SQLBase - SERVER1

File Server Display Pause Level Help

Server Status

CLIENT NAME	USER NAME	DATABASE	STATUS	TRANSPORT	CLIENT PID
HREIMANN-02	SYSADM	ISLAND	IDLE	tcpv4	9892

System Activity Process Activity **Server Status** Databases



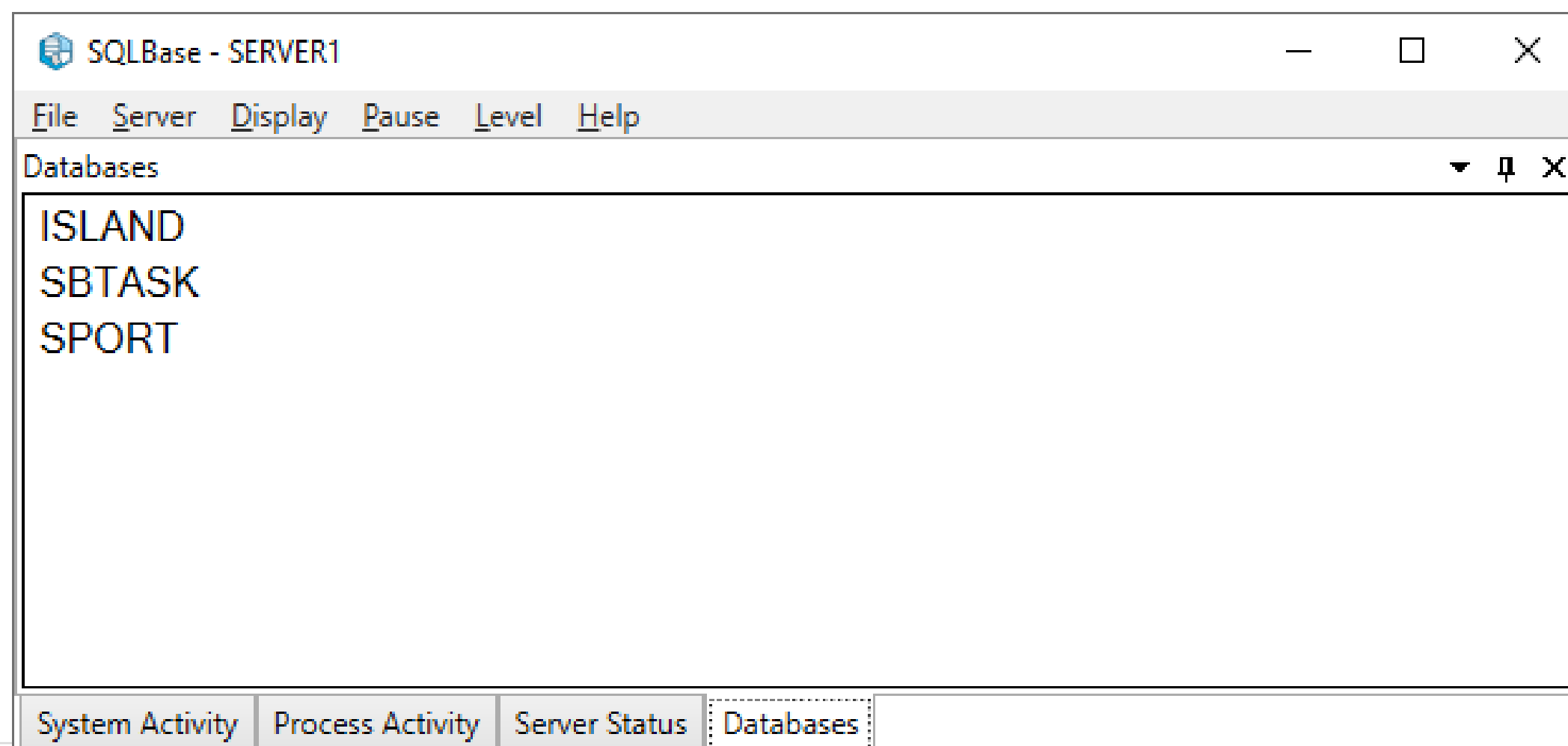
SQLBase - SERVER1

File Server Display Pause Level Help

System Activity

```
#cur=8 #db=2 #pr=134 #ps=64000 #lk=0 lfv[]=0,0,0,0
Databases
fnm=SPORT dfd=1 tfd1=0 tfu1=0
lpa=32786 lpw=32785 nat=0 use=0 flg=17301504
lfd=2, clf=326 lfs=1000 cti=1 flg=0 nlb=1 nsl=0 spn=0
cpp 326:2560 cpl 326:3584 ftp 0:0 fap 326:2560 fbl=62 lbl=62
fnm=ISLAND dfd=4 tfd1=0 tfu1=0
lpa=3805 lpw=3720 nat=1 use=2 flg=524544
lfd=5, clf=26 lfs=1000 cti=1 flg=0 nlb=1 nsl=0 spn=0
cpp 26:2560 cpl 26:3584 ftp 0:0 fap 26:2560 fbl=0 lbl=0
```

System Activity **Process Activity** Server Status Databases



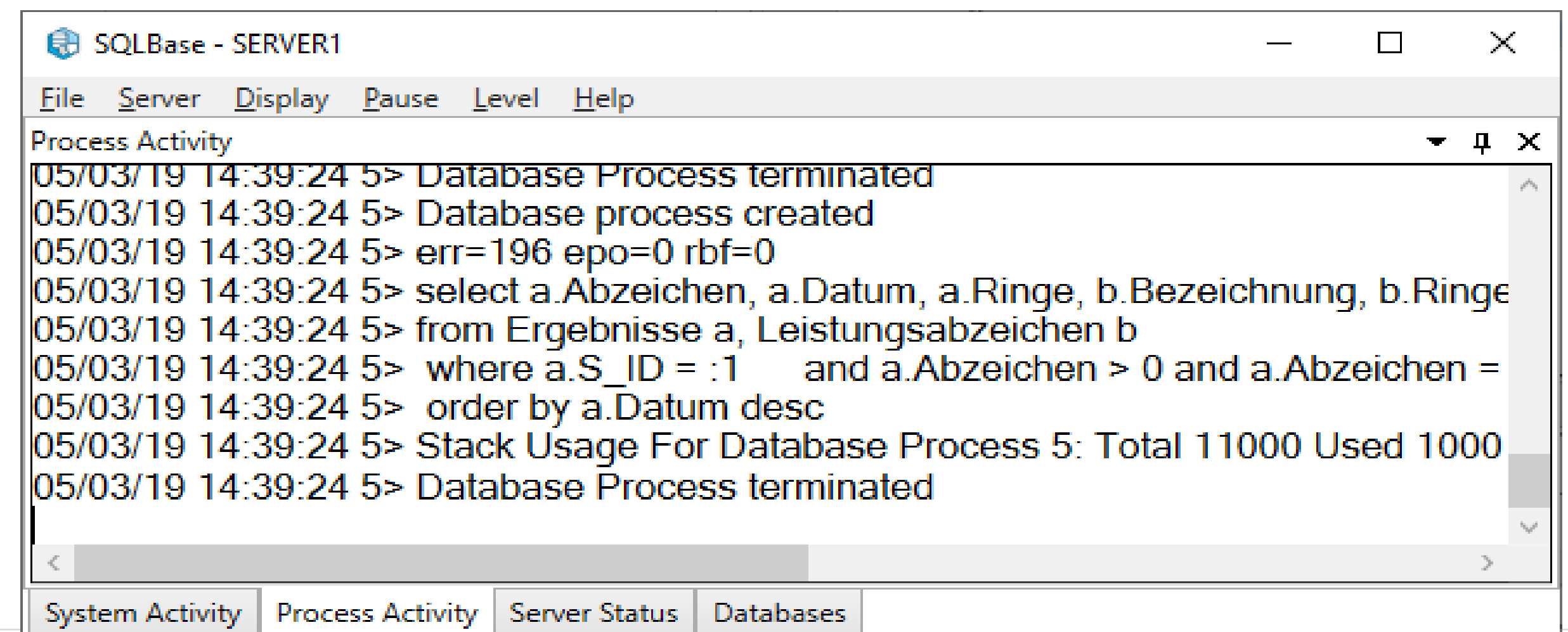
SQLBase - SERVER1

File Server Display Pause Level Help

Databases

```
ISLAND
SBTASK
SPORT
```

System Activity Process Activity **Server Status** Databases



SQLBase - SERVER1

File Server Display Pause Level Help

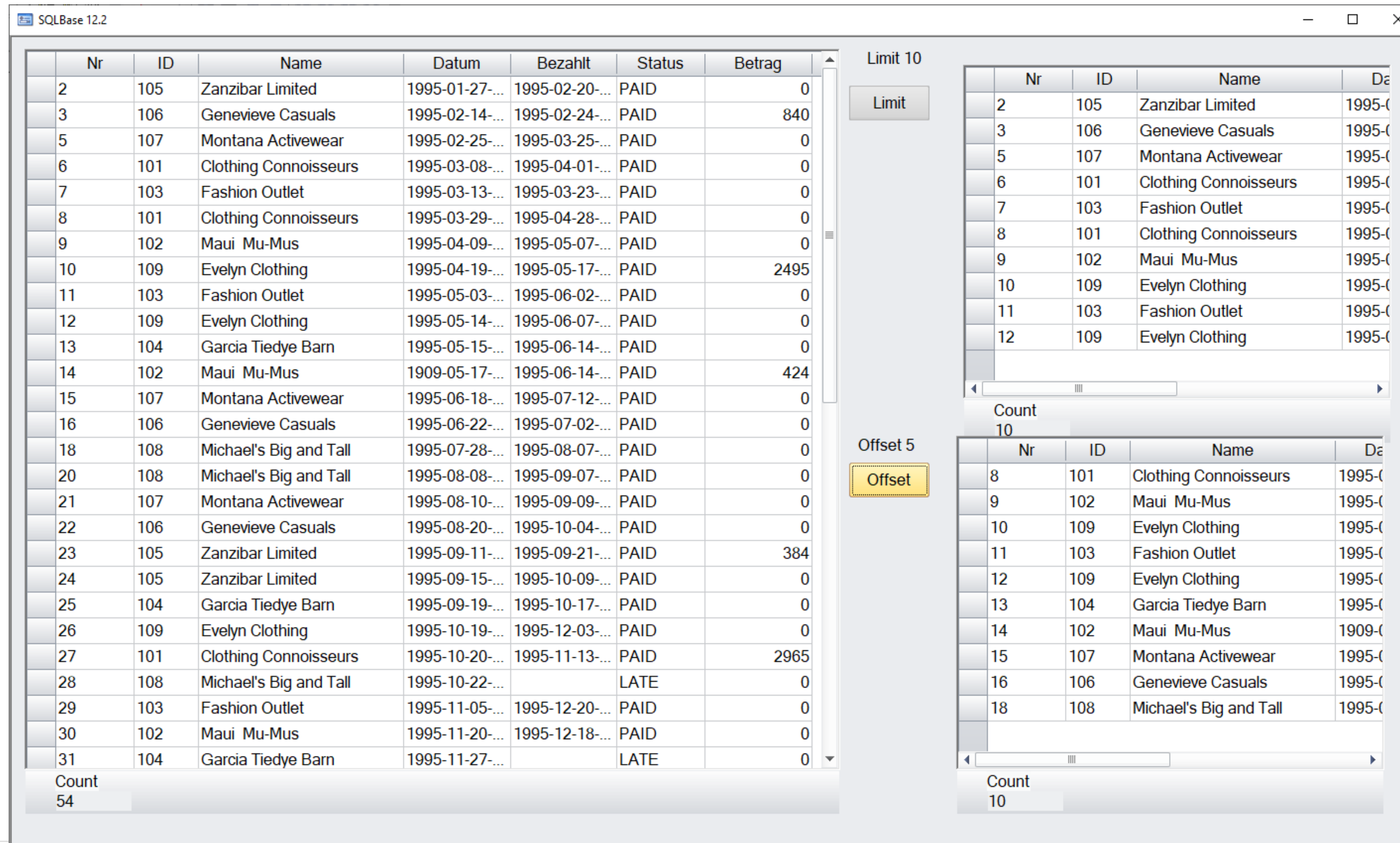
Process Activity

```
05/03/19 14:39:24 5> Database Process terminated
05/03/19 14:39:24 5> Database process created
05/03/19 14:39:24 5> err=196 epo=0 rbf=0
05/03/19 14:39:24 5> select a.Abzeichen, a.Datum, a.Ringe, b.Bezeichnung, b.Ringe
05/03/19 14:39:24 5> from Ergebnisse a, Leistungsabzeichen b
05/03/19 14:39:24 5> where a.S_ID = :1 and a.Abzeichen > 0 and a.Abzeichen =
05/03/19 14:39:24 5> order by a.Datum desc
05/03/19 14:39:24 5> Stack Usage For Database Process 5: Total 11000 Used 1000
05/03/19 14:39:24 5> Database Process terminated
```

System Activity Process Activity **Server Status** Databases

# Neue SQL Funktionen

- Offset / Limit



The screenshot shows the SQLBase 12.2 interface. The main window displays a table with 54 rows. The columns are: Nr, ID, Name, Datum, Bezahlt, Status, and Betrag. The 'Status' column contains values like PAID and LATE. The 'Betrag' column contains numerical values. The 'Count' at the bottom left of the main table is 54.

Two smaller windows are open to the right, demonstrating SQL filtering:

- The top window is titled "Limit 10". It shows a table with 10 rows, starting from the first row of the main table. The "Count" at the bottom of this window is 10.
- The bottom window is titled "Offset 5". It shows a table with 10 rows, starting from the 6th row of the main table (offset by 5). The "Count" at the bottom of this window is 10.

# Neue SQL Funktionen

- LIMIT
  - Ausgabe von n-Datensätzen

```
◇ Set sSQL = 'select Invoice_No, Company_ID, Company_Name, Invoice_Date, Date_Paid, Status,  
            Amount_Paid from Invoice order by Invoice_No LIMIT 10'  
◇ Call SqlConnectEx( hSQL, 'ISLAND', 'SYSADM', 'SYSADM' )  
◇ Call SaITblPopulate( grid2, hSQL, sSQL, TBL_FillAll )  
◇ Call SqlDisconnect( hSQL )
```

# Neue SQL Funktionen

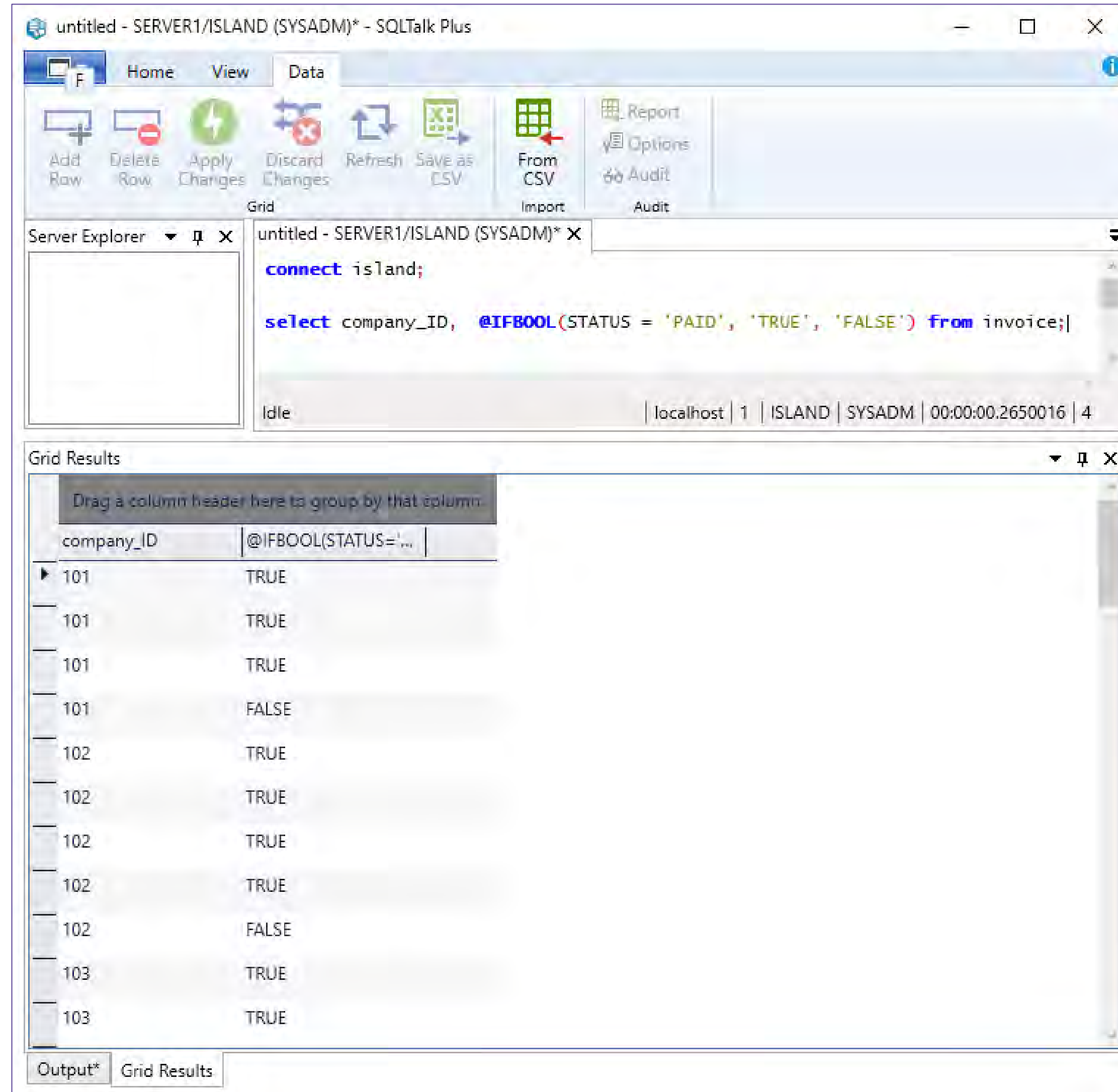
- LIMIT / Offset
  - Ausgabe von n-Datensätzen, starten bei n-Offset
  - Syntax: *LIMIT nOffset, nLimit*

```
◇ Set sSQL = 'select Invoice_No, Company_ID, Company_Name, Invoice_Date, Date_Paid, Status,  
Amount_Paid from Invoice order by Invoice_No LIMIT 5,10 '  
◇ Call SqlConnectionEx( hSQL, 'ISLAND', 'SYSADM', 'SYSADM' )  
◇ Call SaITblPopulate( grid3, hSQL, sSQL, TBL_FillAll )  
◇ Call SqlConnection( hSQL )  
◇ Return TRUE
```



# Neue SQL Funktion

- @IFBOOL



The screenshot shows the SQLTalk Plus interface. The main window displays a SQL query in the editor:

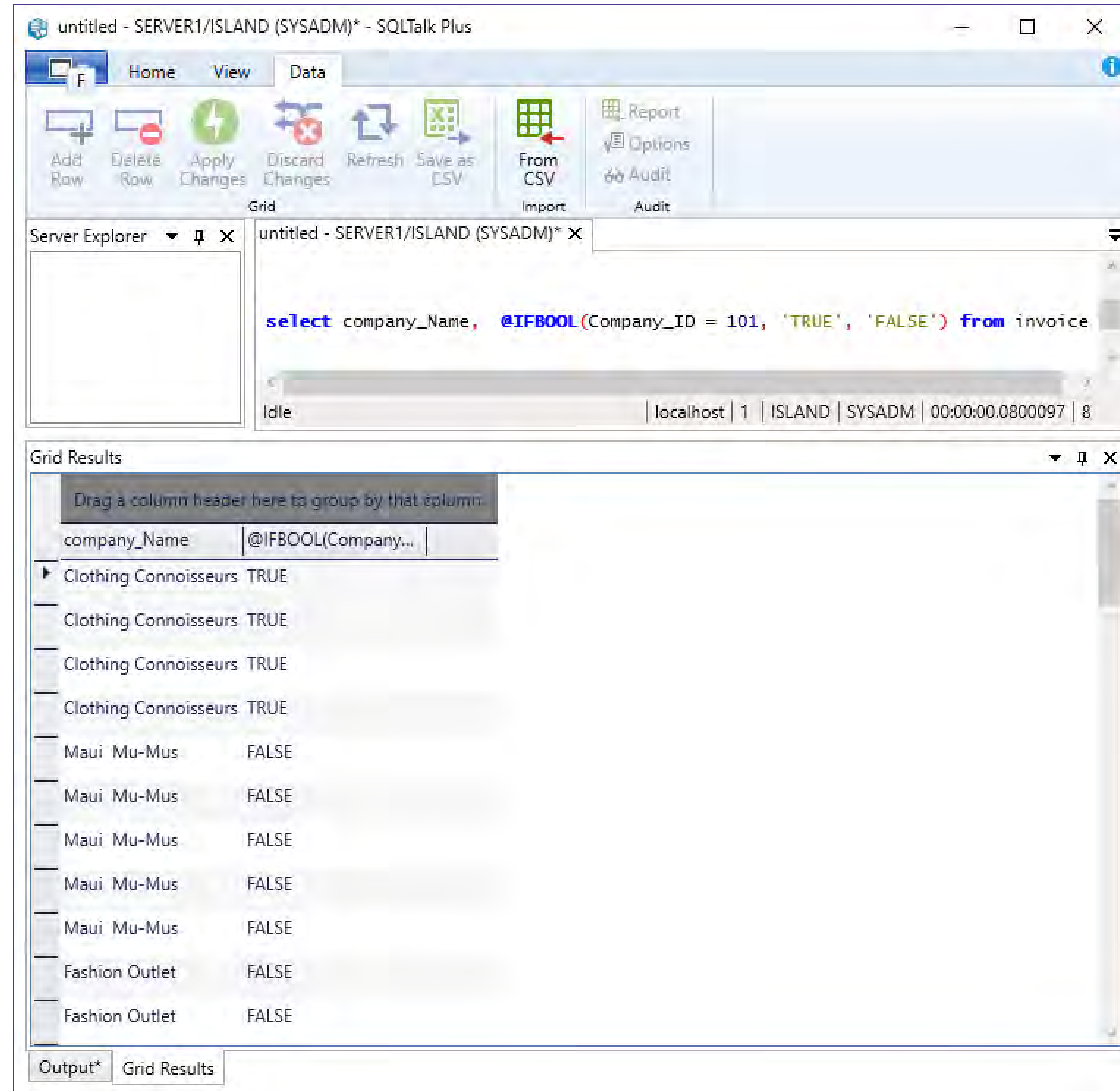
```
connect island;  
  
select company_ID, @IFBOOL(STATUS = 'PAID', 'TRUE', 'FALSE') from invoice;
```

The results are shown in a grid below the query:

company_ID	@IFBOOL(STATUS='...)
101	TRUE
101	TRUE
101	TRUE
101	FALSE
102	TRUE
102	TRUE
102	TRUE
102	TRUE
102	TRUE
102	FALSE
103	TRUE
103	TRUE

# Neue SQL Funktion

- @IFBOOL



The screenshot shows the SQLTalk Plus interface. The main window displays a query in the SQL editor:

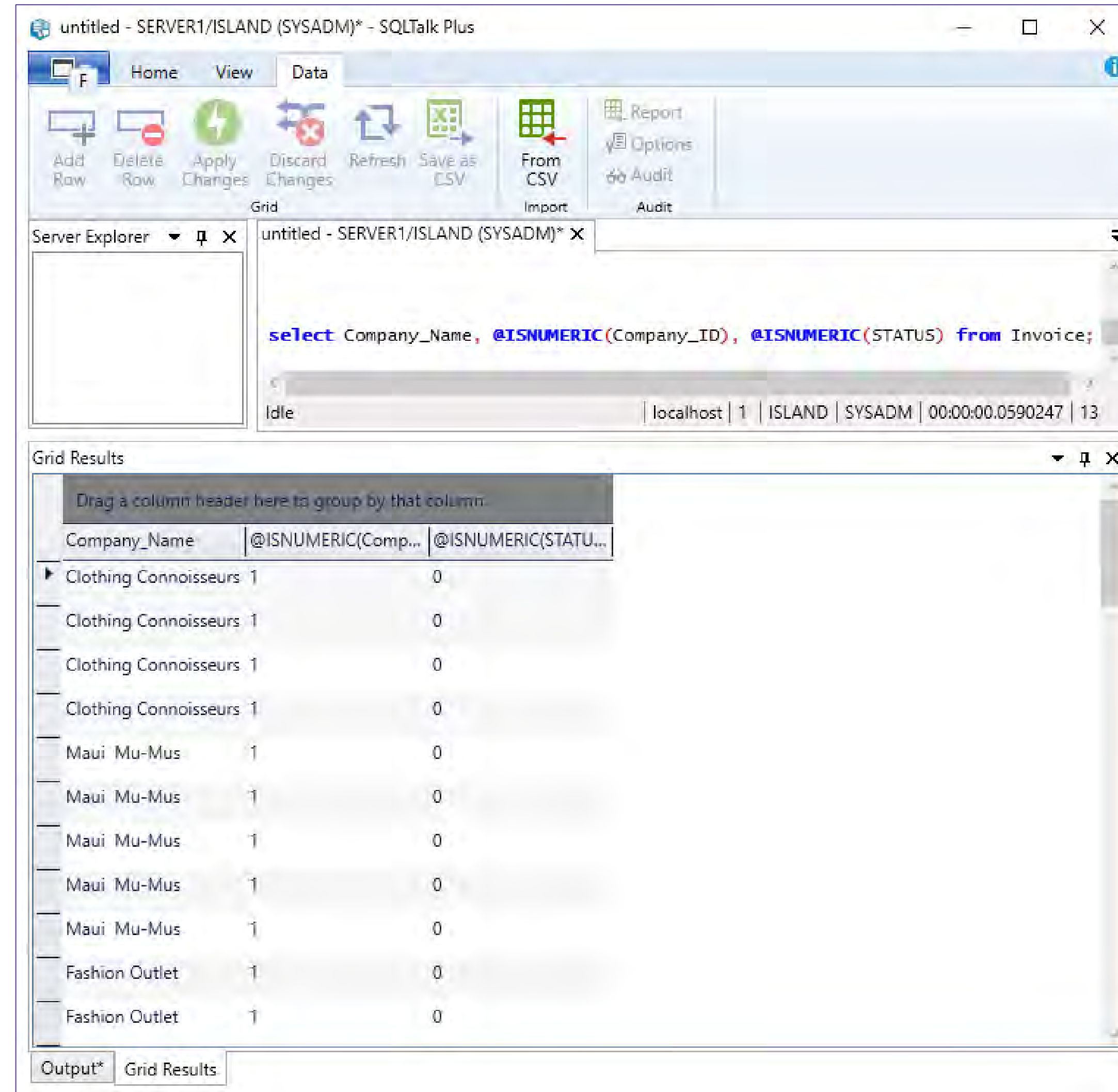
```
select company_Name, @IFBOOL(company_ID = 101, 'TRUE', 'FALSE') from invoice
```

The results are shown in a grid below the editor:

company_Name	@IFBOOL(company...
Clothing Connoisseurs	TRUE
Clothing Connoisseurs	TRUE
Clothing Connoisseurs	TRUE
Clothing Connoisseurs	TRUE
Maui Mu-Mus	FALSE
Maui Mu-Mus	FALSE
Maui Mu-Mus	FALSE
Maui Mu-Mus	FALSE
Maui Mu-Mus	FALSE
Maui Mu-Mus	FALSE
Fashion Outlet	FALSE
Fashion Outlet	FALSE

# Neue SQL Funktion

- @ISNUMERIC



The screenshot shows the SQLTalk Plus interface. The main window displays a SQL query: `select Company_Name, @ISNUMERIC(Company_ID), @ISNUMERIC(STATUS) from Invoice;`. Below the query, the status bar shows 'Idle | localhost | 1 | ISLAND | SYSADM | 00:00:00.0590247 | 13'. The 'Grid Results' pane shows the following data:

Company_Name	@ISNUMERIC(Comp...)	@ISNUMERIC(STATU...)
Clothing Connoisseurs	1	0
Clothing Connoisseurs	1	0
Clothing Connoisseurs	1	0
Clothing Connoisseurs	1	0
Mauï Mu-Mus	1	0
Mauï Mu-Mus	1	0
Mauï Mu-Mus	1	0
Mauï Mu-Mus	1	0
Mauï Mu-Mus	1	0
Fashion Outlet	1	0
Fashion Outlet	1	0

# Sonstiges

- Windows Server 2019 Support
- .NET Core Database Driver
  - Interface zur SQLBase von Linux, MAC und Window mittels .NET Core

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**Danke!**



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