Konfigurieren von ISE 2.1 mit MS SQL mithilfe von ODBC

Inhalt

Einführung

In diesem Dokument wird beschrieben, wie Identity Services Engine (ISE) mit Microsoft Standard Query Language (SQL) Server für die ISE-Authentifizierung mithilfe von Open Database Connectivity (ODBC) konfiguriert wird.

> **Hinweis**: Für die Open Database Connectivity (ODBC)-Authentifizierung muss die ISE ein Nur-Text-Benutzerkennwort abrufen können. Das Kennwort kann in der Datenbank verschlüsselt werden, muss jedoch von der **gespeicherten Prozedur** entschlüsselt werden.

Voraussetzungen

Anforderungen

Cisco empfiehlt, über Kenntnisse in folgenden Bereichen zu verfügen:

- Datenbank- und ODBC-Konzepte
- Microsoft SQL Server

Verwendete Komponenten

Die Informationen in diesem Dokument basieren auf den folgenden Software- und Hardwareversionen:

- Identity Services Engine 2.1
- MSSQL Server 2008 R2

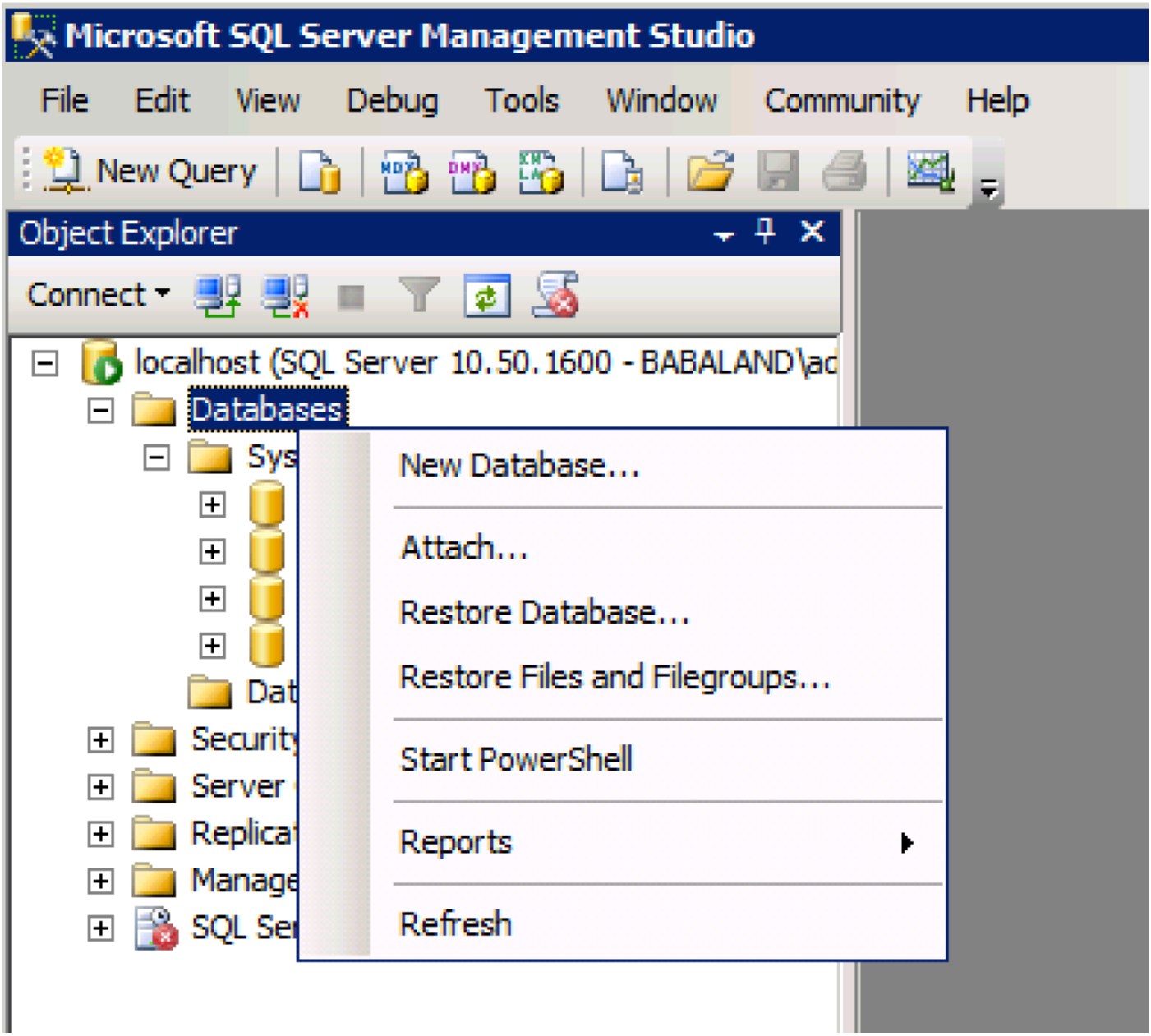
Konfigurieren

Schritt 1: MS SQL-Basiskonfiguration

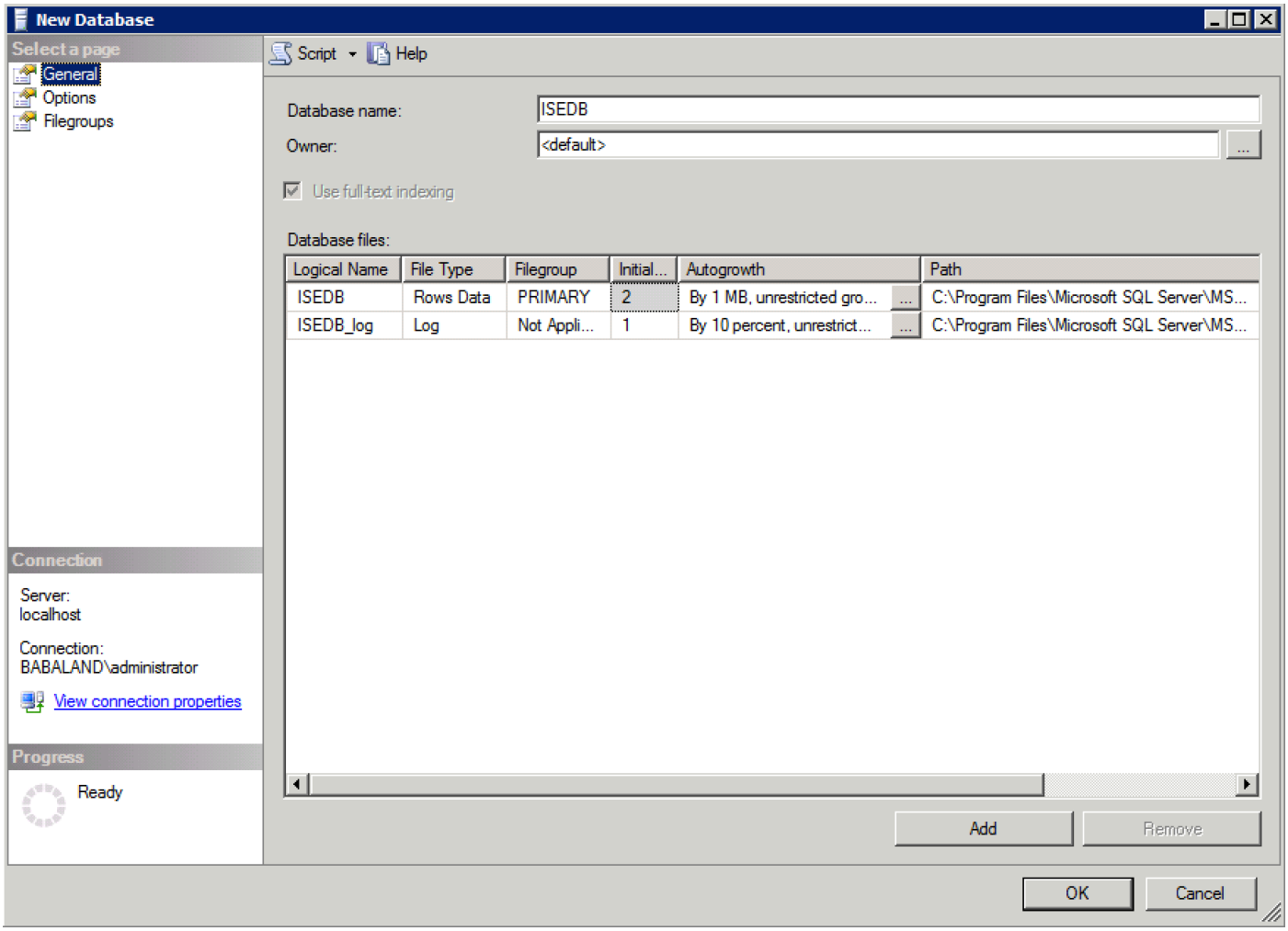
Zu den Konfigurationsschritten gehören das Erstellen einer Datenbank und eines Benutzers für die ISE mit Zugriffsberechtigungen auf diese Datenbank.

> **Hinweis**: Die ISE unterstützt nur die SQL-Authentifizierung, nicht das Windows-Konto. Wenn Sie den Authentifizierungsmodus ändern müssen, finden Sie weitere Informationen unter Change Server Authentication Mode (Serverauthentifizierungsmodus ändern).

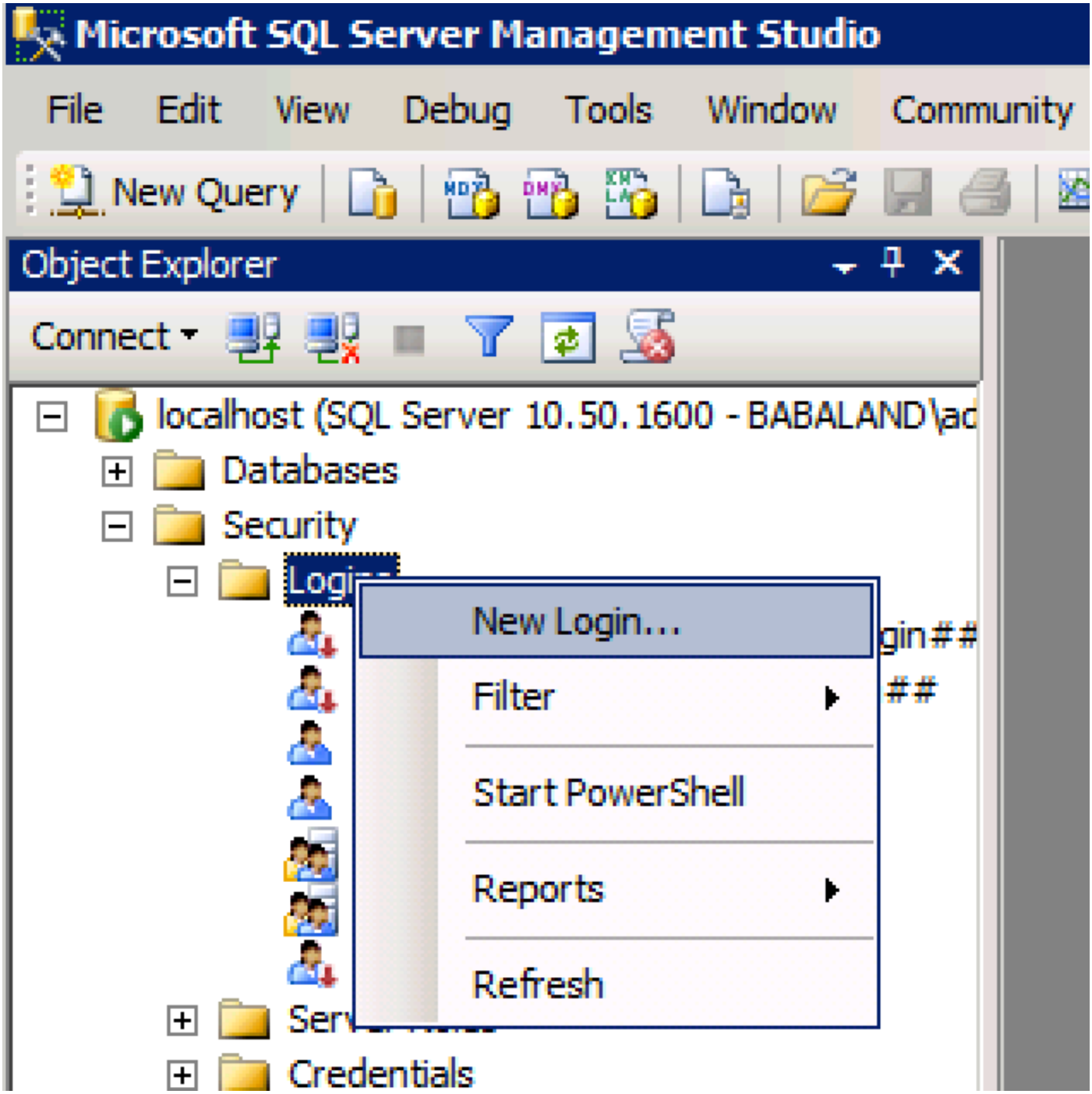
1. Öffnen Sie SQL Server Management Studio (**Startmenü > Microsoft SQL Server 2008 R2**), und erstellen Sie eine Datenbank:

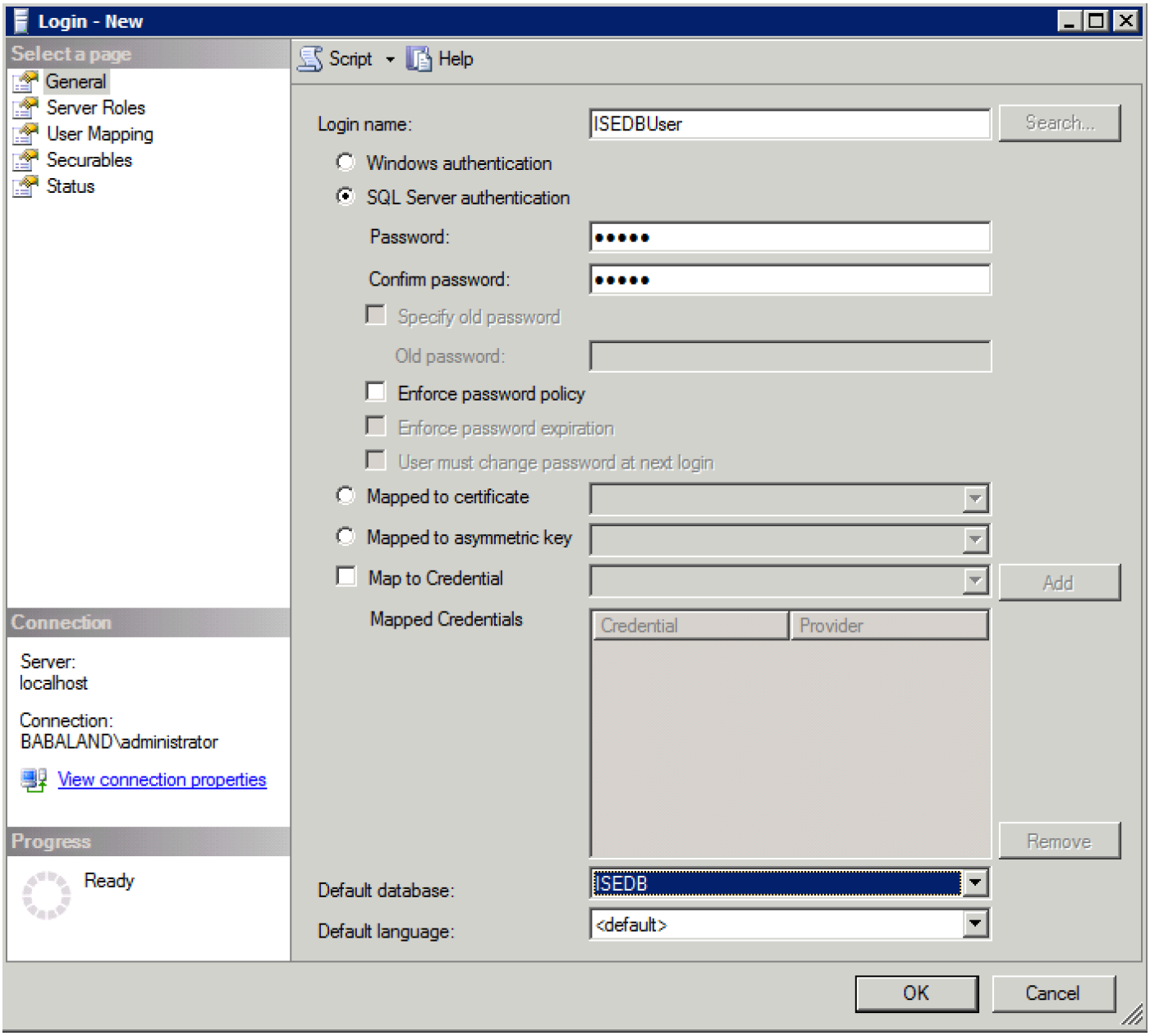


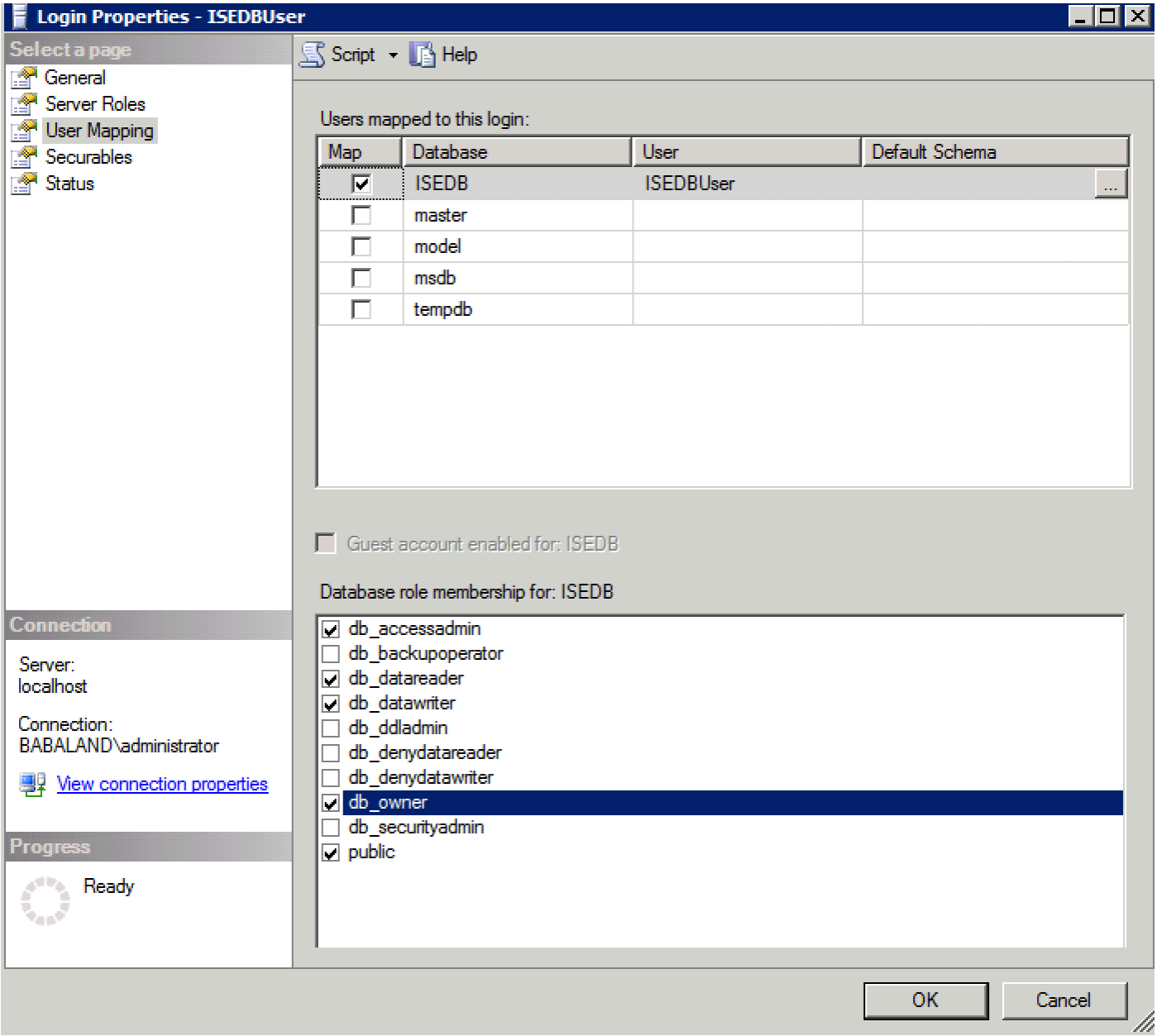
2. Lassen Sie die Standardoptionen unverändert, oder passen Sie die Datenbankeinstellungen wie in diesem Bild gezeigt an:



3. Erstellen Sie einen Benutzer, und legen Sie die Berechtigungen wie in den folgenden Bildern gezeigt fest:

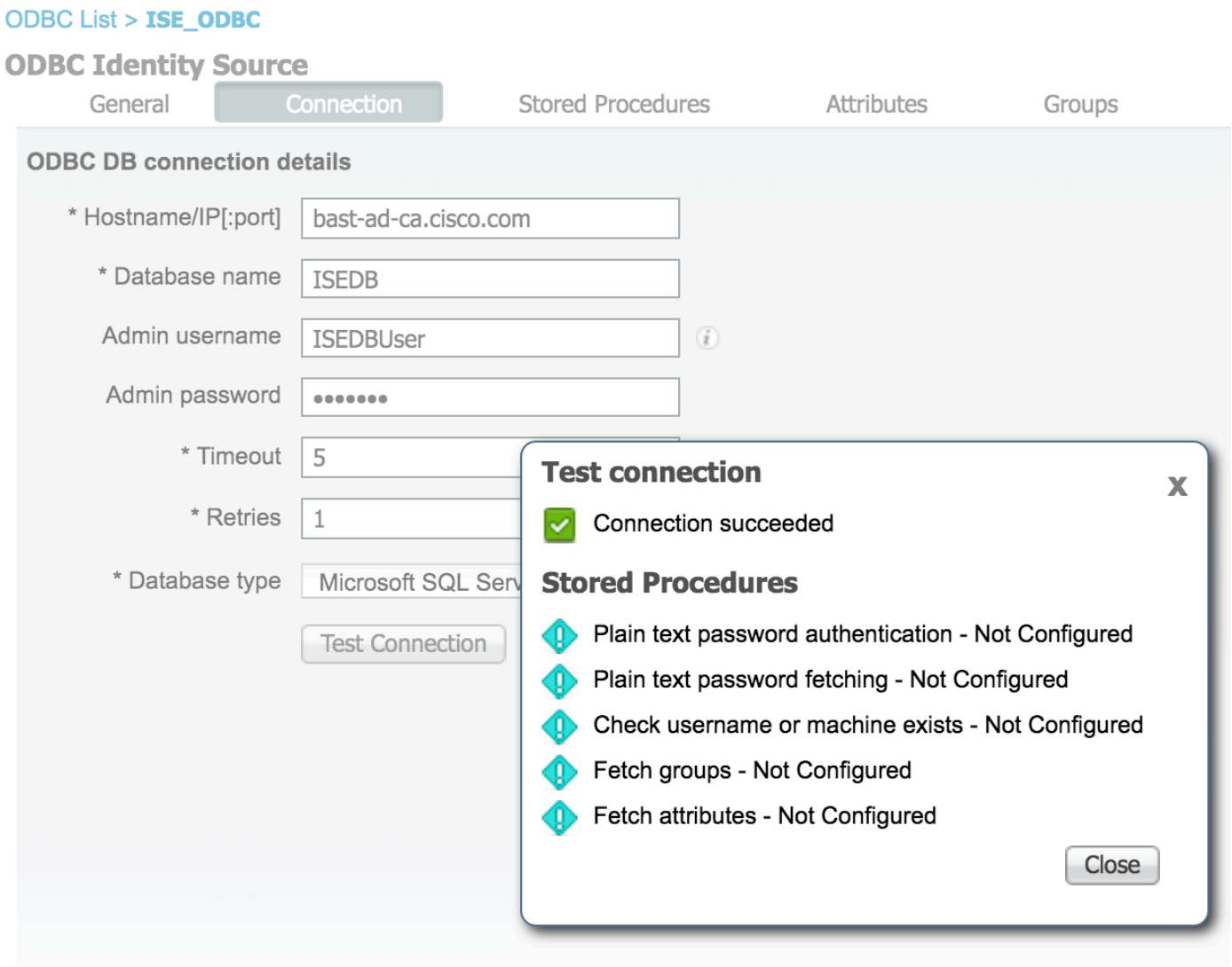

Microsoft SQL Server Management Studio
File
Edit
View
Debug
Tools
Window
Community
New Query
Object Explorer
Connect
localhost (SQL Server 10.50.1600 - BABALAND\ad
Databases
Security
New Login...
Filter
Start PowerShell
Reports
Refresh
Credentials


Login - New
Select a page
General
Server Roles
User Mapping
Securables
Status
Script
Help
Login name:
ISEDBUser
Search...
Windows authentication
SQL Server authentication
Password:
Confirm password:
Specify old password
Old password:
Enforce password policy
Enforce password expiration
User must change password at next login
Mapped to certificate
Mapped to asymmetric key
Map to Credential
Add
Mapped Credentials
Credential
Provider
Remove
Connection
Server:
localhost
Connection:
BABALAND\administrator
View connection properties
Progress
Ready
Default database:
ISEDB
Default language:
<default>
OK
Cancel



Schritt 2: ISE - Basiskonfiguration

Erstellen einer **ODBC-Identitätsquelle** unter **Administration > External Identity Source > ODBC** und Testverbindung:



Schritt 3: Benutzerauthentifizierung konfigurieren

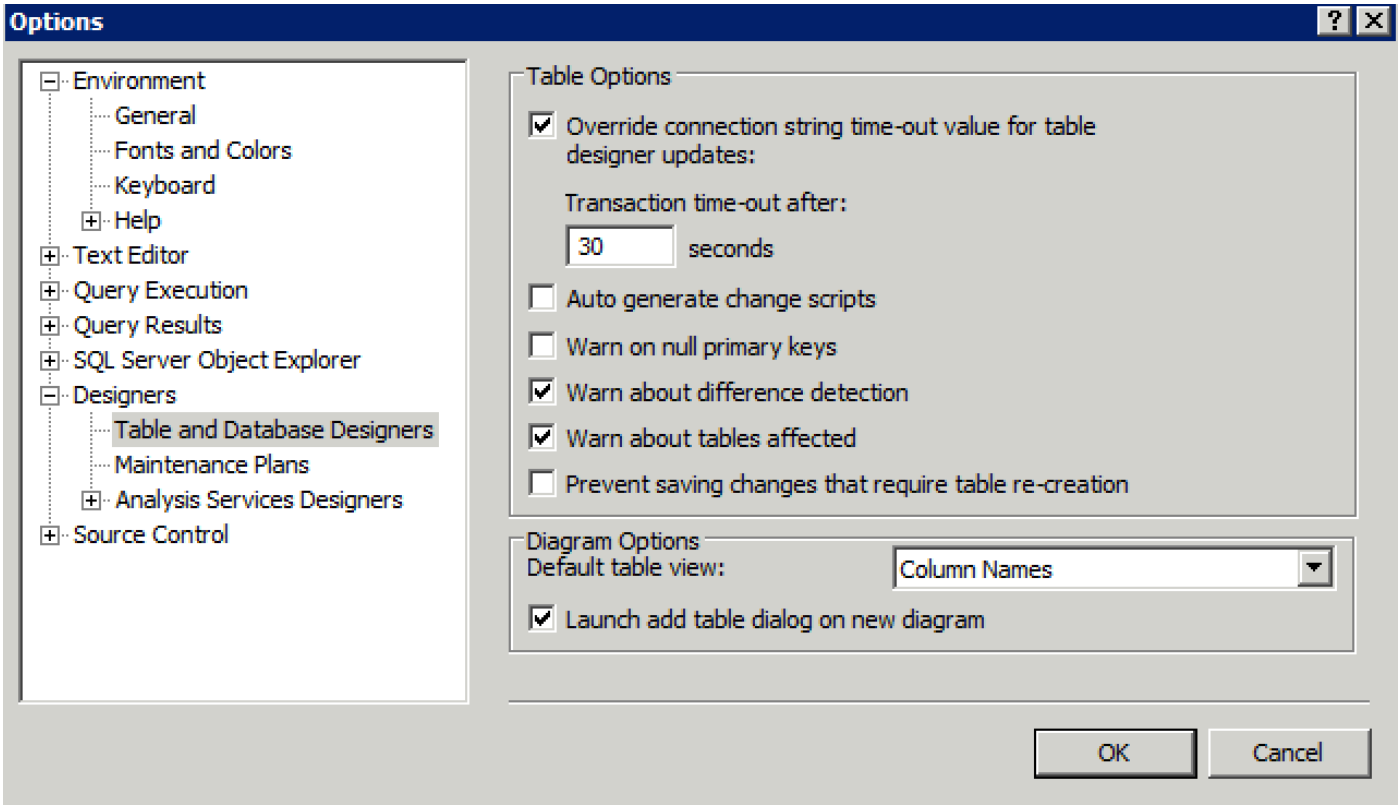
Die ISE-Authentifizierung an ODBC verwendet gespeicherte Prozeduren.Die gespeicherte Prozedur für die Authentifizierung gibt **Ergebnismenge** mit dieser Syntax zurück:

Wert	Typ
Ergebnis	Ganzzahl
Gruppe (nur zur Kompatibilität mit ACS 4.2)	Integer oder varchar(255)
Kontoinformationen	varchar(255)
Fehlerstring	varchar(255)

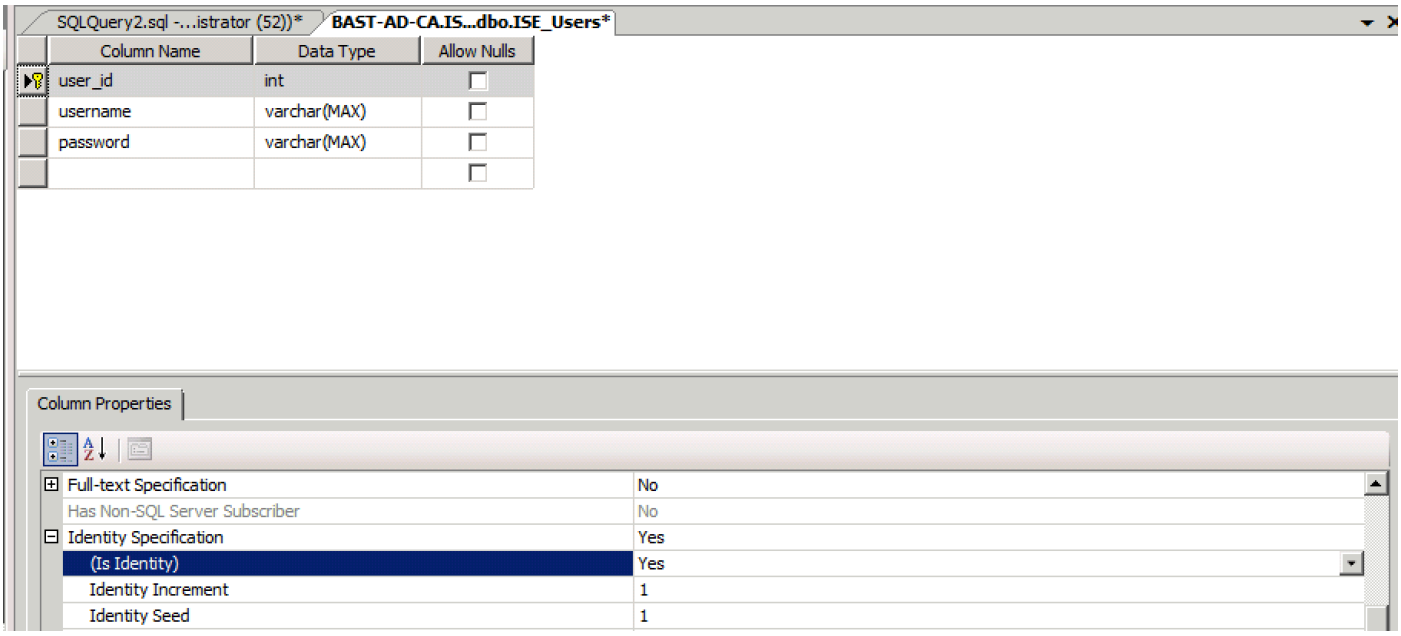
Weitere Verfahren finden Sie im [Cisco Identity Services Engine 2.1-Administrationsleitfaden.]

> **Tipp**: Sie können benannte Parameter anstelle von Resultset zurückgeben. Es ist nur ein anderer Ausgabetyp, die Funktionalität ist die gleiche.

1. Navigieren Sie zu Optionen, und deaktivieren Sie das Kontrollkästchen **Speichern von Änderungen, die eine Neuerstellung der Tabelle erfordern,** verhindern (optional):



2. Erstellen Sie die Tabelle. Stellen Sie sicher, dass Sie die Identitätseinstellungen für den **Primärschlüssel** festlegen. Um **user_id** als **Primärschlüssel** festzulegen, klicken Sie mit der rechten Maustaste auf den **Spaltennamen:**



Letzte SQL-Version:

```
CREATE TABLE [dbo].[ISE_Users](
[user_id] [int] IDENTITY(1,1) NOT NULL,
[username] [varchar](max) NOT NULL,
[password] [varchar](max) NOT NULL,
```

```
CONSTRAINT [PK_ISE_Users] PRIMARY KEY CLUSTERED
(
[user_id] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY]
```

3. Führen Sie diese Abfrage aus, um einen Benutzer einzufügen:

```
insert into ISE_Users(username,password) values('odbcuser1','odbcpass');
```

4. Erstellen Sie eine Prozedur für die unverschlüsselte Kennwortauthentifizierung (für PAP, EAP-GTC innere Methode, TACACS):

```
CREATE PROCEDURE [dbo].[ISEAuthUserPlainReturnsRecordset]
@username varchar(255), @password varchar(255)
AS
BEGIN
IF EXISTS( SELECT username
FROM ISE_Users
WHERE username = @username
AND password = @password )
SELECT 0,11,'This is a very good user, give him all access','No Error'
FROM ISE_Users
WHERE username = @username
ELSE
SELECT 3,0,'odbc','ODBC Authen Error'
END
```

5. Erstellen Sie eine Prozedur zum Abrufen von unverschlüsselten Kennwörtern (für CHAP, MSCHAPv1/v2, EAP-MD5, LEAP, EAP-MSCHAPv2 innere Methode, TACACS):

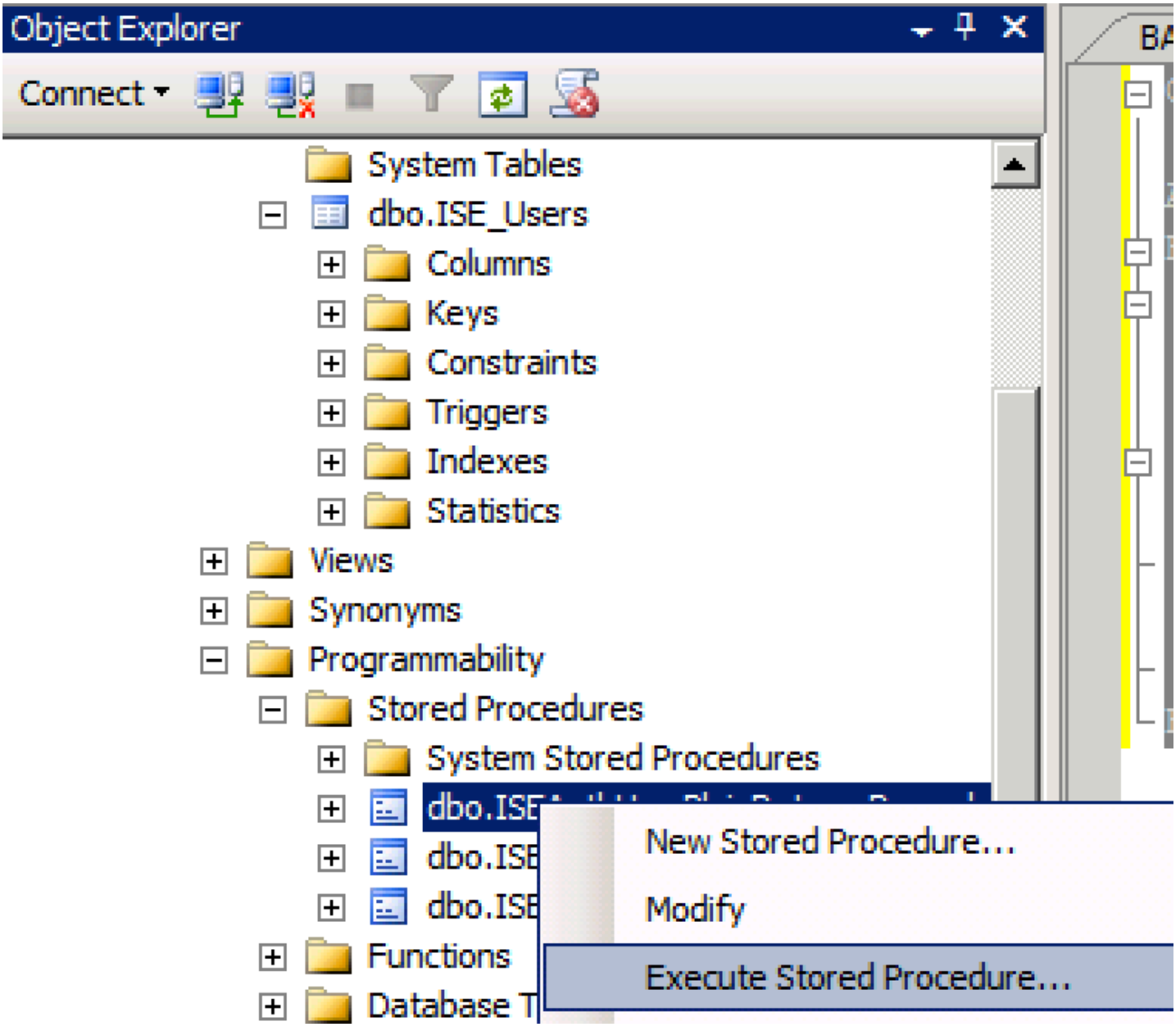
```
CREATE PROCEDURE [dbo].[ISEFetchPasswordReturnsRecordset]
@username varchar(255)
AS
BEGIN
IF EXISTS( SELECT username
FROM ISE_Users
WHERE username = @username)
SELECT 0,11,'This is a very good user, give him all access','No Error',password
FROM ISE_Users
WHERE username = @username
ELSE
SELECT 3,0,'odbc','ODBC Authen Error'
END
```

6. Erstellen Sie eine Prozedur zur Prüfung des Benutzernamens oder des Rechners (für MAB verwendet, schnelle Wiederverbindung von PEAP, EAP-FAST und EAP-TTLS):

```
CREATE PROCEDURE [dbo].[ISEUserLookupReturnsRecordset]
@username varchar(255)
```

```
AS
BEGIN
IF EXISTS( SELECT username
FROM ISE_Users
WHERE username = @username)
SELECT 0,11,'This is a very good user, give him all access','No Error'
FROM ISE_Users
WHERE username = @username
ELSE
SELECT 3,0,'odbc','ODBC Authen Error'
END
```

7. Testerstellte Prozeduren:



Execute Procedure - [dbo].[ISEAuthUserPlainReturnsRecordset]

Select a page

General

Script Help

Parameter	Data Type	Output Parameter	Pass Null Value	Value
@username	varchar(255)	No	☐	odbcuser1
@password	varchar(255)	No	☐	odbcpass

Connection

Server:
localhost

Connection:
BABALAND\administrator

View connection properties

Progress

Ready

OK Cancel

SQLQuery5.sql -...inistrator (57)) | BAST-AD-CA.IS...dbo.ISE_Users | SQLQuery2.sql -...istrator (52))* | BAST-AD-CA.IS...dbo.ISE_Users

```
USE [ISEDB]
GO

DECLARE @return_value int

EXEC    @return_value = [dbo].[ISEAuthUserPlainReturnsRecordset]
        @username = N'odbcuser1',
        @password = N'odbcpass'

SELECT  'Return Value' = @return_value

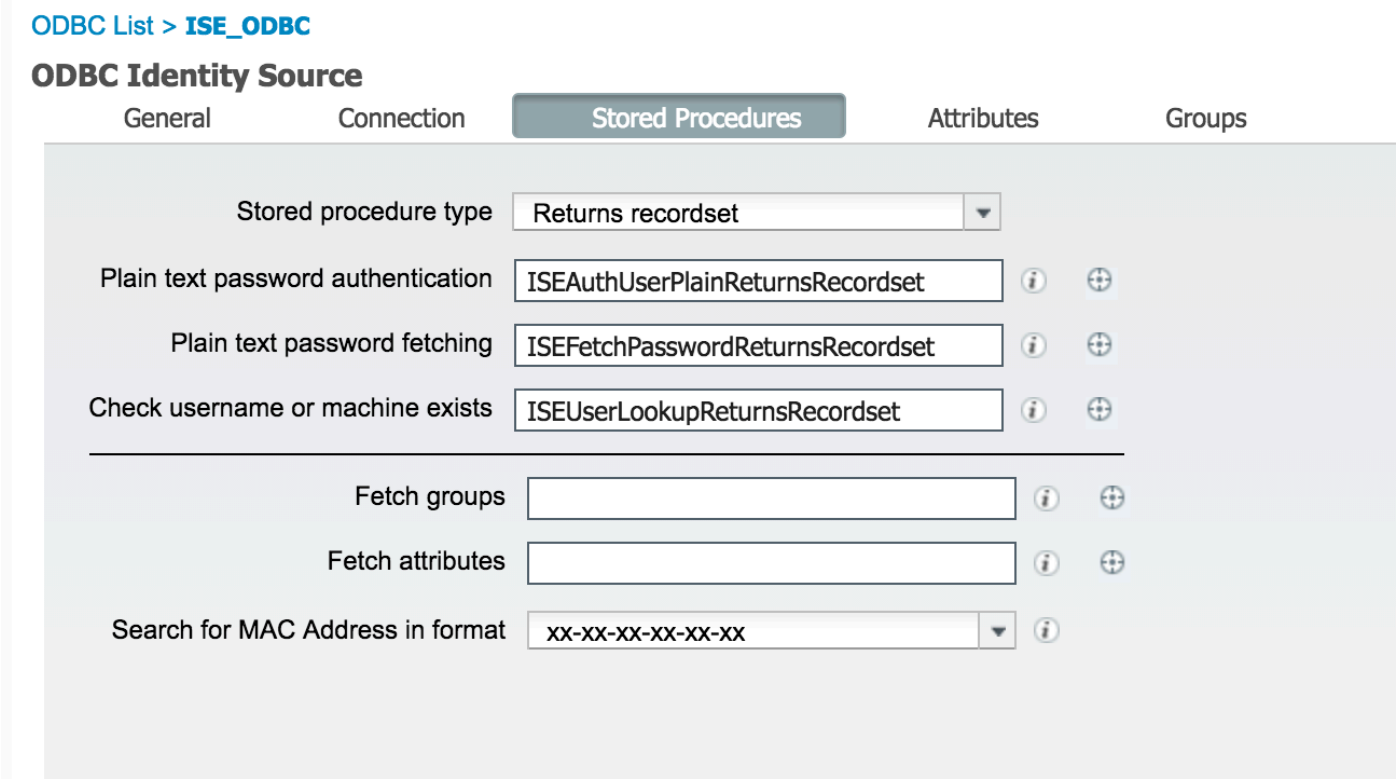
GO
```

Results | Messages

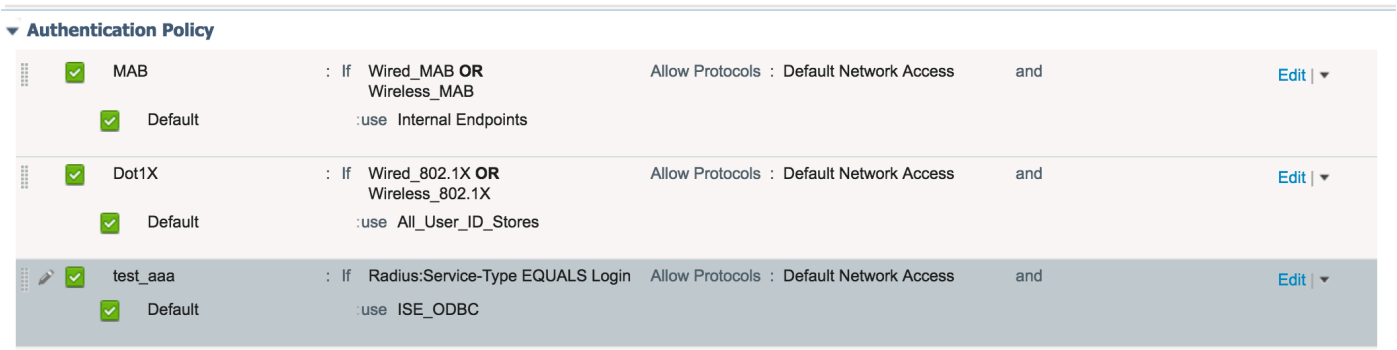
	(No column name)	(No column name)	(No column name)	(No column name)
1	0	11	This is a very good user, give him all access	No Error

Testen Sie andere Verfahren auf die gleiche Weise.

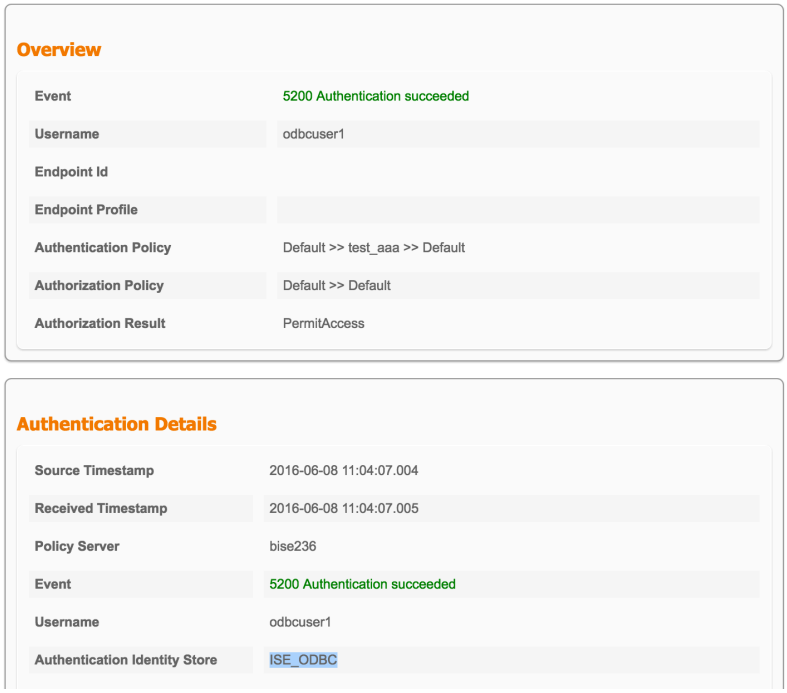
8. Konfigurieren von Prozeduren auf der ISE und Speichern:



9. Erstellen Sie eine einfache Authentifizierungsregel mit ODBC, und testen Sie sie:




```
b3560#test aaa group ISE236 odbcuser1 odbcpass legacy
Attempting authentication test to server-group ISE236 using radius
User was successfully authenticated.
```



Overview

Event	5200 Authentication succeeded
Username	odbcuser1
Endpoint Id	
Endpoint Profile	
Authentication Policy	Default >> test_aaa >> Default
Authorization Policy	Default >> Default
Authorization Result	PermitAccess

Authentication Details

Source Timestamp	2016-06-08 11:04:07.004
Received Timestamp	2016-06-08 11:04:07.005
Policy Server	bise236
Event	5200 Authentication succeeded
Username	odbcuser1
Authentication Identity Store	ISE_ODBC

Steps

11001	Received RADIUS Access-Request
11017	RADIUS created a new session
11117	Generated a new session ID for a 3rd party NAD
15049	Evaluating Policy Group
15008	Evaluating Service Selection Policy
15048	Queried PIP - Radius.NAS-Port-Type
15048	Queried PIP - Normalised Radius.RadiusFlowType (4 times)
15048	Queried PIP - Radius.Service-Type
15004	Matched rule - test_aaa
15041	Evaluating Identity Policy
15006	Matched Default Rule
15013	Selected Identity Source - ISE_ODBC
24852	Perform plain text password authentication in external ODBC database - ISE_ODBC
24849	Connecting to external ODBC database - ISE_ODBC
24850	Successfully connected to external ODBC database - ISE_ODBC
24855	Expect external ODBC database stored procedure to return results in a recordset - ISE_ODBC
22037	Authentication Passed
15036	Evaluating Authorization Policy
15048	Queried PIP - Radius.User-Name
15048	Queried PIP - Network Access.UseCase
15048	Queried PIP - Normalised Radius.RadiusFlowType (5 times)
15004	Matched rule - Default

Schritt 4: Gruppenabruf konfigurieren

1. Erstellen Sie Tabellen mit Benutzergruppen und eine andere Tabelle für die Many-to-Many-Zuordnung:

```
CREATE TABLE [dbo].[Groups](
[Group_ID] [int] IDENTITY(1,1) NOT NULL,
[Group_Name] [varchar](max) NOT NULL,
[Group_Desc] [text] NOT NULL,
CONSTRAINT [PK_Groups] PRIMARY KEY CLUSTERED
(
[Group_ID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY] TEXTIMAGE_ON [PRIMAR
```

```
CREATE TABLE [dbo].[User_Groups_Mapping](
[user_id] [int] NOT NULL,
[group_id] [int] NOT NULL
) ON [PRIMARY]

ALTER TABLE dbo.User_Groups_Mapping ADD CONSTRAINT
FK_User_Groups_Mapping_Groups FOREIGN KEY
(
group_id
) REFERENCES dbo.Groups
(
Group_ID
) ON UPDATE CASCADE
ON DELETE CASCADE

GO
ALTER TABLE dbo.User_Groups_Mapping ADD CONSTRAINT
FK_User_Groups_Mapping_ISE_Users FOREIGN KEY
(
```

```
user_id
) REFERENCES dbo.ISE_Users
(
user_id
) ON UPDATE CASCADE
ON DELETE CASCADE
```

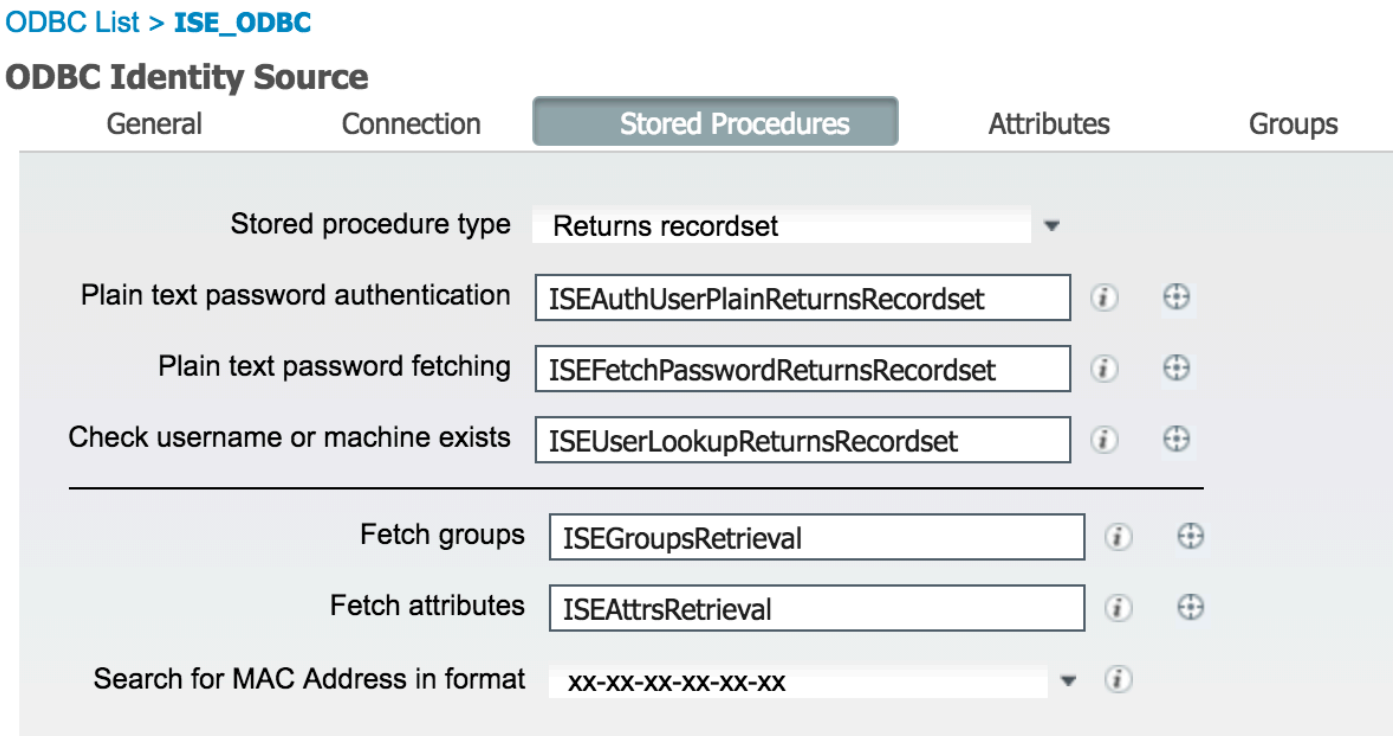
2. Fügen Sie Gruppen und Zuordnungen hinzu, sodass **ODBCUSER1** zu beiden Gruppen gehört:

```
INSERT [dbo].[Groups] ([Group_ID], [Group_Name], [Group_Desc]) VALUES (1, N'ODBCGroup1', N'My
Nice Group1')
INSERT [dbo].[User_Groups_Mapping] ([user_id], [group_id]) VALUES (1, 1)
INSERT [dbo].[Groups] ([Group_ID], [Group_Name], [Group_Desc]) VALUES (2, N'ODBCGroup2', N'My
Nice Group2')
INSERT [dbo].[User_Groups_Mapping] ([user_id], [group_id]) VALUES (1, 2)
```

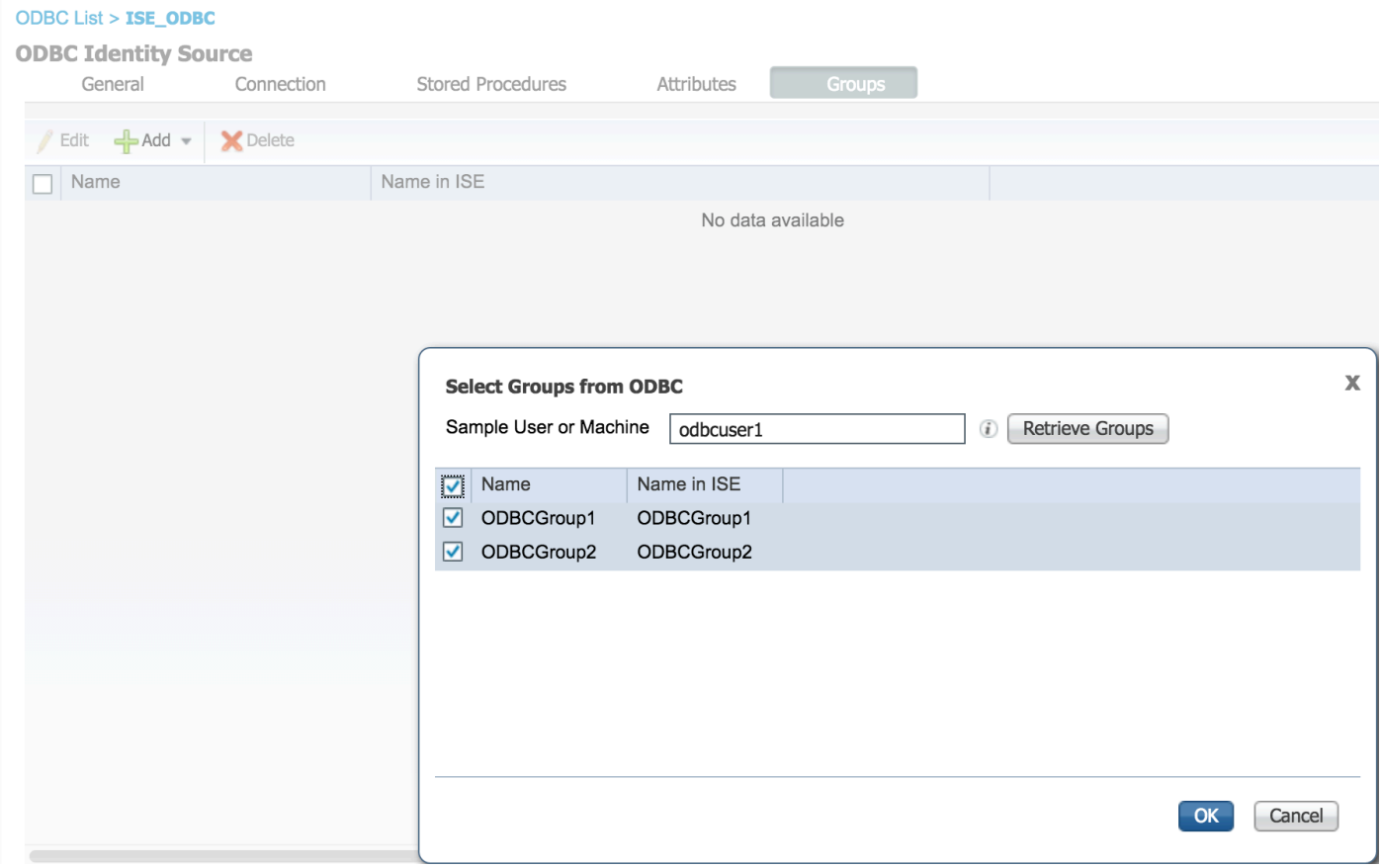
3. Vorgang zum Abrufen von Gruppen erstellen:

```
CREATE PROCEDURE [dbo].[ISEGroupsRetrieval]
@username varchar(255), @result int output
AS
BEGIN
if exists (select * from ISE_Users where username = @username)
begin
set @result = 0
select Group_Name from Groups where group_id in (select group_ID from User_Groups_Mapping where
User_Groups_Mapping.USER_ID IN (select USER_ID from ISE_Users where username=@username ) )
end
else
set @result = 1
END
```

4. Zuordnen zu **Fetch-Gruppen:**



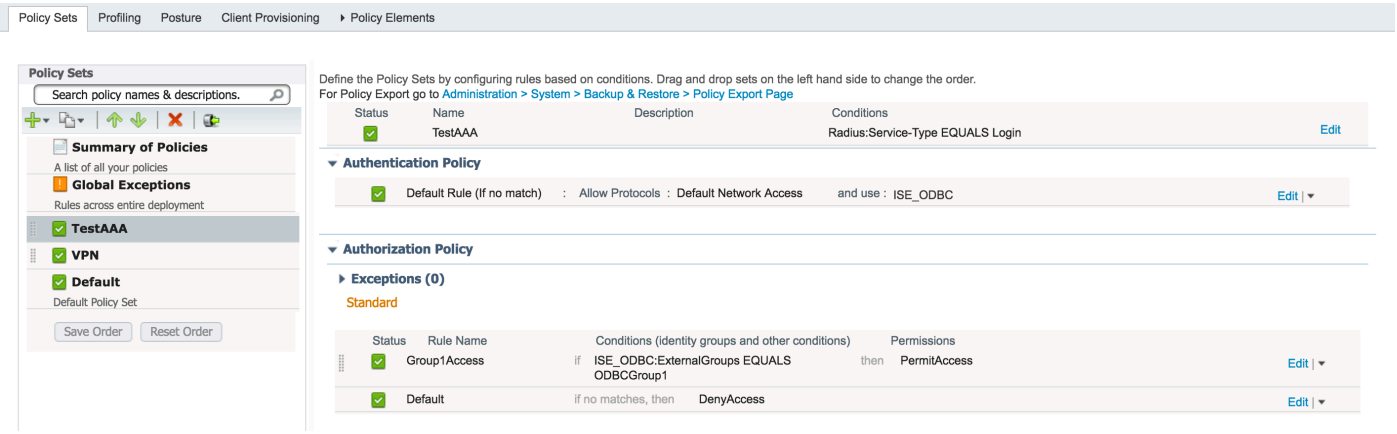
5. Abrufen der Gruppen und Hinzufügen dieser Gruppen zur **ODBC-Identitätsquelle:**



6. Fügen Sie einen anderen Benutzer hinzu, der keiner Gruppe angehört:

```
insert into ISE_Users(username,password) values('odbcuser2','odbcpass');
```

7. Erstellen eines spezifischen **Policy Set** und Tests:




```
b3560#test aaa group ISE236 odbcuser2 odbcpass legacy
Attempting authentication test to server-group ISE236 using radius
User authentication request was rejected by server.

b3560#test aaa group ISE236 odbcuser1 odbcpass legacy
Attempting authentication test to server-group ISE236 using radius
User was successfully authenticated.
```

AuthorizationPolicyMatchedRule	Group1Access
CPMSessionID	0a3027eci0HeVTM3/bn5vLXkWMcJ0em5rzUDaOSnbMmAvL7jcfY
ISEPolicySetName	TestAAA
AllowedProtocolMatchedRule	Default
IdentitySelectionMatchedRule	Default
Network Device Profile	Cisco
Location	Location#All Locations
Device Type	Device Type#All Device Types
ExternalGroups	ODBCGroup1
ExternalGroups	ODBCGroup2
RADIUS Username	odbcuser1

Schritt 5: Konfigurieren des Abrufen von Attributen

1. Um dieses Beispiel zu vereinfachen, wird eine flache Tabelle für Attribute verwendet:

```
 CREATE TABLE [dbo].[User_Attributes](
[user_id] [int] NOT NULL,
[Attribute_Name] [varchar](max) NOT NULL,
[Attribute_Value] [varchar](max) NOT NULL
) ON [PRIMARY]

GO

ALTER TABLE [dbo].[User_Attributes] WITH CHECK ADD CONSTRAINT [FK_User_Attributes_ISE_Users]
FOREIGN KEY([user_id])
REFERENCES [dbo].[ISE_Users] ([user_id])
ON UPDATE CASCADE
ON DELETE CASCADE
GO
```

2. Erstellen Sie ein Attribut für einen der Benutzer:

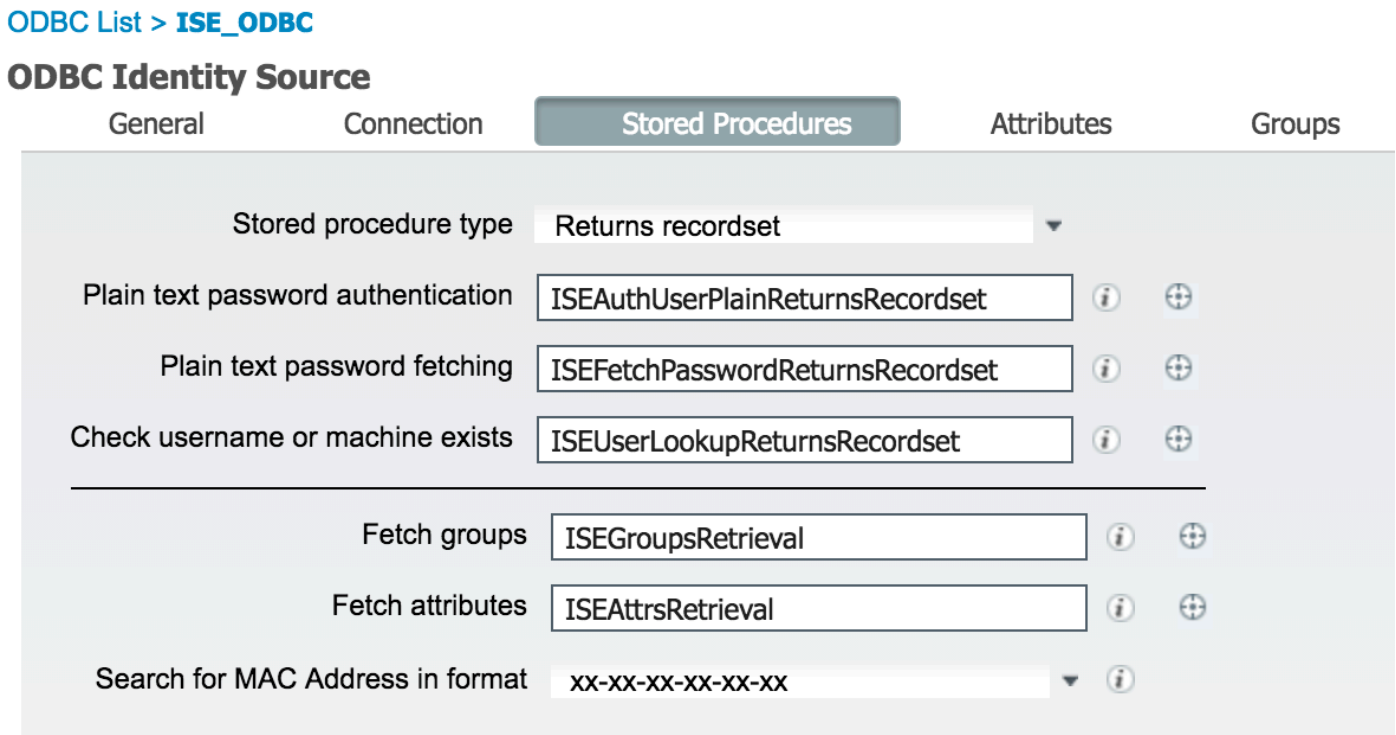
```
INSERT [dbo].[User_Attributes] ([user_id], [Attribute_Name], [Attribute_Value]) VALUES (2,
N'AwsomenessLevel', N'100')
INSERT [dbo].[User_Attributes] ([user_id], [Attribute_Name], [Attribute_Value]) VALUES (2,
N'UserType', N'admin')
```

3. Erstellen **einer gespeicherten Prozedur:**

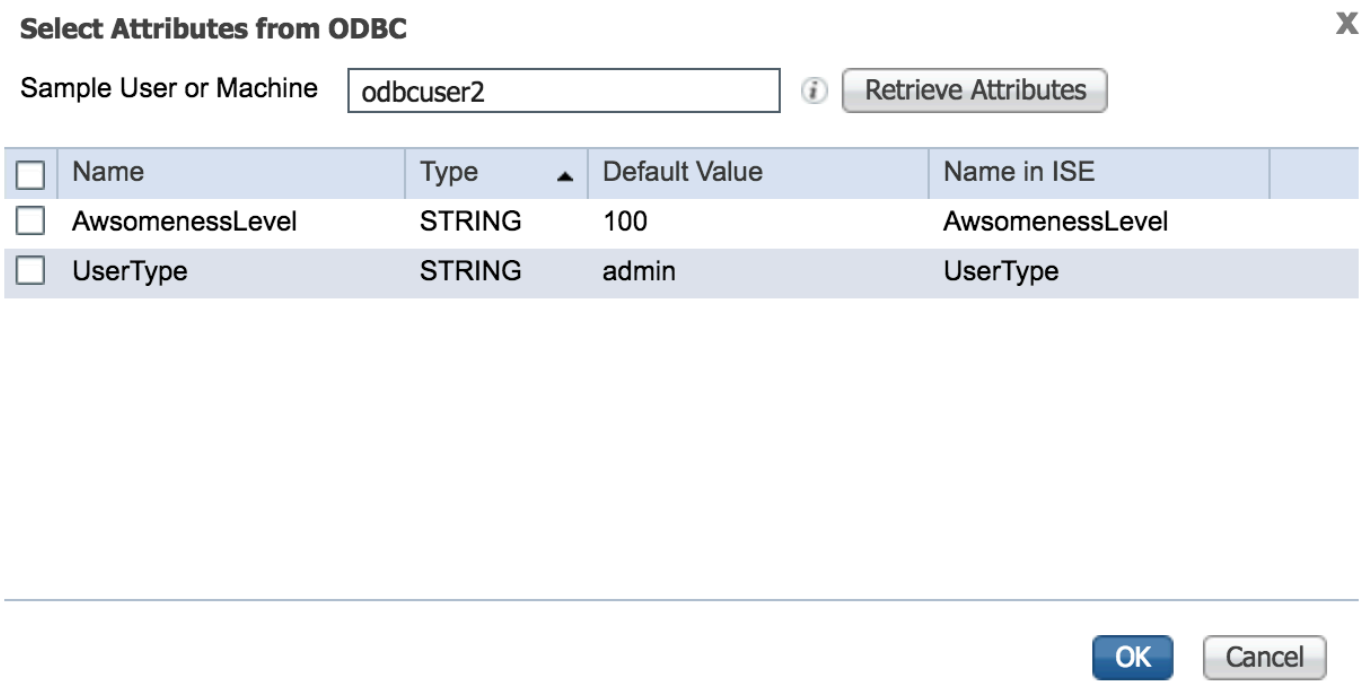
```
CREATE PROCEDURE [dbo].[ISEAttrsRetrieval]
@username varchar(255), @result int output
AS
BEGIN
if exists (select * from ISE_Users where username = @username)
begin
```

```
set @result = 0
select attribute_name , attribute_value from user_attributes where USER_ID in(SELECT USER_ID
from ISE_Users where username = @username)
end
else
set @result = 1
END
```

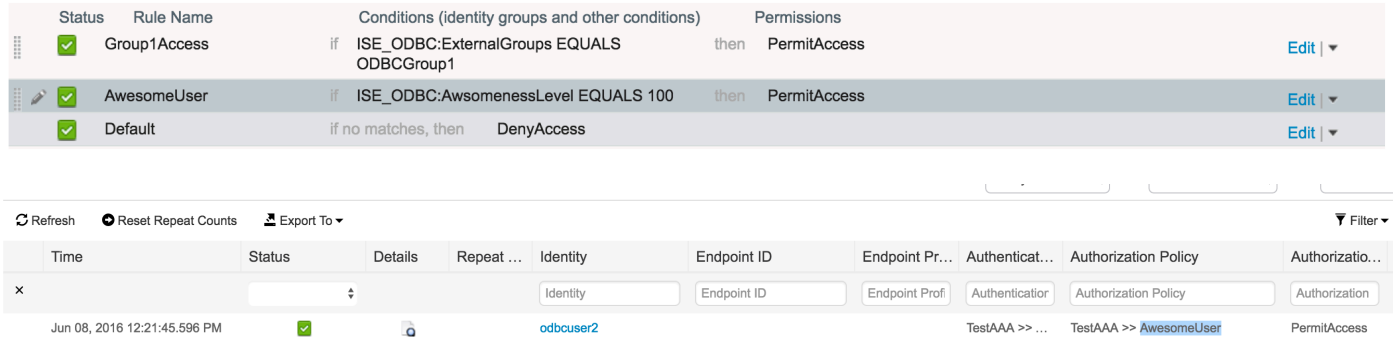
4. Zuordnen zu **Attributen abrufen:**



5. Abrufen der Attribute:



6. Ändern Sie die ISE-Regeln:

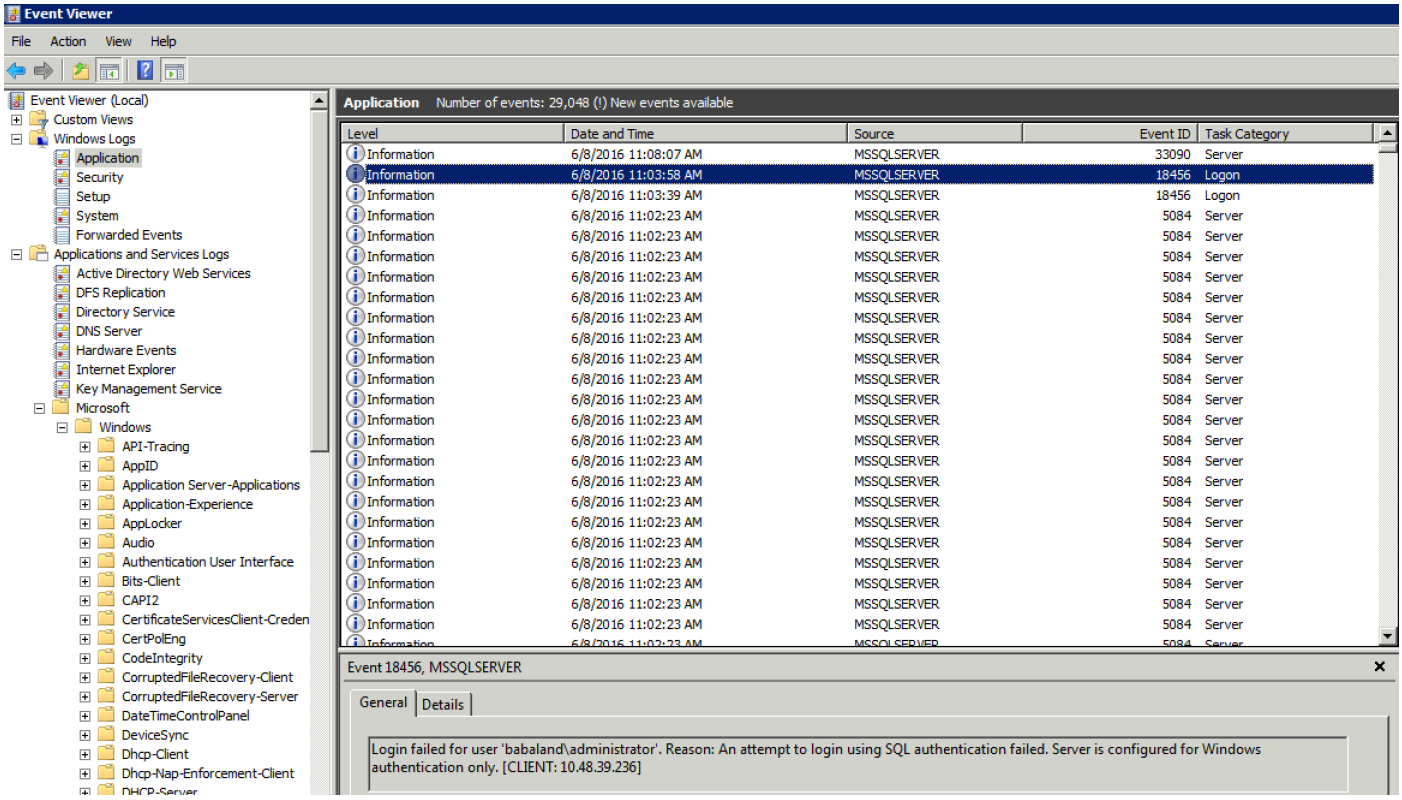


Fehlerbehebung

Wenn die Verbindung nicht erfolgreich hergestellt werden kann, überprüfen Sie das Ereignisprotokoll von Windows. Verwenden Sie bei der ISE den Befehl **show logging application prt-management.log tail** beim Verbindungsversuch.

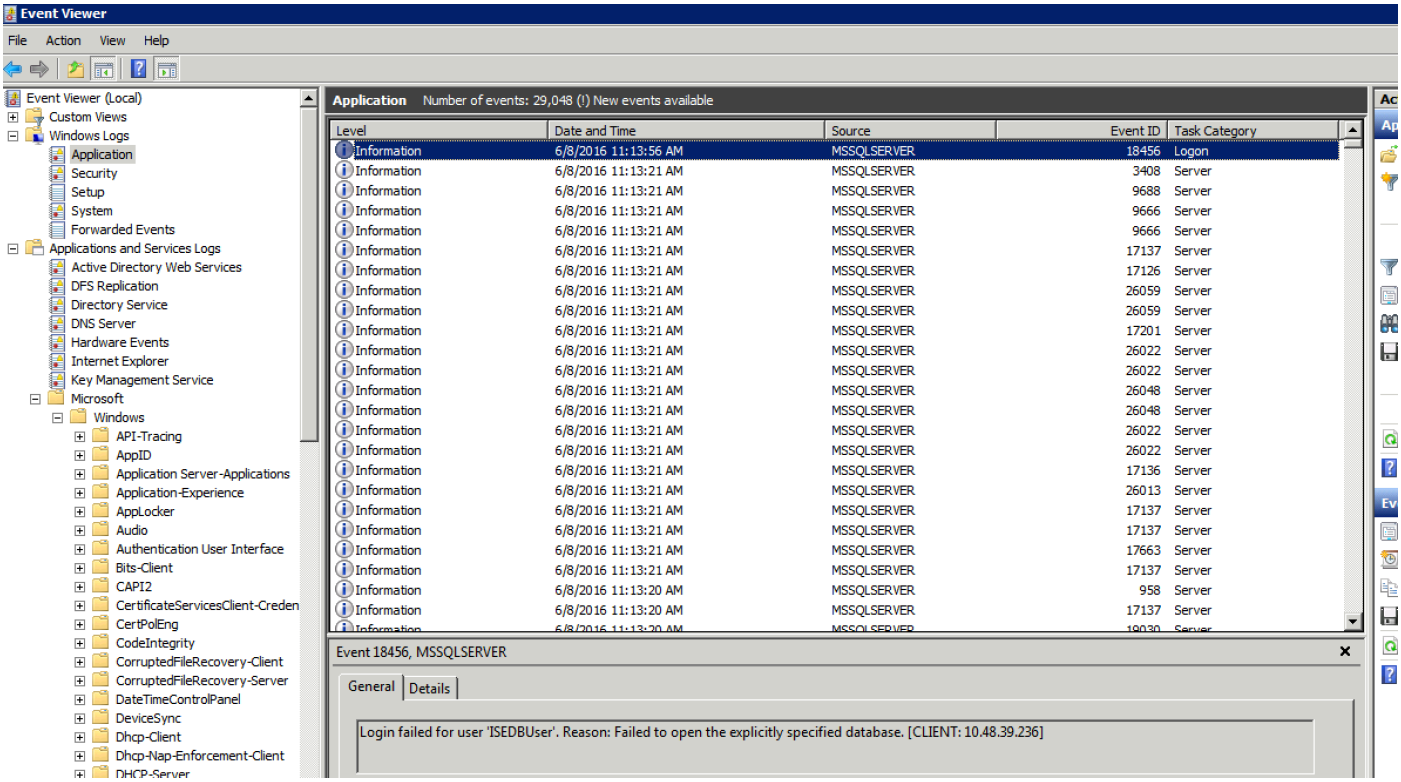
Beispiel für einen schlechten Authentifizierungsmodus:

```
bise236/admin# sh logg app prrt-management.log tail
2016-06-08 09:03:59,822 WARN [admin-http-pool177][]
cisco.cpm.odbcidstore.impl.MSSQLServerDbAccess -:bastien::- Connection to ODBC DB failed.
Exception: com.microsoft.sqlserver.jdbc.S
QLServerException: Login failed for user 'babaland\administrator'. ClientConnectionId:c74ade15-
4f34-415a-9a94-4c54c58c0fc3
com.microsoft.sqlserver.jdbc.SQLServerException: Login failed for user 'babaland\administrator'.
ClientConnectionId:c74ade15-4f34-415a-9a94-4c54c58c0fc3
at
com.microsoft.sqlserver.jdbc.SQLServerException.makeFromDatabaseError(SQLServerException.java:21
6)
at com.microsoft.sqlserver.jdbc.TDSTokenHandler.onEOF(tdsparser.java:254)
at com.microsoft.sqlserver.jdbc.TDSParser.parse(tdsparser.java:84)
at com.microsoft.sqlserver.jdbc.SQLServerConnection.sendLogon(SQLServerConnection.java:2908)
at com.microsoft.sqlserver.jdbc.SQLServerConnection.logon(SQLServerConnection.java:2234)
at com.microsoft.sqlserver.jdbc.SQLServerConnection.access$000(SQLServerConnection.java:41)
at
com.microsoft.sqlserver.jdbc.SQLServerConnection$LogonCommand.doExecute(SQLServerConnection.java
:2220)
at com.microsoft.sqlserver.jdbc.TDSCommand.execute(IOBuffer.java:5696)
at
com.microsoft.sqlserver.jdbc.SQLServerConnection.executeCommand(SQLServerConnection.java:1715)
at com.microsoft.sqlserver.jdbc.SQLServerConnection.connectHelper(SQLServerConnection.java:1326)
```



Beispiel für Benutzer, die keine Berechtigungen zum Öffnen der Datenbank besitzen:

```
2016-06-08 09:13:57,842 WARN [admin-http-pool159][]
cisco.cpm.odbcidstore.impl.MSSQLServerDbAccess -:bastien::- Connection to ODBC DB failed.
Exception: com.microsoft.sqlserver.jdbc.SQLServerException: Cannot open database "ISEDB"
requested by the login. The login failed. ClientConnectionId:299c2956-6946-4282-b3ca-
2aa86642a821
com.microsoft.sqlserver.jdbc.SQLServerException: Cannot open database "ISEDB" requested by the
login. The login failed. ClientConnectionId:299c2956-6946-4282-b3ca-2aa86642a821
at
com.microsoft.sqlserver.jdbc.SQLServerException.makeFromDatabaseError(SQLServerException.java:21
6)
at com.microsoft.sqlserver.jdbc.TDSTokenHandler.onEOF(tdsparser.java:254)
at com.microsoft.sqlserver.jdbc.TDSParser.parse(tdsparser.java:84)
at com.microsoft.sqlserver.jdbc.SQLServerConnection.sendLogon(SQLServerConnection.java:2908)
at com.microsoft.sqlserver.jdbc.SQLServerConnection.logon(SQLServerConnection.java:2234)
at com.microsoft.sqlserver.jdbc.SQLServerConnection.access$000(SQLServerConnection.java:41)
```



Aktivieren Sie zur Fehlerbehebung bei DB-Vorgängen unter **Administration > System > Logging > Debug Log Configuration die Option odbc-id-store** auf DEBUG-Ebene.

Protokolle werden in der Datei **prrt-management.log** abgelegt.

Beispiel für **odbuser2**:

```
2016-06-08 12:26:56,009 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- ODBC
ID Store Operation: Authenticate Plain Text Password. Username=odbcuser2,
SessionID=0a3027ecLA_rJLKsS5QAzuRvluGWzdYe67rIgcG3MMQcpE8yKnw
2016-06-08 12:26:56,012 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.CustomerLog -:::- Write
customer log message: 24852
2016-06-08 12:26:56,012 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -
:::- OdbcConnectionPool - get connection
2016-06-08 12:26:56,012 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -
:::- OdbcConnectionPool - use existing connection
2016-06-08 12:26:56,013 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -
:::- OdbcConnectionPool - connections in use: 1
2016-06-08 12:26:56,013 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Authenticate plain text password
2016-06-08 12:26:56,013 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Prepare stored procedure call, procname=ISEAuthUserPlainReturnsRecordset
2016-06-08 12:26:56,013 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Using recordset to obtain stored procedure result values
2016-06-08 12:26:56,013 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.CustomerLog -:::- Write
customer log message: 24855
2016-06-08 12:26:56,013 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Text: {call ISEAuthUserPlainReturnsRecordset(?, ?)}
2016-06-08 12:26:56,013 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Setup stored procedure input parameters, username=odbcuser2, password=***
2016-06-08 12:26:56,014 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Execute stored procedure call
2016-06-08 12:26:56,017 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
```

Process stored procedure results
2016-06-08 12:26:56,017 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Obtain stored procedure results from recordset
2016-06-08 12:26:56,017 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Received result recordset, number of columns=4
2016-06-08 12:26:56,017 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Results successfully parsed from recordset
2016-06-08 12:26:56,018 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::- OdbcConnectionPool - release connection
2016-06-08 12:26:56,018 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::- OdbcConnectionPool - connections in use: 0
2016-06-08 12:26:56,018 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- Call to ODBC DB succeeded
2016-06-08 12:26:56,018 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcAuthResult -:::- Authentication result: code=0, Conection succeeded=false, odbcDbErrorString=No Error, odbcStoredProcedureCustomerErrorString=null, accountInfo=This is a very good user, give him all access, group=11
2016-06-08 12:26:56,019 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.CustomerLog -:::- Write customer log message: 24853
2016-06-08 12:26:56,026 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- ODBC ID Store Operation: Get all user groups. Username=odbcuser2, SessionID=0a3027ecLA_rJLKsS5QAzuRvluGWzdYe67rIgcG3MMQcpE8yKnw
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- ODBC ID Store Operation: Fetch user groups. Username=odbcuser2, SessionID=0a3027ecLA_rJLKsS5QAzuRvluGWzdYe67rIgcG3MMQcpE8yKnw
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.CustomerLog -:::- Write customer log message: 24869
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::- OdbcConnectionPool - get connection
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::- OdbcConnectionPool - use existing connection
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::- OdbcConnectionPool - connections in use: 1
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Fetch user groups
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Prepare stored procedure call, procname=ISEGroupsRetrieval
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Text: {call ISEGroupsRetrieval(?,?)}
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Setup stored procedure input parameters, username=odbcuser2
2016-06-08 12:26:56,029 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Execute stored procedure call
2016-06-08 12:26:56,031 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Process stored procedure results
2016-06-08 12:26:56,032 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Received epmty result set, no groups/attributes data can be obtained
2016-06-08 12:26:56,032 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::- Result code indicates success
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::- OdbcConnectionPool - release connection
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::- OdbcConnectionPool - connections in use: 0
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- Call to ODBC DB succeeded
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.CustomerLog -:::- Write customer log message: 24870
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- ODBC ID Store Operation: Get all user groups. Got groups...
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- ODBC ID Store Operation: Get all user groups. Username=odbcuser2, ExternalGroups=[]
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- ODBC ID Store Operation: Fetch user attributes. Username=odbcuser2, SessionID=0a3027ecLA_rJLKsS5QAzuRvluGWzdYe67rIgcG3MMQcpE8yKnw

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2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.CustomerLog -:::- Write
customer log message: 24872
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::-
OdbcConnectionPool - get connection
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::-
OdbcConnectionPool - use existing connection
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::-
OdbcConnectionPool - connections in use: 1
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Fetch user attributes
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Prepare stored procedure call, procname=ISEAttrsRetrieval
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Text: {call ISEAttrsRetrieval(?,?)}
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Setup stored procedure input parameters, username=odbcuser2
2016-06-08 12:26:56,033 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Execute stored procedure call
2016-06-08 12:26:56,035 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Process stored procedure results
2016-06-08 12:26:56,035 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Received result recordset, total number of columns=2
2016-06-08 12:26:56,035 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
According to column number expect multiple rows (vertical attributes/groups retured result)
2016-06-08 12:26:56,035 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Fetched data: AwsomenessLevel=100
2016-06-08 12:26:56,035 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Fetched data: UserType=admin
2016-06-08 12:26:56,035 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Results successfully parsed from recordset
2016-06-08 12:26:56,035 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Result code indicates success
2016-06-08 12:26:56,036 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::-
OdbcConnectionPool - release connection
2016-06-08 12:26:56,036 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcConnectionPool -:::-
OdbcConnectionPool - connections in use: 0
2016-06-08 12:26:56,036 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- Call to
ODBC DB succeeded
2016-06-08 12:26:56,036 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.CustomerLog -:::- Write
customer log message: 24873
2016-06-08 12:26:56,036 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- ODBC ID
Store Operation: Get all user attrs. Username=odbcuser2, Setting ISE_ODBC.AwsomenessLevel to 100
2016-06-08 12:26:56,036 DEBUG [Thread-84][] cisco.cpm.odbcidstore.impl.OdbcIdStore -:::- ODBC ID
Store Operation: Get all user attrs. Username=odbcuser2, Setting ISE_ODBC.UserType to admin
```