

Configuración de ISE 2.1 con MS SQL mediante ODBC

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Introducción

Este documento describe cómo configurar Identity Services Engine (ISE) con Microsoft Standard Query Language (SQL) Server para la autenticación de ISE mediante Conectividad abierta de bases de datos (ODBC)

Nota: La autenticación de Conectividad de base de datos abierta (ODBC) requiere que ISE pueda obtener una contraseña de usuario de texto sin formato. La contraseña puede cifrarse en la base de datos, pero debe descifrarse mediante el **procedimiento almacenado**.

Prerequisites

Requirements

Cisco recomienda que tenga conocimiento sobre estos temas:

- Conceptos de base de datos y ODBC
- Microsoft SQL Server

Componentes Utilizados

La información que contiene este documento se basa en las siguientes versiones de software y hardware.

- Identity Services Engine 2.1
- MSSQL Server 2008 R2

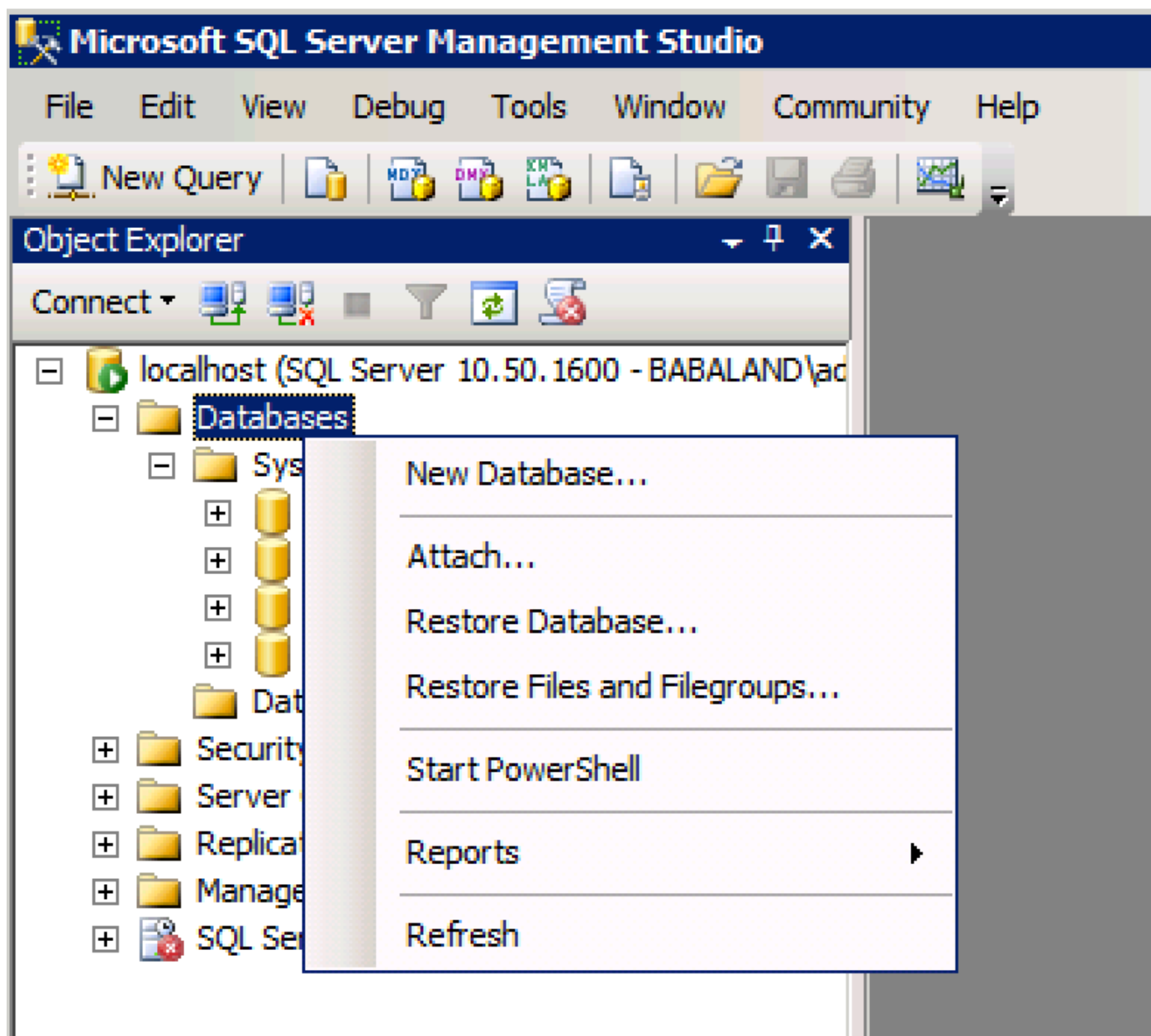
Configurar

Paso 1. Configuración básica de MS SQL

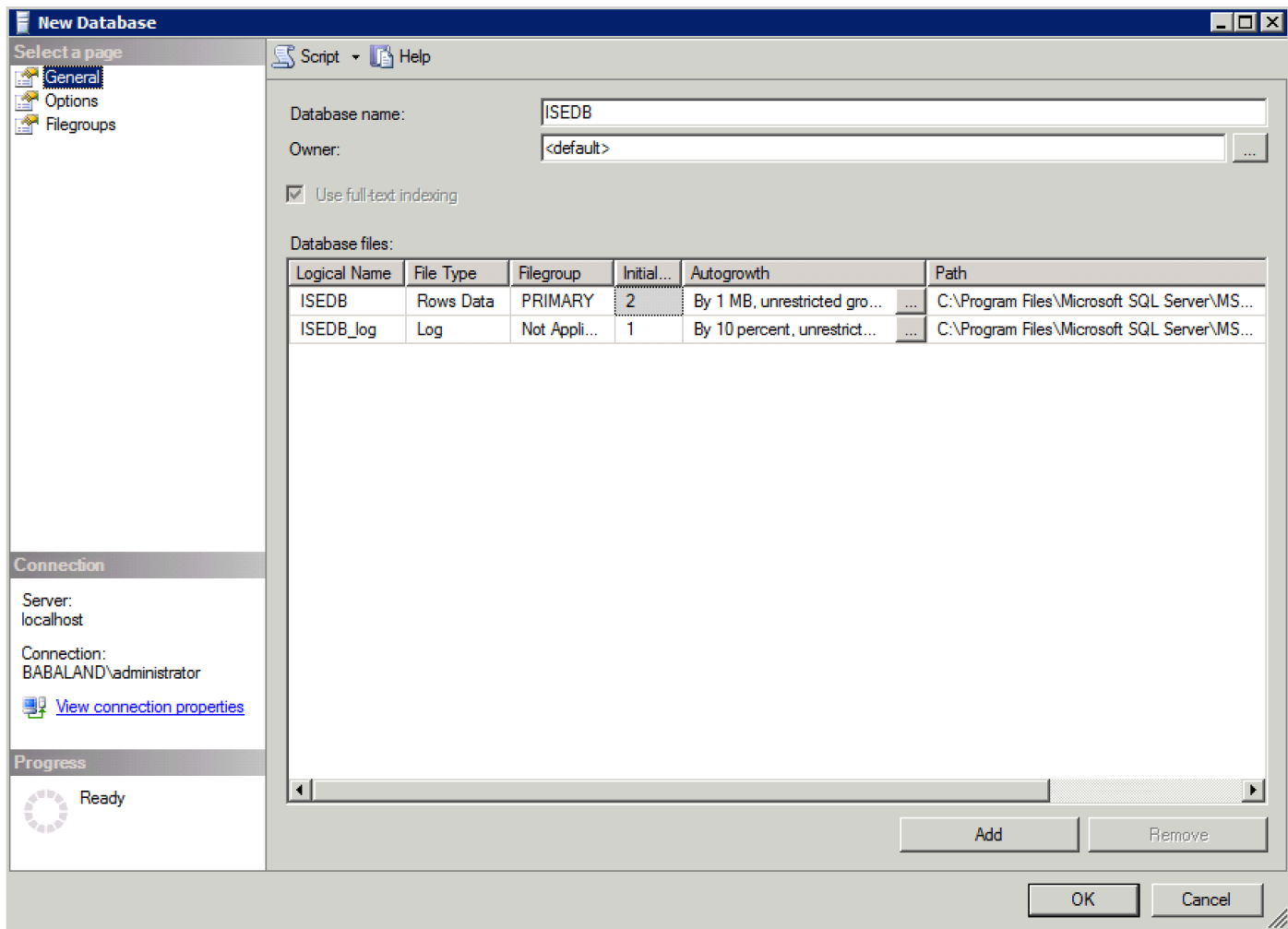
Los pasos de configuración incluyen la creación de una base de datos y un usuario para ISE con permisos para acceder a esa base de datos.

Nota: ISE sólo admite la autenticación SQL, no la cuenta de Windows. Si necesita cambiar el modo de autenticación, consulte [Cambiar el modo de autenticación del servidor](#)

1. Abra SQL Server Management Studio (menú Inicio > Microsoft SQL Server 2008 R2) y cree una base de datos:



2. Deje las opciones predeterminadas o ajuste la configuración de la base de datos como se muestra en esta imagen:



3. Cree un usuario y establezca permisos como se muestra en las imágenes siguientes:

Microsoft SQL Server Management Studio

File Edit View Debug Tools Window Community

New Query [Icons]

Object Explorer [Icons]

Connect [Icons]

- [-] localhost (SQL Server 10.50.1600 - BABALAND\ad)
 - [+] Databases
 - [-] Security
 - [-] Logins
 - [+] Login ##
 - [+] Login ##
 - [+] Login ##
 - [+] Login ##
 - [+] Login ##
 - [+] Login ##
 - [+] Login ##
 - [+] Servers
 - [+] Credentials

New Login...
Filter ▶
Start PowerShell
Reports ▶
Refresh

Login - New [Minimize] [Maximize] [Close]

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Script Help

Login name: 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

Default database:

Default language:

OK Cancel

Connection

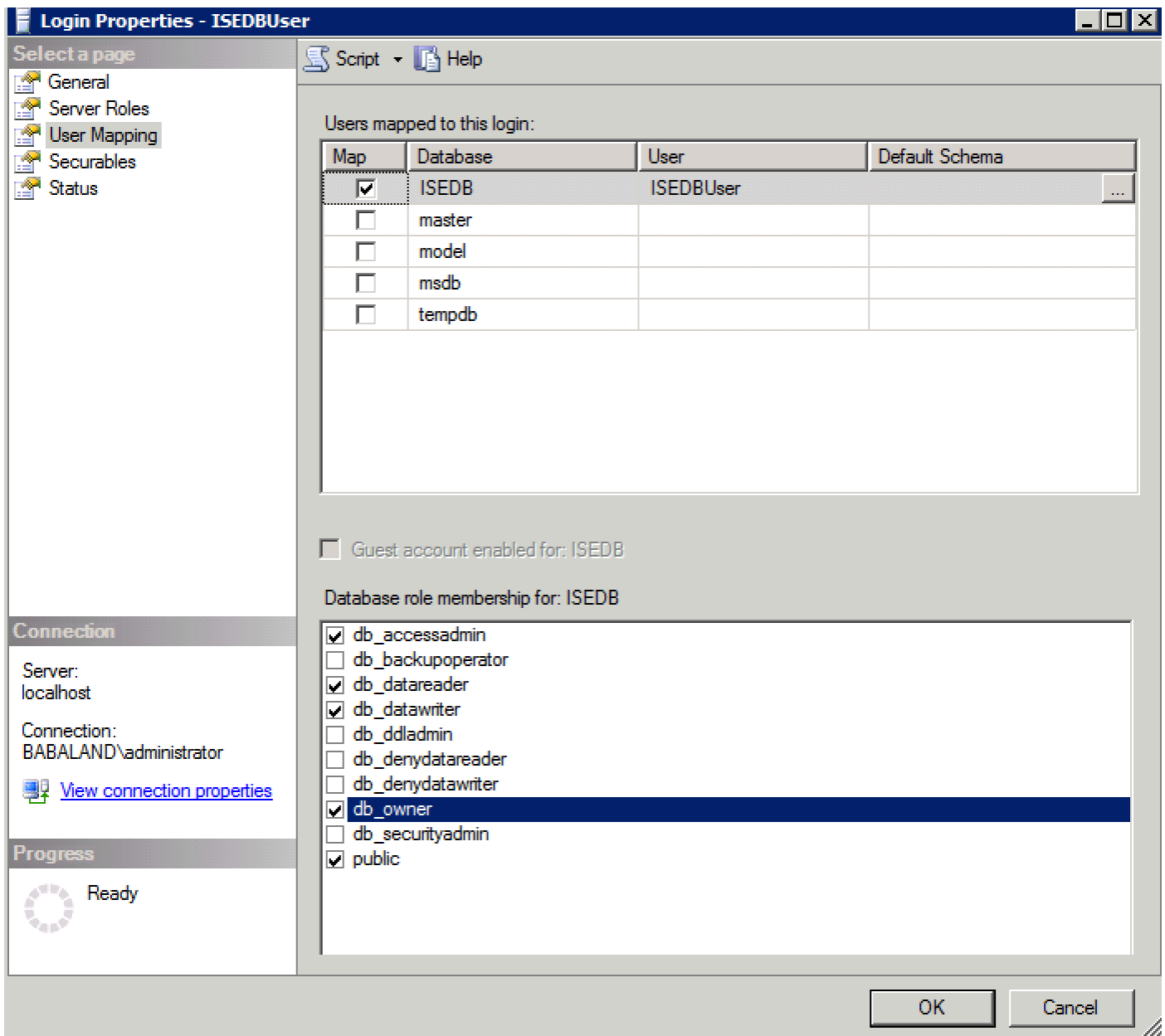
Server: localhost

Connection: BABALAND\administrator

[View connection properties](#)

Progress

Ready



Paso 2. Configuración básica de ISE

Cree un origen de identidad ODBC en Administration > External Identity Source > ODBC y pruebe la conexión:

ODBC Identity Source

General **Connection** Stored Procedures Attributes Groups

ODBC DB connection details

* Hostname/IP[:port]

* Database name

Admin username ⓘ

Admin password

* Timeout

* Retries

* Database type

Test connection X

Connection succeeded

Stored Procedures

- Plain text password authentication - Not Configured
- Plain text password fetching - Not Configured
- Check username or machine exists - Not Configured
- Fetch groups - Not Configured
- Fetch attributes - Not Configured

Paso 3. Configuración de la autenticación de usuario

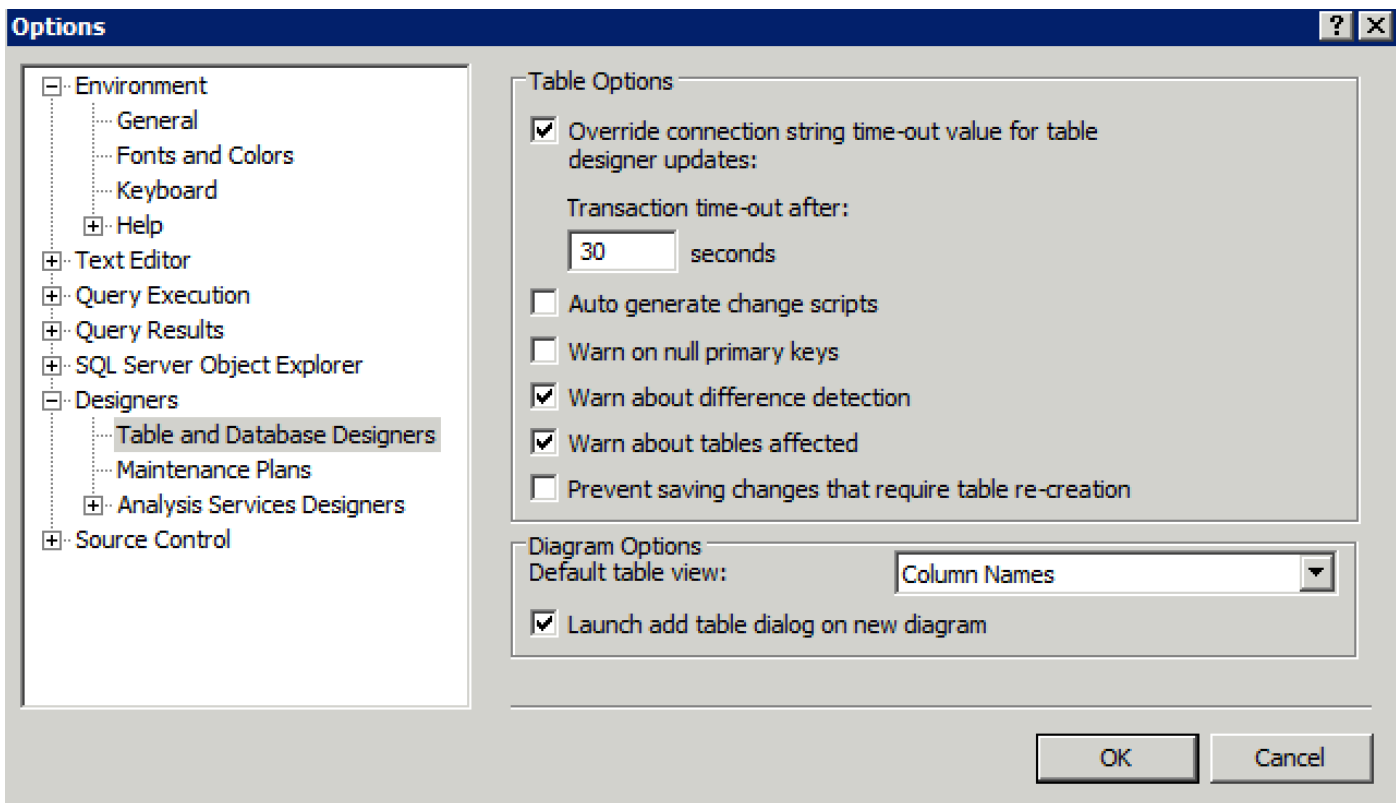
La autenticación de ISE a ODBC utiliza procedimientos almacenados. El procedimiento almacenado para la autenticación devuelve **resultset** con esta sintaxis:

Valor	Tipo
Resultado	Entero
Grupo (sólo para compatibilidad con ACS 4.2)	Entero o varchar(255)
Información de la cuenta	varchar(255)
Cadena de error	varchar(255)

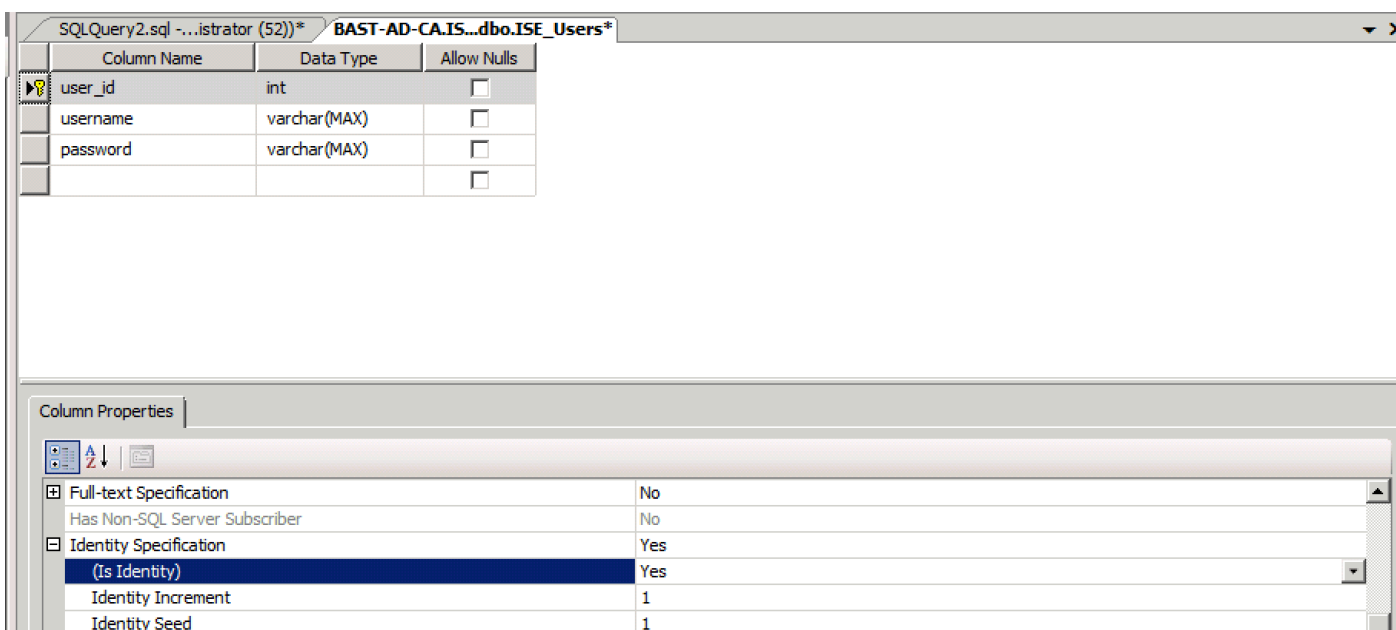
Para ver otros procedimientos, consulte la [Guía de administración de Cisco Identity Services Engine 2.1](#)

Consejo: Es posible devolver los parámetros con nombre en lugar del conjunto de resultados. Es sólo un tipo diferente de salida, la funcionalidad es la misma.

1. Desplácese hasta las opciones y desmarque la casilla de verificación **Evitar guardar cambios que requieran la recreación de la tabla** (opcional):



2. Cree la tabla. Asegúrese de establecer la configuración de identidad en la **clave primaria**. Para establecer **user_id** como **clave principal**, haga clic con el botón derecho en el **nombre de columna**:



SQL final:

```
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. Ejecute esta consulta para insertar un usuario:

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

4. Cree un procedimiento para la autenticación de contraseña de texto sin formato (utilizado para PAP, método interno EAP-GTC, 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. Cree un procedimiento para la búsqueda de contraseñas de texto sin formato (utilizado para CHAP, MSCHAPv1/v2, EAP-MD5, LEAP, EAP-MSCHAPv2, método interno, TACACS):

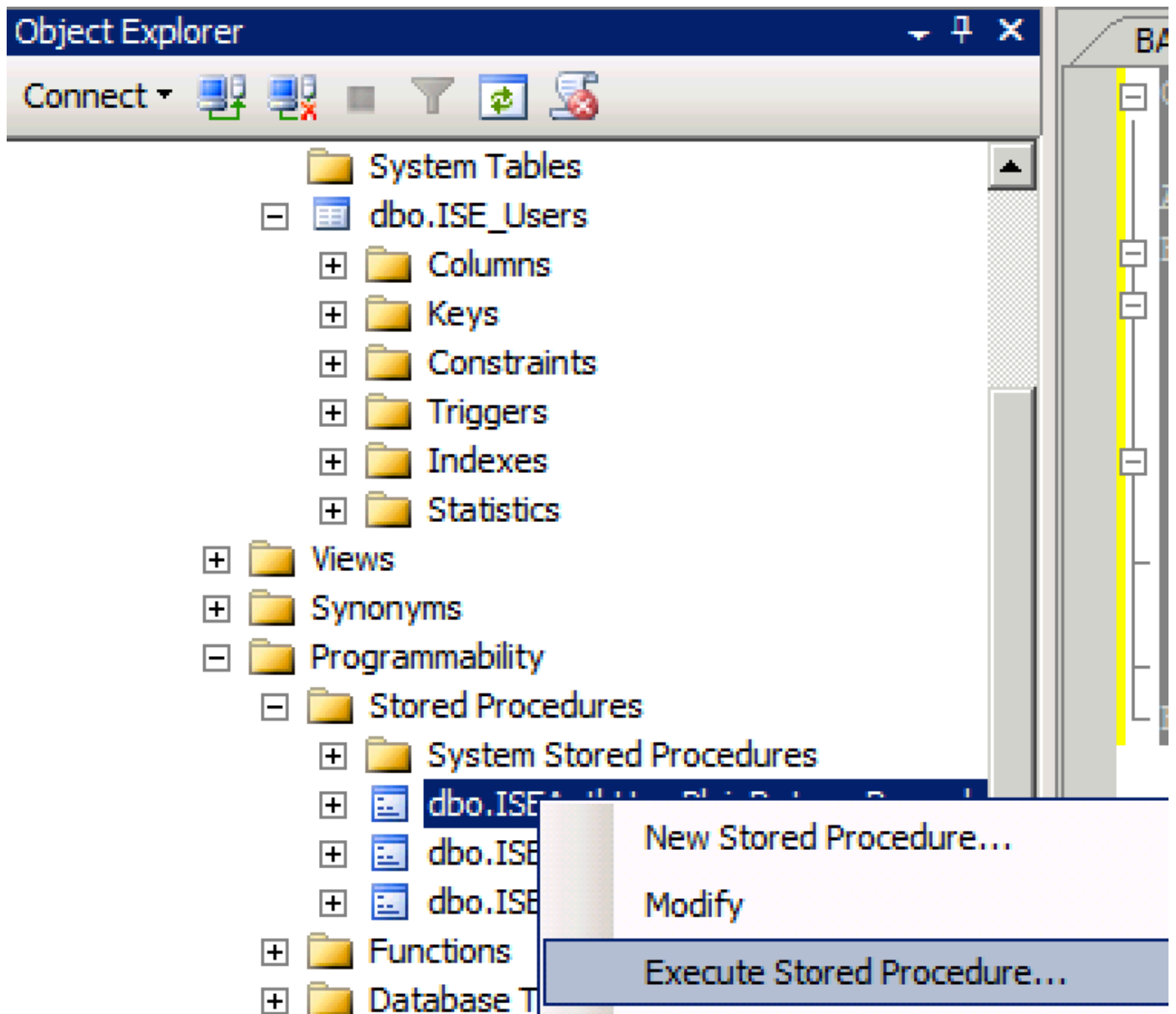
```
CREATE PROCEDURE [dbo].[ISEFetchPasswordReturnsRecordset]
@username varchar(255)
AS
BEGIN
IF EXISTS( SELECT username
FROM ISE_Users
WHERE username = @username)
SELECT 0,11,'This is a very good user, give him all access','No Error',password
FROM ISE_Users
WHERE username = @username
ELSE
SELECT 3,0,'odbc','ODBC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

6. Cree un procedimiento para verificar si existe un nombre de usuario o una máquina (utilizado para MAB, reconexión rápida de PEAP, EAP-FAST y 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. Procedimientos creados para la prueba:



Execute Procedure - [dbo].[ISEAuthUserPlainReturnsRecordset]

Select a page: General

Script Help

Parameter	Data Type	Output Parameter	Pass Null Value	Value
@username	varchar(255)	No	<input type="checkbox"/>	odbcuser1
@password	varchar(255)	No	<input type="checkbox"/>	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

Pruebe otros procedimientos de la misma manera.

8. Configure los procedimientos en ISE y guarde:

[ODBC List](#) > [ISE_ODBC](#)

ODBC Identity Source












General

Connection

Stored Procedures




Attributes

Groups

Stored procedure type	Returns recordset	
Plain text password authentication	ISEAuthUserPlainReturnsRecordset	 
Plain text password fetching	ISEFetchPasswordReturnsRecordset	 
Check username or machine exists	ISEUserLookupReturnsRecordset	 
<hr/>		
Fetch groups		 
Fetch attributes		 
Search for MAC Address in format	xx-xx-xx-xx-xx-xx	

9. Cree una regla de autenticación simple utilizando ODBC y pruebe:

Authentication Policy

<input checked="" type="checkbox"/>	MAB	: If Wired_MAB OR Wireless_MAB	Allow Protocols : Default Network Access	and	Edit 
<input checked="" type="checkbox"/>	Default	:use Internal Endpoints			
<input checked="" type="checkbox"/>	Dot1X	: If Wired_802.1X OR Wireless_802.1X	Allow Protocols : Default Network Access	and	Edit 
<input checked="" type="checkbox"/>	Default	:use All_User_ID_Stores			
<input checked="" type="checkbox"/>	test_aaa	: If Radius:Service-Type EQUALS Login	Allow Protocols : Default Network Access	and	Edit 
<input checked="" type="checkbox"/>	Default	:use ISE_ODBC			

```
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
```

Paso 4. Configurar recuperación de grupo

1. Cree tablas que contengan grupos de usuarios y otra que se utilice para la asignación de varios a varios:

```
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 [PRIMARY]
```

```
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. Agregue grupos y asignaciones para que ODBCUSER1 pertenezca a ambos grupos:

```

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. Crear procedimiento de recuperación de grupo:

```

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. Mapearlo para Buscar grupos:

[ODBC List > ISE_ODBC](#)

ODBC Identity Source

General	Connection	Stored Procedures	Attributes	Groups
Stored procedure type		Returns recordset		
Plain text password authentication	ISEAuthUserPlainReturnsRecordset			
Plain text password fetching	ISEFetchPasswordReturnsRecordset			
Check username or machine exists	ISEUserLookupReturnsRecordset			
Fetch groups		ISEGroupsRetrieval		
Fetch attributes		ISEAttrsRetrieval		
Search for MAC Address in format		xx-xx-xx-xx-xx-xx		

5. Obtenga los grupos y agréguelos al origen de identidad ODBC:

ODBC Identity Source

- General Connection Stored Procedures Attributes **Groups**

Edit + Add X Delete

Name	Name in ISE
No data available	

Select Groups from ODBC X

Sample User or Machine: Retrieve Groups

Name	Name in ISE
<input checked="" type="checkbox"/> ODBCGroup1	ODBCGroup1
<input checked="" type="checkbox"/> ODBCGroup2	ODBCGroup2

OK Cancel

6. Agregue otro usuario que no pertenezca a ningún grupo:

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

7. Crear un conjunto de políticas y una prueba específica:

Policy Sets Profiling Posture Client Provisioning Policy Elements

Policy Sets

Search policy names & descriptions.

Summary of Policies

Global Exceptions

TestAAA

VPN

Default

Save Order Reset Order

Define the Policy Sets by configuring rules based on conditions. Drag and drop sets on the left hand side to change the order.

For Policy Export go to [Administration > System > Backup & Restore > Policy Export Page](#)

Status	Name	Description	Conditions	Edit
<input checked="" type="checkbox"/>	TestAAA		Radius:Service-Type EQUALS Login	Edit

Authentication Policy

<input checked="" type="checkbox"/>	Default Rule (if no match)	Allow Protocols : Default Network Access	and use : ISE_ODBC	Edit
-------------------------------------	----------------------------	--	--------------------	------

Authorization Policy

Exceptions (0)

Standard

Status	Rule Name	Conditions (identity groups and other conditions)	Permissions	Edit
<input checked="" type="checkbox"/>	Group1Access	if ISE_ODBC:ExternalGroups EQUALS ODBCGroup1	then PermitAccess	Edit
<input checked="" type="checkbox"/>	Default	if no matches, then	DenyAccess	Edit

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

```
b3560#test aaa group ISE236 odbcuser1 odhcpass 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

Paso 5. Configurar recuperación de atributos

1. Para simplificar este ejemplo, se utiliza una tabla plana para los atributos:

```
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. Cree un atributo para uno de los usuarios:

```
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. Crear procedimiento almacenado:

```
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. Asignarlo a **Obtener atributos:**

[ODBC List](#) > **ISE_ODBC**

ODBC Identity Source

General Connection **Stored Procedures** Attributes Groups

Stored procedure type: Returns recordset

Plain text password authentication: ISEAuthUserPlainReturnsRecordset

Plain text password fetching: ISEFetchPasswordReturnsRecordset

Check username or machine exists: ISEUserLookupReturnsRecordset

Fetch groups: ISEGroupsRetrieval

Fetch attributes: ISEAttrsRetrieval

Search for MAC Address in format: xx-xx-xx-xx-xx-xx

5. Obtenga los atributos:

Select Attributes from ODBC

X

Sample User or Machine:

<input type="checkbox"/>	Name	Type	Default Value	Name in ISE
<input type="checkbox"/>	AwsomenessLevel	STRING	100	AwsomenessLevel
<input type="checkbox"/>	UserType	STRING	admin	UserType

6. Ajuste de las reglas de ISE:

Status	Rule Name	Conditions (identify groups and other conditions)	Permissions	
✓	Group1Access	if ISE_ODBC:ExternalGroups EQUALS ODBCGroup1	then PermitAccess	Edit ▾
✓	AwesomeUser	if ISE_ODBC:AwsomenessLevel EQUALS 100	then PermitAccess	Edit ▾
✓	Default	if no matches, then	DenyAccess	Edit ▾

Refresh Reset Repeat Counts Export To Filter

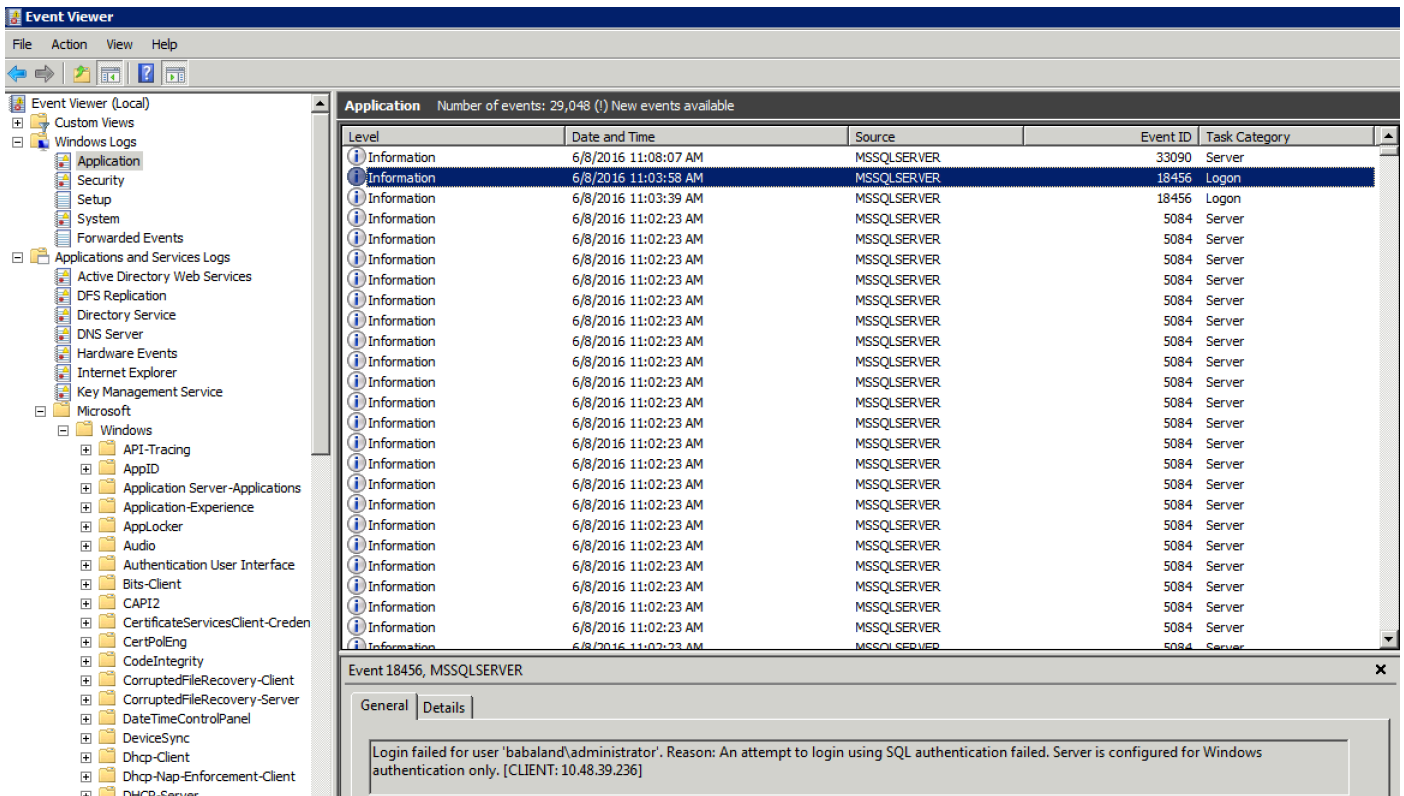
Time	Status	Details	Repeat ...	Identity	Endpoint ID	Endpoint Pr...	Authenticat...	Authorization Policy	Authorizatio...
Jun 08, 2016 12:21:45.596 PM	✓			odbcuser2		Endpoint Prof	Authenticator	Authorization Policy	Authorization

Troubleshoot

Si la conexión no se realiza correctamente, verifique el registro de eventos de windows. En ISE use el comando **show logging application prrt-management.log tail** mientras intenta conectarse.

Ejemplo de modo de autenticación incorrecto:

```
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)
```

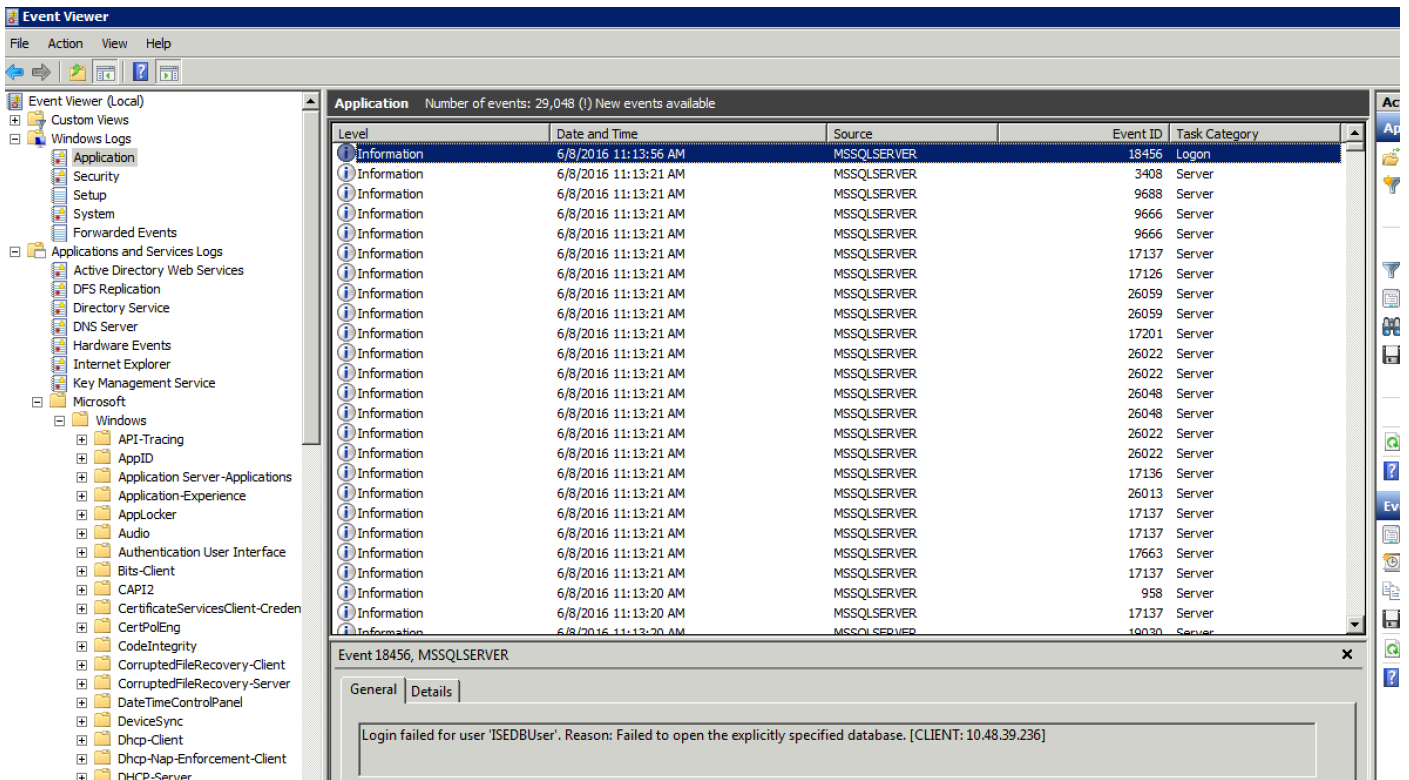


Ejemplo de permisos de usuario que faltan para abrir la base de datos:

```

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)

```



Para resolver problemas de operaciones de la base de datos, habilite los componentes de registro **odbc-id-store** en el nivel **DEBUG** bajo **Administración > Sistema > Registro > Configuración de registro de depuración**.

Los registros se colocan en el archivo **prrt-management.log**.

Ejemplo para **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=odbuser2,
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=odbuser2, password=***
2016-06-08 12:26:56,014 DEBUG [Thread-4051][] cisco.cpm.odbcidstore.impl.OdbcConnection -:::-
Execute stored procedure call

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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, Connection 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 empty 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 returned 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
```