使用ODBC配置ISE 2.1的MS SQL

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简介

本文档介绍如何使用Microsoft标准查询语言(SQL)服务器配置身份服务引擎(ISE),以便使用开放数 据库连接(ODBC)进行ISE身份验证

注意:开放数据库连接(ODBC)身份验证要求ISE能够获取明文用户密码。密码可以在数据库 中加密,但必须由存储过程**解密**。

先决条件

要求

Cisco 建议您了解以下主题:

- •数据库和ODBC概念
- Microsoft SQL 服务器

使用的组件

本文档中的信息基于以下软件和硬件版本:

- •身份服务引擎2.1
- MSSQL服务器2008 R2

配置

步骤1. MS SQL基本配置

配置步骤包括为ISE创建数据库和一个具有访问该数据库权限的用户。

注意:ISE仅支持SQL身份验证,不支持Windows帐户。如果需要更改身份验证模式,请参阅 更改服<u>务器身份验证模式</u>

1.打开SQL Server Management Studio("开始"**菜单> Microsoft SQL Server 2008 R2)并**创建数据库 :

🍢 Microsoft SQL Serve	er Management St	tudio	
File Edit View De	bug Tools Wind	ow Community	Help
🔛 New Query 🛅	🐴 🔁 🌇 🗎	🚰 🖬 🎒 🜌	ł _
Object Explorer		- 7 ×	
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🗆 🧰 Sys	New Database		
	Attach		
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🗖 🛄 Dat	Restore Files and Fi	legroups	
E Courity	Start PowerShell		
	Reports	•	
🕀 🧰 Manage			
🕀 📸 SQL Sei	Refresh		

2.保留默认选项或调整数据库设置,如下图所示:

🚪 New Database						
Select a page	🔄 Script 👻 📑	Help				
General						
Pilegroups	Database name	:	ISEDB			
	Owner:		<default></default>			
	_		· · ·			
	Use full-text i	indexing				
	Database files:					
	Logical Name	File Type	Filegroup	Initial	Autogrowth	Path
	ISEDB	Rows Data	PRIMARY	2	By 1 MB, unrestricted gro	. C:\Program Files\Microsoft SQL Server\MS
	ISEDB_log	Log	Not Appli	1	By 10 percent, unrestrict	C:\Program Files\Microsoft SQL Server\MS
Connection						
Server:						
localhost						
Connection: BABALAND\administrator						
View connection properties						
Dragroop						
T TOGICAS						
Ready						
445						Add Remove
						OK Cancel

3.创建用户并设置权限,如下图所示:



🚪 Login - New			
Select a page	<u>S</u> Script 👻 📑 Help		
General			Conroh
User Mapping	Login name.	ISEDBOSEF	Search
Securables	O Windows authentication		
	SQL Server authentication		
	Password:	••••	
	Confirm password:	•••••	
	Specify old password		
	Old password:		
	Enforce password policy	/	
	Enforce password expira	ation	
	🗖 User must change pass	word at next login	
	O Mapped to certificate		
	O Mapped to asymmetric key		
	Map to Credential		Add
Connection	Mapped Credentials	Credential Provider	
Server: localhost			
Connection: BABALAND\administrator			
View connection properties			
Progress			Remove
Ready	Default database:	ISEDB	
The start of	Defectibleseuroes	<default></default>	
	Delaukianguage:		
		ОК	Cancel

Login Properties - ISEDBUs	er			_ 🗆 ×
Select a page	🕄 Script 🕞	🖪 Help		
🚰 General				
Server Roles	Lleere man	ned to this login:		
User Mapping	Mare	Detekara	Ulara	Defect Colore
Securables				Derault Schema
Er Status		ISEDB	ISEDBUser	
		master		
		model		
		msdb		
		tempdb		
	Guest	account enabled for: ISEDB		
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View connection properties	db_de	nydatawriter		
	db_ow	ner		
	db_se	curityadmin		
Progress	I I Public			
Ready				
Teas of				
				OK Cancel

步骤2. ISE基本配置

在管理**>外部身份源**> ODBC**和测试连**接处**创建ODBC身份**源,并测试连接:

ODBC List > ISE_ODBC

ODBC Identity Source General Stored Procedures Attributes Groups **ODBC DB connection details** * Hostname/IP[:port] bast-ad-ca.cisco.com * Database name **ISEDB** Admin username (i)**ISEDBUser** Admin password * Timeout 5 **Test connection** Х * Retries 1 Connection succeeded * Database type Microsoft SQL Serv **Stored Procedures** Plain text password authentication - Not Configured Test Connection Plain text password fetching - Not Configured ◍ Check username or machine exists - Not Configured Fetch groups - Not Configured Fetch attributes - Not Configured Close

步骤3.配置用户身份验证

ISE对ODBC的身份验证使用存储过程。用于身份验证的存储过**程返**回结果集,语法为:

价值	类型
结果	整数
组(仅用于与ACS 4.2兼容)	整数或varchar(255)
帐户信息	varchar(255)
错误字符串	varchar(255)

有关其他步骤,请参阅思科身份服务引擎2.1管理指南

提示:可以返回命名参数而不是结果集。它只是一种不同的输出类型,功能是相同的。

1.定位至选项并取消选中"防止保存需要重新创建表的更改"复选框(可选):

Options	? >
 Environment General Fonts and Colors Keyboard Help Text Editor Query Execution Query Results SQL Server Object Explorer Designers Table and Database Designers Maintenance Plans Analysis Services Designers Source Control 	Table Options Image: Override connection string time-out value for table designer updates: Transaction time-out after: 30 seconds Auto generate change scripts Warn on null primary keys Warn about difference detection Warn about tables affected Prevent saving changes that require table re-creation Diagram Options Default table view: Column Names
	OK Cancel

2.创建表。确保在主键上设置身**份设置**。要将user_id设置为主键,请右键单击:

	/		_	
Column Name	Data Type	Allow Nulls	-	
user_id	int			
username	varchar(MAX)			
password	varchar(MAX)			
olumn Properties	Subscriber			
olumn Properties	Subscriber			
olumn Properties	Subscriber			
olumn Properties	Subscriber			

最终SQL:

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.运行此查询以插入一个用户:

insert into ISE_Users(username,password) values('odbcuser1','odbcpass'); 4.创建纯文本密码身份验证的过程(用于PAP、EAP-GTC内部方法、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.创建纯文本密码获取过程(用于CHAP、MSCHAPv1/v2、EAP-MD5、LEAP、EAP-MSCHAPv2内 部方法、TACACS):

6.创建一个过程以检查用户名或计算机是否存在(用于MAB、PEAP、EAP-FAST和EAP-TTLS的快 速重新连接):

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.测试子AJ2書的印度 .
```



Series a page Series Series Ser	🐙 Execute Procedure - [dbo].[ISEAuthUserPlainR	eturnsRecordset]		
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OK Cancel SQLQuery5.sqlinistrator (57)) BAST-AD-CA.ISdbo.ISE_Users SQLQuery2.sqlistrator (52))* BAST-AD-CA.ISdbo.ISE_Users Image: SQLQuery2.sqlistrator (52))* SQLQuery2.sql	No. of					
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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 D_Messages (No column name) (No column name) (No column name) 0 11 This is a very good user, give him all access No Error	SQLQuery5.sqlinistrator (57)) B/	AST-AD-CA.ISdbo.ISE_U	Isers SQLQuery2.sc	ılistrator (52))* 🛛 B	AST-AD-CA.ISdbo.IS	E_Users 🗸 👻
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<pre>DECLARE @return_value int EXEC @return_value = [dbo][ISEAuthUserPlainReturnsRecordset] @username = N'odbcuser1', @password = N'odbcpass' SELECT 'Return Value' = @return_value GO GO Results Messages (No column name) (No column name) (No column name) 0 11 This is a very good user, give him all access No Error</pre>						
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Go SELECT 'Return Value' = @return_value GO Results Messages (No column name) (No column name) (No column name) (No column name) No Error	EXEC @return_value =	[dbo].[ISEAuthUs	erPlainReturnsH	Recordset]		
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	(No column name) (No column nam	e) (No column name) This is a very coord ur	ser, give him all access	(No column name)		
		This is a very good us	ser, give him all access			

8.在ISE上配置步骤并保存:

ODBC List > ISE_ODBC

0	DBC Identity	Source					
	General	Connection	Stored Procedures	Attributes		Groups	
	S	tored procedure type	Returns recordset	•			
	Plain text pas	sword authentication	ISEAuthUserPlainReturnsReco	ordset	\oplus		
	Plain te	ext password fetching	ISEFetchPasswordReturnsRec	ordset	\oplus		
	Check usernar	ne or machine exists	ISEUserLookupReturnsRecord	lset (i)	\oplus		
		Fetch groups		(0 🕀		
		Fetch attributes		(0		
	Search for M	IAC Address in format	xx-xx-xx-xx-xx	• (i	D		

9.使用ODBC创建简单身份验证规则并进行测试:

v 1	\uth	nent	ication Policy					
		~	МАВ	: If	Wired_MAB OR Wireless_MAB	Allow Protocols : Default Network Access	and	Edit 🕶
			Default		use Internal Endpoints			
		~	Dot1X	: If	Wired_802.1X OR Wireless_802.1X	Allow Protocols : Default Network Access	and	Edit 🕶
			Default		use All_User_ID_Stores			
	ø	~	test_aaa	: If	Radius:Service-Type EQUALS Login	Allow Protocols : Default Network Access	and	Edit 🕶
			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.

Event	5200 Authentication succeeded	
Username	odbcuser1	
Endpoint Id		
Endpoint Profile		
Authentication Policy	Default >> test_aaa >> Default	
Authorization Policy	Default >> Default	
Authorization Folloy		
Authorization Result	PermitAccess	
Authorization Result	PermitAccess	
Authorization Result Ithentication Details Source Timestamp	PermitAccess 2016-06-08 11:04:07.004	
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Authorization Result Authorization Result Ithentication Details Source Timestamp Received Timestamp Policy Server Event	PermitAccess 2016-06-08 11:04:07.004 2016-06-08 11:04:07.005 bise236 5200 Authentication succeeded	

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 - $\ensuremath{ISE}\xspace_{ODBC}$
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 - $\ensuremath{ISE}\xspace$
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

步骤4.配置组检索

1.创建包含用户组和用于多对多映射的另一个表:

```
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.添加组和映射,使ODBCUSER1同时属于两个组:

```
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.创建组检索过程:
```

```
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.将其映射到Fetch组:
```

ODBC List > ISE_ODBC

ODBC Identity Source

General	Connection	Stored Procedures	Attributes	Groups
St	ored procedure type	Returns recordset	*	
Plain text pas	sword authentication	ISEAuthUserPlainReturnsRec	cordset	\oplus
Plain te	xt password fetching	ISEFetchPasswordReturnsRe	cordset	\oplus
Check usernar	ne or machine exists	ISEUserLookupReturnsRecor	dset	\oplus
	Fetch groups	ISEGroupsRetrieval	i	\oplus
	Fetch attributes	ISEAttrsRetrieval	()	\oplus
Search for M	AC Address in format	xx-xx-xx-xx-xx	• ()	

5.获取组并将其添加到ODBC身份源:

ODBC List > **ISE_ODBC**

ODBC Identity Source		
General Connection	Stored Procedures Attributes Groups	
/ Edit 🕂 Add 👻 🗙 Delete		
Name	Name in ISE	
	No data available	
	Select Groups from ODBC	x
	Sample User or Machine odbcuser1 (1) Retrieve Groups	
	Name Name in ISE	
	ODBCGroup1 ODBCGroup1 ODBCGroup1 ODBCGroup2	
	OK Can	Icel

6.添加不属于任何组的其他用户:

insert into ISE_Users(username,password) values('odbcuser2','odbcpass');
7.创建特定策略集并测试:

Policy Sets Profiling Posture Client Provisioni	ing Policy Elements			
Policy Sets Search policy names & descriptions.	Define the Policy Sets by configuring rules For Policy Export go to Administration > S	s based on conditions. Drag and drop sets ystem > Backup & Restore > Policy Expor	on the left hand side to change the order. Page	
+- ₽₁- ↑ ↓ X @	Status Name	Description	Conditions	
Summary of Policies	TestAAA		Radius:Service-Type EQUALS Login	Edit
A list of all your policies	 Authentication Policy 			
Global Exceptions Rules across entire deployment	Default Rule (If no match) : Allow Protocols : Default Network	Access and use : ISE_ODBC	Edit 🕶
Z TestAAA				
VPN	 Authorization Policy 			
🗹 Default	Exceptions (0)			
Default Policy Set	Standard			
Save Order Reset Order				
	Status Rule Name	Conditions (identity groups and	other conditions) Permissions	
	Group1Access	If ISE_ODBC:ExternalGroups EQ ODBCGroup1	JALS then PermitAccess	Edit 🔻
	Default	if no matches, then DenyAcces	3	Edit 🕶

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

步骤5.配置属性检索

1.为简化此示例,属性使用平面表:

```
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.为以下用户之一创建属性:

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.创建存**储过程:**

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.将其映射到"获取"属性:
```

ODBC List > ISE_ODBC

ODBC Identity Source

General	Connection	Stored Procedures	Attributes	Groups
:	Stored procedure type	Returns recordset	•	
Plain text pa	ssword authentication	ISEAuthUserPlainReturnsRec	cordset	\oplus
Plain t	ext password fetching	ISEFetchPasswordReturnsRe	cordset	\oplus
Check userna	ame or machine exists	ISEUserLookupReturnsRecor	rdset	\oplus
	Fetch groups	ISEGroupsRetrieval	<i>i</i>	Ð
	Fetch attributes	ISEAttrsRetrieval	i	\oplus
Search for	MAC Address in format	xx-xx-xx-xx-xx	• (i)	

5.获取属性:

Select Attributes from ODBC								
Sample User or Machine	odbcuser2		i) Retrie	eve Attributes				
Name	Туре 🔺	Default Value		Name in ISE				
AwsomenessLevel	STRING	100		AwsomenessLevel				
UserType	STRING	admin		UserType				



6.调整ISE规则:

	Status	s Rule Name Group1Access	if	Conditions (i ISE_ODBC:E ODBCGroup	identity grou ExternalGrou 1	ps and other conditions) then	Permissions PermitAcces	s			Edit 🔻
		AwesomeUser		ISE_ODBC:	Awsomenes	sLevel EQUALS 100		PermitAcces	s			Edit 🕶
		Default	if no	o matches, th	en Deny	Access						Edit 🕶
C Re	fresh	Reset Repeat Counts	Export To 🗸									T Filter •
	Time		Status	Details	Repeat	Identity	Endpoint	ID	Endpoint Pr	Authenticat	Authorization Policy	Authorizatio
×			÷			Identity	Endpoint	ID	Endpoint Profi	Authentication	Authorization Policy	Authorization
	Jun 08, 2	2016 12:21:45.596 PM		Q		odbcuser2				TestAAA >>	TestAAA >> AwesomeUser	PermitAccess

故障排除

如果连接不成功,请检查windows事件日志。在ISE上,在尝试**连接时使用命令show logging** application prrt-management.log tail。

身份验证模式错误的示例:

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)

🛃 Event Viewer						
File Action View Help						
🗢 🔿 📶 🔢 🗊						
Event Viewer (Local)	Application Number of	events: 29,048 (!) New events available				
Custom Views	Laval	Data and Time	Saumaa	Event ID	Task Catagory	
Windows Logs	Level	6/8/2016 11:08:07 AM	MSCOL SERVER	22000	Fask Category	
Application	Toformation	6/8/2016 11:08:07 AM	MSSQLSERVER	19456	Server	
Security	Information	6/8/2016 11:03:38 AM	MSSQLSERVER	10450	Logon	
Seup	Information	6/0/2016 11:03:39 AM	MISSQUEERVER	10430	Coguar	
Enrwarded Events	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Applications and Services Logs	Information	6/8/2016 11:02:22 AM	MISSQUEERVER	5004	Server	
Active Directory Web Services	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
DFS Replication	Information	6/0/2016 11:02:22 AM	MSSQLSERVER	5004	Server	
Directory Service	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
DNS Server	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Hardware Events	Information	6/0/2016 11:02:23 AM	MSSQLSERVER	5004	Server	
👔 Internet Explorer	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
🛃 Key Management Service	Information	6/0/2016 11:02:22 AM	MISSQUEERVER	5004	Server	
🖃 🚞 Microsoft	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
E Windows	Information	6/0/2016 11:02:22 AM	MISSQUEERVER	5004	Server	
API-Tracing	Information	6/0/2016 11:02:23 AM	MSSQLSERVER	5004	Server	
🕀 🛄 AppID	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Application Server-Applications	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5004	Server	
Application-Experience	Information	6/6/2016 11:02:23 AM	MSSQLSERVER	5004	Server	
🗄 🔛 AppLocker	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5004	Server	
Audio Authentication Liner Interface	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Bits-Client	Tafamatian	6/6/2016 11:02:23 AM	MSSQLSERVER	5004	Server	
	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
CertificateServicesClient-Creden	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
🕀 🦳 CertPolEng	Tafamatian	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	-
CodeIntegrity		5/8//115 101/273 AM	MISSI II SED VED	51184	Server	
	Event 18456, MSSQLSER	WER				×
	General Dataila					
🕀 🧮 DateTimeControlPanel	Details					1
🕀 🧰 DeviceSync						
🕀 🧮 Dhcp-Client	Login failed for user	"babaland\administrator". Reason: An attem	pt to login using SQL authentication fa	ailed. Server is configured for	Windows	
🕀 🛄 Dhcp-Nap-Enforcement-Client	authentication only	. [CLIENT: 10.46.59.250]				
🗊 DHCP-Server	,					

用户缺少打开数据库的权限的示例:

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)

🛃 Event Viewer					
File Action View Help					
🗢 🔿 🔁 🗔 🔽 🗊					
🛃 Event Viewer (Local)	Application Number of	events: 29,048 (!) New events available			Ac
Gypt Custom Views			1-		
🖃 📑 Windows Logs	Level	Date and Time	Source	Event ID Task Category	
Application	Information	6/8/2016 11:13:56 AM	MSSQLSERVER	18456 Logon	
E Security	Information	6/8/2016 11:13:21 AM	MSSQLSERVER	3408 Server	
Setup	Information	6/8/2016 11:13:21 AM	MSSQLSERVER	9688 Server	
System	Information	6/8/2016 11:13:21 AM	MSSQLSERVER	9666 Server	
Forwarded Events	Information	6/8/2016 11:13:21 AM	MSSQLSERVER	9666 Server	
Applications and Services Logs	(1) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	17137 Server	
Active Directory Web Services	(1) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	17126 Server	The second se
Disastery Carrier	(1) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	26059 Server	
Directory Service	(i) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	26059 Server	I M
E DNS Server	(i) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	17201 Server	
Tatomat Eveloper	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	26022 Server	
Kov Management Service	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	26022 Server	
	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	26048 Server	
E Windows	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	26048 Server	
+ API-Tracing	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	26022 Server	
	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	26022 Server	
Application Server-Applications	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	17136 Server	?
Application-Experience	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	26013 Server	
🕀 🧰 AppLocker	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	17137 Server	Ev
🕀 🧮 Audio	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	17137 Server	
🕀 🧮 Authentication User Interface	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	17663 Server	
🕀 🚞 Bits-Client	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	17137 Server	
🕀 🚞 CAPI2	Information	6/8/2016 11:13:20 AM	MSSQLSERVER	958 Server	
🕀 🚞 CertificateServicesClient-Creden	(i) Information	6/8/2016 11:13:20 AM	MSSQLSERVER	17137 Server	
🕀 🧮 CertPolEng	Information	6/8/2016 11:13:20 AM	MSSOLSED//ED	19030 Server	
🕀 🛄 CodeIntegrity	Event 18456 MSSOLSER	/FR			x
CorruptedFileRecovery-Client					- 2
CorruptedFileRecovery-Server	General Details				
DateTimeControlPanel					1
🛨 🛄 DeviceSync	Login failed for user	'ISEDBUser' Reason: Failed to open the evolu	citly specified database. [CLIENT: 10.49	3 39 2361	
H i Dhop-Client	Login failed for user	iscososci i neusoni i alleu to open the expli	enty specifico outobase. [CEIEIVI. 10.40		
Dhcp-Nap-Enforcement-Client					
+ DHCP-Server					

要排除DB操作故障,请在Administration > System > Logging > Debug Log Configuration下**,将记** 录组件odbc-id-store**启用到DEBUG级别**。

日志被放在prrt-management.log文件中。

odbuser2示例:

```
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

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