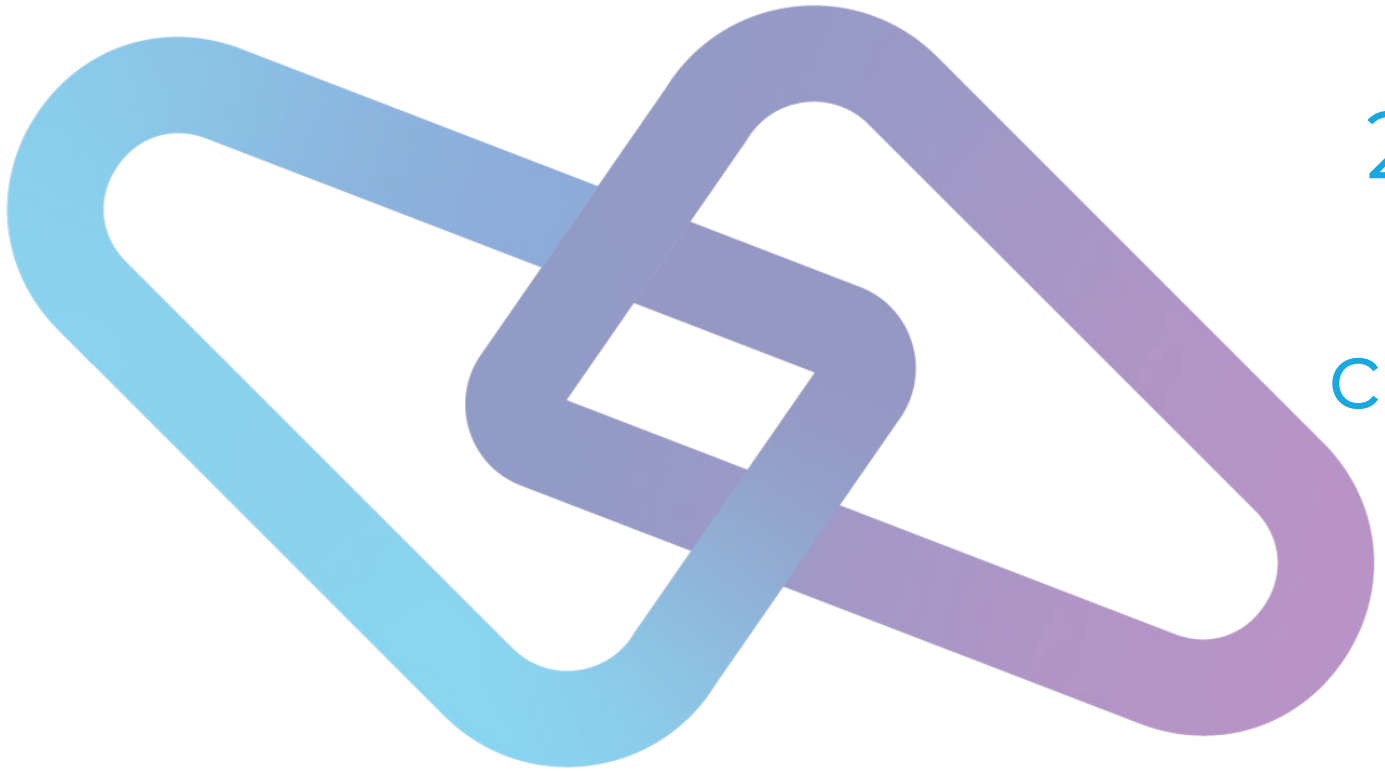
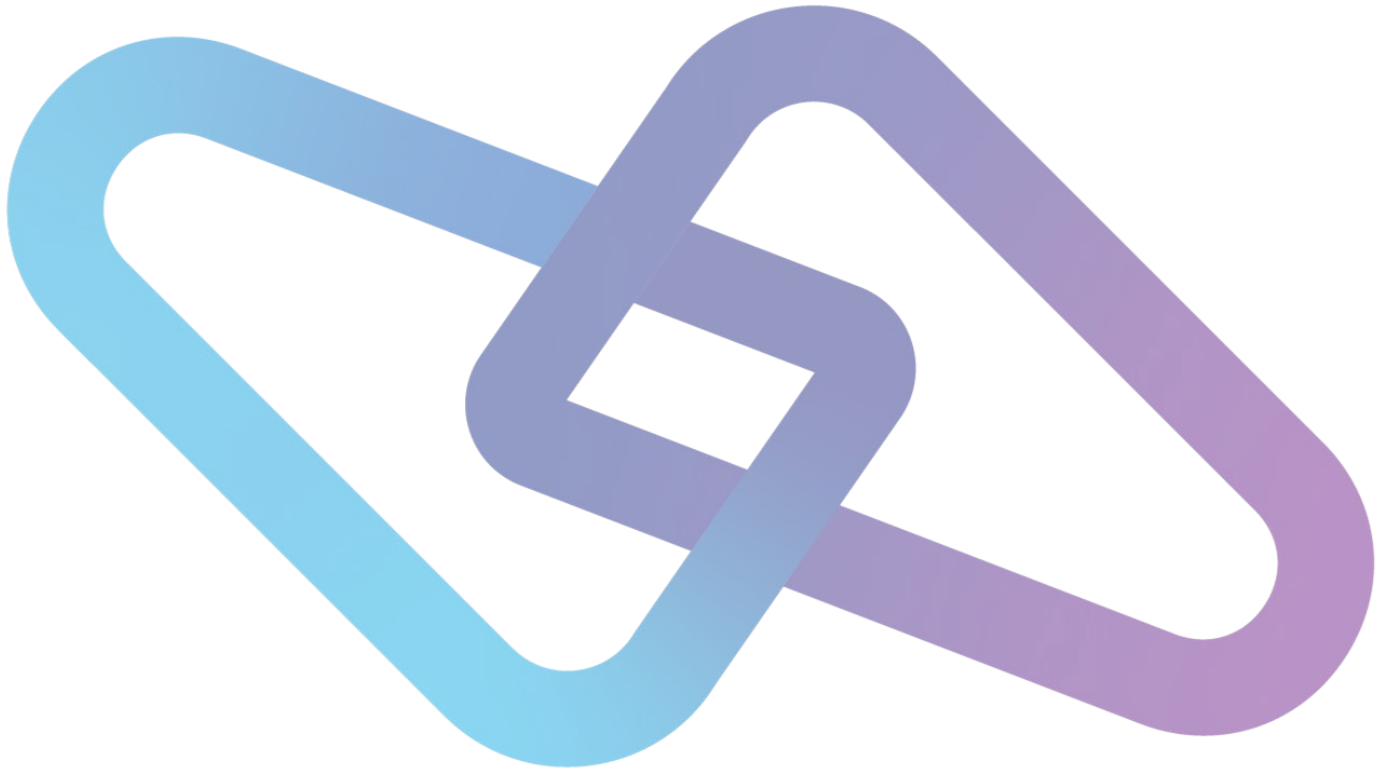


21CS SDB (DB2) Client Supporting up to 60 chars lenght password

Jake Haggen

Content

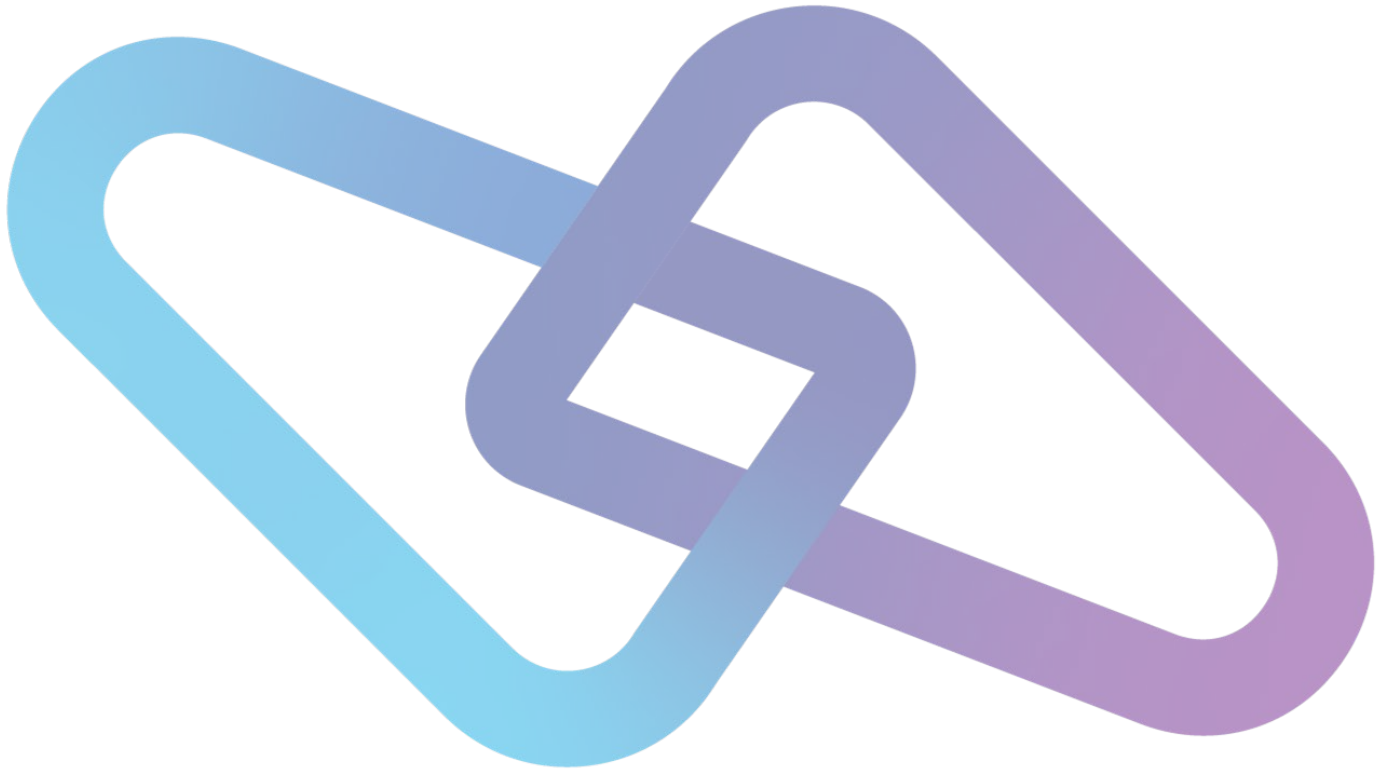
- SDB overview
  - What it it's used for
- Enhancements
  - 60 Character length passwords
- Migration
  - Optional and mandatory steps
- SDB Client Demo



SDB Overview

What is SDB used for?

- Industry standard Relational Database Management Software
  - Server
    - A collection of all SDB Server and Client functionality
    - Hosts and manages databases
    - Authenticates users and handles security
  - Client
    - Tools and utilities to connect to remote databases
    - Sends SQL requests to the server and returns results to users or applications



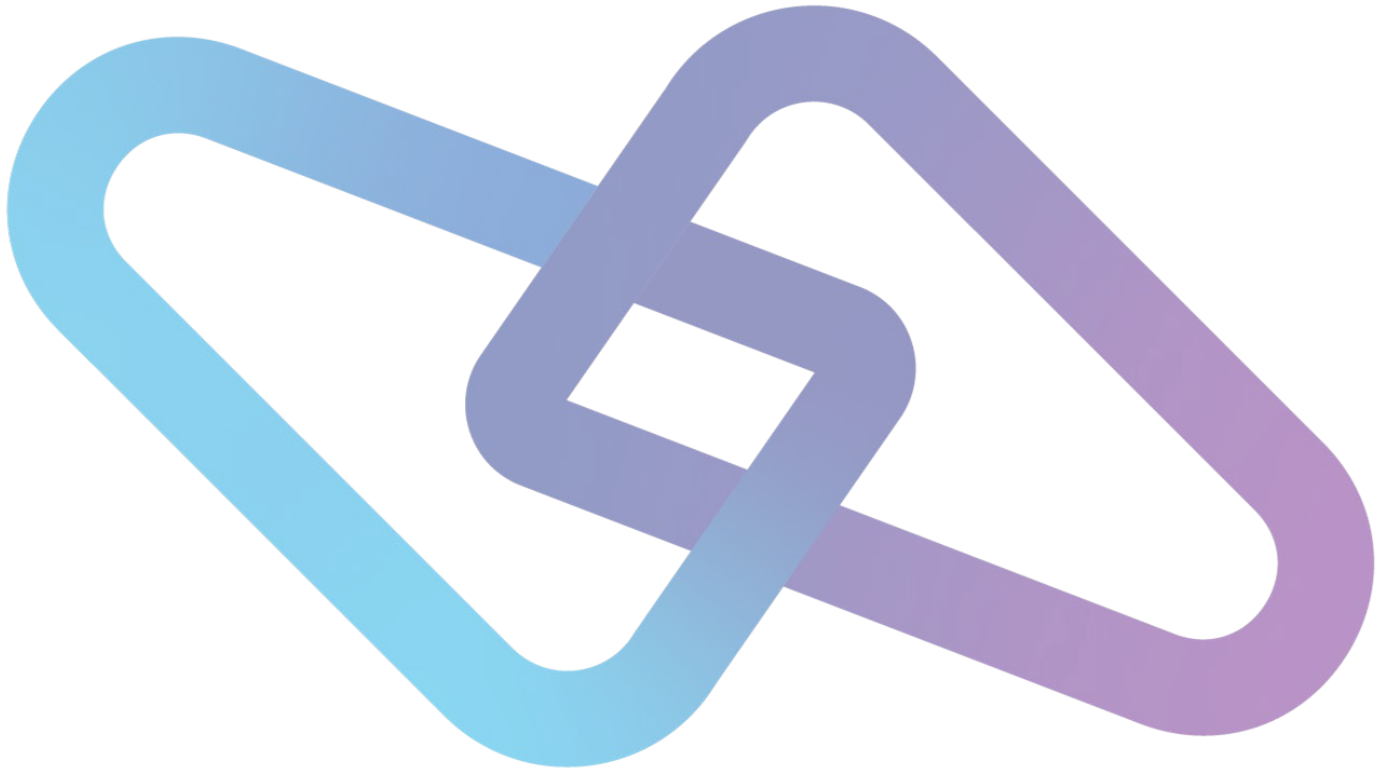
Enhancements

60 Character Length Passwords

- Customer request was for up to 40 characters
- Used for VSEn connections to remote databases via client requests or a distributed environment with DRDA
  - Based on the remote database
  - Limit is still 8 on VSE
- SDB Server 7.7 accepts only a host variable length of 8 or 60 for COBOL, Assembler, PLI and IBM Fortran application programs
- Passwords longer than 8 characters should be declared with a host variable length of **60** for COBOL, Assembler, and PLX programs, and **61** for C programs
- C Programs require an empty space at the end

Password Examples

- Example for the declaration of host variable for password of a C application program:
- char pw[61] = "SQLDBAPW "; /* SQL user password */
- char pw[9] = "SQLDBAPW"; /* SQL user password */
- Example for the declaration of host variable for password of a COBOL application program:
- 01 PASSWD PIC X(60) VALUE 'SQLDBAPW'.
- 01 PASSWD PIC X(8) VALUE 'SQLDBAPW'.
- Example for the declaration of host variable for password of an ASSEMBLER application program:
- PW DC CL60'SQLDBAPW' PASSWORD
- PW DC CL8'SQLDBAPW' PASSWORD
- Example for the declaration of host variable for password of a PL/I application program:
- DCL PW CHAR(60) INIT ('SQLDBAPW');
- DCL PW CHAR(8) INIT ('SQLDBAPW');



Migration

Migration Steps

Step	Optional	IBM Vs 3.5 & up	IBM Vs 3.4	Description
1	Optional	Manual	Manual	Space Verification and DATE/TIME Option Verification
2	Optional	Manual	Manual	Archiving a Database
3	Mandatory	Automated	Manual	Prepare the Database for Migration
4	Mandatory	Automated	Manual	Migrate the DBNAME Directory
5	Mandatory	Automated	Automated	Format the SDB Server logs
6	Mandatory	Automated	Automated	Update the SDB Server Catalog to the 7.6
7	Mandatory	Automated	Automated	Reload the DBS Utility Package
8	Mandatory	Automated	Automated	Update the SDB Server Database
9	Mandatory	Automated	Automated	Migrate the HELP Text Tables
10	Optional	Automated	Automated	Reload English Help Text into a Database

Migration Steps Continued

Step	Optional	IBM Vs 3.5 & up	IBM Vs 3.4	Description
11	Optional	Automated	Automated	Reload ISQL into a Database
12	Mandatory	Automated	Automated	Reload CCSID-Related Phases Package
13	Optional	Automated	Automated	Load FIPS Flagger into a Database
14	Optional **(1)**	Automated	Automated	Determine the Primary Keys to be Recreated
15	Optional	Automated	Automated	Revoke connect Authority from ALLUSERS
16	Mandatory	Automated	Automated	Reset the Password for User SQLDBA
17	Mandatory	Automated	Automated	Start Application Server in multiple user mode
18	Mandatory	Automated	Automated	Create CCSID-Related Phases
19	Mandatory	Manual	Manual	System Customization Activities

Job Manager

- Simplifies the SDB installation process
- Member ARISIVAR.Z is a collection of steps for Preparation, Installation, and Migration
- Lines contain a job name, parameter, and its value
- Execute REXX procedure ARISIMGR once you have altered the parameters as needed

```
* PREPARATION STEP 8: DEFINE VSAM DATA SETS FOR THE STARTER DATABASE
ARIS77CD DBCAT      SQLCAT
ARIS77CD NEWUSERCAT YES
ARIS77CD SPACE      1
ARIS77CD SPACE1     117
ARIS77CD VOLUME1    JDCAT
ARIS77CD DIRFILE    SQL.BDISK.STARTER.DB
ARIS77CD SPACE2     34
ARIS77CD VOLUME2    JDCAT
ARIS77CD LOGFILE    SQL.LOGDSK1.STARTER.DB
ARIS77CD SPACE3     08
ARIS77CD VOLUME3    JDCAT
ARIS77CD EXTFILE    SQL.DDSK1.STARTER.DB
ARIS77CD SPACE4     72
ARIS77CD VOLUME4    JDCAT
```

Mandatory Steps 3 and 4

Prepare the Database for migration

- Member ARIS77ND
- Sets the ALTLOG and DUALLOG parameters
- Sets the default user password to SQLDBAPW

Migrate the DBNAME directory

- Member ARISBDID.
- Is the available directories list

Mandatory Steps 5 and 6

Format the SDB Server Logs

- Member ARIS77OD.
- Formats the ALTLOG and DUALLOG parameter values
- Sets the default user password to SQLDBAPW

Update the SDB Server Catalog Level to 7.7

- Member ARIS77PD
- Do **not** execute this step if you are migrating a database from IBM Version 6.1 or later
- Sets the LOGMOD and SOSLEVEL

Mandatory Steps 7 and 8

Reload the DBS Utility Package

- Member ARIS77QD
- Creates the SDB Server Version 7 Release 7 of the DBS utility package in the database

Update the SDB Server Database

- Member ARIS77RD
- Grants SELECT and CONNECT authority to specific users

Mandatory Steps 9 and 12

Migrate the Help Text Tables

- Member ARIS77SD
- migrates existing HELP Text tables from a previous IBM SQL/DS version
- Also drops the SQLDBA.SYSLANGUAGE table, and recreates it in the PUBLIC.SYS0001 dbspace

Reload CCISD-Related Phases Package

- Member ARIS77WD
- Contains the job control statements to load the CCSID-related phases package into the database

Mandatory Steps 16 and 17

Reset the Password for User SQLDA

- Member ARIS77NZ
- Surprisingly, this resets the SQLDA password

Start the Application Server in Multiple User Mode

- Member ARIS77GZ
- Is the available directories list

Mandatory Steps 18

Create CCSID-Related Phases

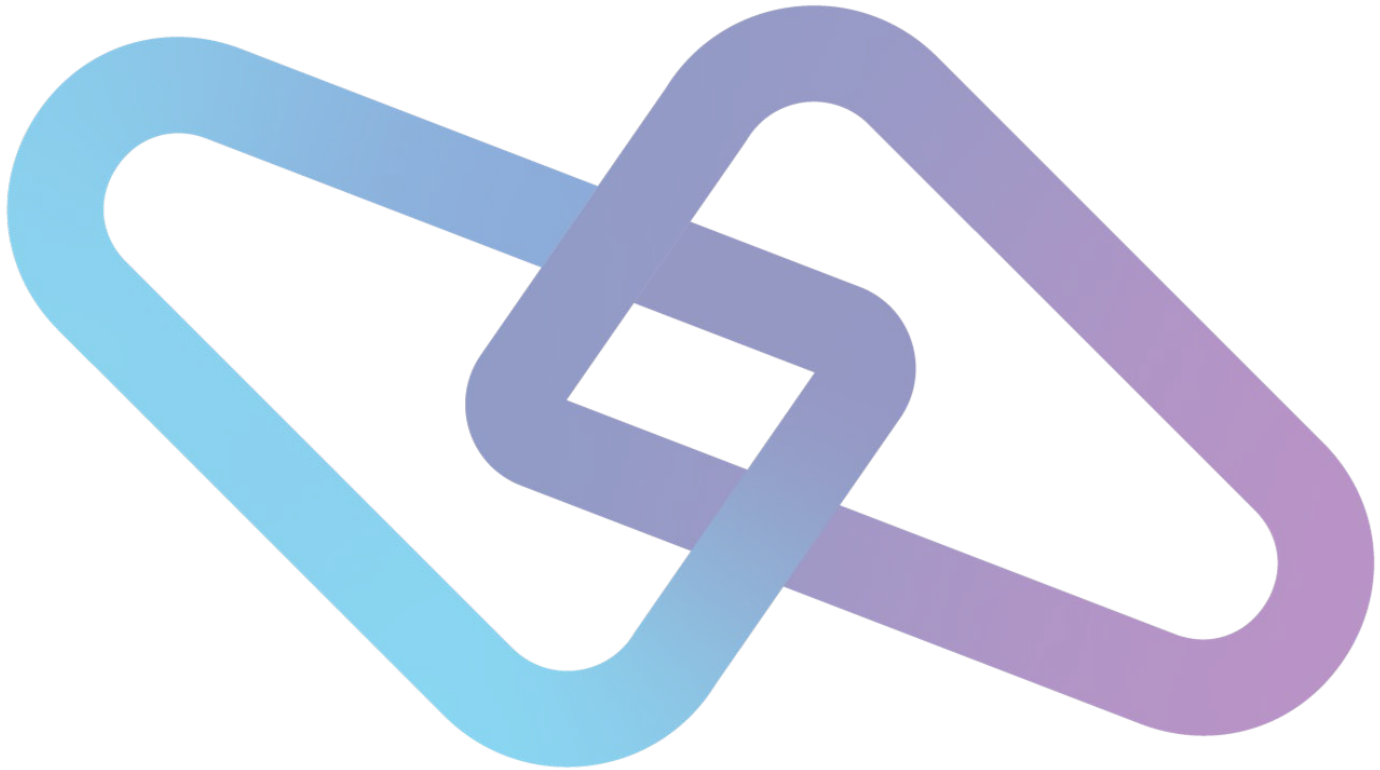
- Member ARISCNVD

System Customization Activities

- Rebind application packages using REBIND PACKAGE DBS to avoid dynamic preprocessing at runtime
- Update the CHARNAME parameter and reinitialize the user partition (default post-migration is ENGLISH)
- Set database CCSID support for pre-migration user tables
- Configure database options (DBCS support, character subtype, etc.)
- Drop and recreate any EXPLAIN tables from prior releases (use source member ARISEXP)
- Set up schema stored procedures and load packages if using JDBC/CLI clients with DB2 UDB v8 or later

System Customization Activities Continued

- Reset DATE and TIME values in SYSTEM.SYSOPTIONS to LOCAL if changed during Migration Step 1
- Set up Stored Procedures — define PSERVERs and catalog procedures
- Ensure startup JCL includes a logical device 097 assignment to enable POWER to locate the stored procedure handler: // ASSGN SYS097,SYSPCH



SDB Client Demo

Db2 LUW View

```
db2 => connect to testdb

   Database Connection Information

 Database server        = DB2/LINUXZ64 12.1.0.0
 SQL authorization ID   = DB2USERA
 Local database alias   = TESTDB
```

- Db2 LUW instance running on Linux
- Connect to local database

Db2 LUW Connection to VSEn SDB

```
db2 => catalog database SQLDS as VSEDB at node VSENODE authentication server
DB20000I  The CATALOG DATABASE command completed successfully.
DB21056W  Directory changes may not be effective until the directory cache is
refreshed.
db2 => terminate
DB20000I  The TERMINATE command completed successfully.
```

```
db2 => connect to VSEDB user TESTUSR1 using TSTU1PW

   Database Connection Information

 Database server        = SQL/DS VSE 7.7.0
 SQL authorization ID   = TESTUSR1
 Local database alias   = VSEDB
```

SDB Connection to Db2 LUW

```
ARI0410I Resource Adapter ARI00LRM is enabled.
ARI0450I SDB Server for VSEn online support has an
         entry point of 03F0BEA0. RMGL at 005991D4.
         DRDA online support entry point at 04200000.
ARI0454I Connections to TESTDB established.
         RMCV at 006143B0.
ARI0458I The default server is TESTDB.
```

View from ISQL Transaction

Q & A

Thank you!