ODBC를 사용하여 MS SQL을 사용하여 ISE 2.1을 구성합니다.

목차

<u>소개</u> <u>사전 요구 사항</u> <u>요구 사항</u> <u>사용되는 구성 요소</u> <u>구성</u> <u>1단계. MS SQL 기본 구성</u> <u>2단계. ISE 기본 컨피그레이션</u> <u>3단계. 사용자 인증 구성</u> <u>4단계. 그룹 검색 구성</u> <u>5단계. 특성 검색 구성</u> 문제 해결

소개

이 문서에서는 ODBC(Open Database Connectivity)를 사용하여 ISE 인증을 위해 Microsoft SQL(Standard Query Language) Server를 사용하여 ISE(Identity Services Engine)를 구성하는 방 법에 대해 설명합니다.

참고:ODBC(Open Database Connectivity) 인증을 사용하려면 ISE가 일반 텍스트 사용자 비 밀번호를 가져올 수 있어야 합니다.비밀번호는 데이터베이스에서 암호화할 수 있지만 **저장 프 로시저**로 해독해야 합니다.

사전 요구 사항

요구 사항

다음 주제에 대한 지식을 보유하고 있으면 유용합니다.

- •데이터베이스 및 ODBC 개념
- Microsoft SQL Server

사용되는 구성 요소

이 문서의 정보는 다음 소프트웨어 및 하드웨어 버전을 기반으로 합니다.

- Identity Services Engine 2.1
- MSSQL Server 2008 R2

구성

1단계. MS SQL 기본 구성

컨피그레이션 단계에는 데이터베이스에 액세스할 수 있는 권한이 있는 ISE에 대한 데이터베이스 및 사용자 하나가 생성됩니다.

참고:ISE는 Windows 계정이 아니라 SQL 인증만 지원합니다.인증 모드를 변경해야 하는 경우 <u>서버 인증 모드 변경을</u> 참조하십시오.

1. SQL Server Management Studio(**시작 메뉴 > Microsoft SQL Server 2008 R2**)를 열고 데이터베 이스를 만듭니다.



2. 다음 이미지에 표시된 대로 기본 옵션을 그대로 유지하거나 데이터베이스 설정을 조정합니다.

🚪 New Database						
Select a page	🔄 Script 👻 📑	Help				
General						
Pilegroups	Database name:		ISEDB			
	Owner:		<default></default>			
	_		,			
	Use full-text i	ndexing				
	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						
Progrees						
i Togress						
Ready	<u> </u>					
.db.						Add Remove
						,
						OK Cancel

3. 다음 이미지에 표시된 대로 사용자를 생성하고 권한을 설정합니다.



🚪 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 - ISEDBUser				
Select a page	🕻 Script 🔸	📑 Help		
General				
Server Roles	Users map	ped to this login:		
Securables	Мар	Database	User	Default Schema
Status		ISEDB	ISEDBUser	
_		master		
		model		
		msdb		
		tempdb		
	,			
	Guest	account enabled for: ISEDB		
	i oucar			
	Database	role membership for: ISEDB		
Connection	<mark>⊌ db_</mark> ac	cessadmin		
Server:	db_ba	ckupoperator		
localhost	l	tareader tawriter		
Connection:	db_dd	ladmin		
BABALAND\administrator	db_de	nydatareader		
■↓ View connection properties	□ db_de	nydatawriter		
	db_ow	ner		
Progress	Dia db_se	cuntyadmin		
Dent:	Public			
neauy				
. d b.,				
				OK Cancel

2단계. ISE 기본 컨피그레이션

Administration(관리) > External **Identity Source(외부 ID 소스**) **> ODBC에서 ODBC ID 소스**를 생성 하고 연결을 테스트합니다.

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

3단계. 사용자 인증 구성

ODBC에 대한 ISE 인증에서는 저장 프로시저를 사용합니다.인증에 대한 저장 프로시저는 다음 구 문으로 결과 집합을 반환합니다.

가치	유형
결과	정수
그룹(ACS 4.2와의 호환성에만 해 당)	정수 또는 varchar(255)
계정정보	varchar(255)
오류 문자열	varchar(255)

다른 절차는 Cisco Identity Services Engine 2.1 관리 가이드를 참조하십시오.

팁:결과 집합 대신 명명된 매개 변수를 반환할 수 있습니다.다른 유형의 출력일 뿐이며 기능이 동일합니다.

1. 옵션으로 이동하고 **테이블 재생성**이 **필요한 변경 내용 저장 금지** 확인란**을 선택** 취소합니다(선택 사항).

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 Image: Launch add table dialog on new diagram
	OK Cancel

2. 테이블을 생성합니다.**기본 키**에서 ID 설정을 **설정해야 합니다.user_id를 기본 키**로 설정하려면 **열 이름**을 마우스 오른쪽 버튼으로 클릭합니다**.**

SQLQuery2.sqlistrator (52))* BAST-AD-CA.ISdbo.ISE_Users* Column Name Data Type Allow Nulls user_id int username varchar(MAX)	• >
Column Name Data Type Allow Nulls Image: User_id int Image:	
Image: ward ward ward ward ward ward ward ward	
username varchar(MAX)	
password varchar(MAX)	
Column Properties	
Full-text Specification No	
Has Non-SQL Server Subscriber No	
Identity Specification Yes	
(Is Identity) Yes	
Identity Increment 1	
Identity Seed 1	

최종 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

3. 이 쿼리를 실행하여 사용자 1명을 삽입합니다.

) ON [PRIMARY]

[user_id] ASC)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]

4. 일반 텍스트 비밀번호 인증 절차를 생성합니다(PAP, EAP-GTC 내부 방법, TACACS에 사용).

(

AS

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

5. 일반 텍스트 비밀번호 가져오기(CHAP, MSCHAPv1/v2, EAP-MD5, LEAP, EAP-MSCHAPv2 내 부 방법, TACACS에 사용) 절차를 생성합니다.

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

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

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

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. 사용자 이름 또는 시스템이 있는지 확인하는 절차(MAB에 사용됨, PEAP, EAP-FAST 및 EAP-TTLS의 빠른 재연결)를 만듭니다.

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. 시험생성절차



Series a page Series Series Ser	🐙 Execute Procedure - [dbo].[ISEAuthUserPlainR	eturnsRecordset]		
Personal Pe	Select a page	🔄 Script 👻 📑 Hel	p			
Parameter Data Type Output Planmeter Pass Null Value adouter1 @usename varchar(25) No odbopase] edbopase] @password varchar(25) No odbopase] odbopase] Sever: coanted odbopase] odbopase] Sever: oanted Connection: B&BALAND Value/usenameter Sever: odbopase] Pressite Sever: odbopase] odbopase] odbopase] odbopase] odbopase] setum: setum:	🚰 General					
Connection epassword varchar(255) No odccsel epassword varchar(255) No odccsel epassword varchar(255) No odccsel Server: occurrection: BABALAND Safministrator BABALAND Safministrator Mex connection properties Progress OK Cancel Operstand: OK Cancel Querytand: instrator (577) BATADCALEdo.ISE_Users SQ.Querytang:bitrator (527)* BATADCALEdo.ISE_Users v Progress OK Cancel OK Cancel OK Cancel Querytand: ISE (ISEDD) OK Cancel OK Cancel OK Cancel Statistic: Statistic: Statistic: Statistic: Statistic: v OK Cancel OK Cancel OK Cancel OK Cancel OK Cancel OCLABSE Secture: Value: SQ.Querytang:		Parameter	Data Type	Output Parameter	Pass Null Value	Value
Connection Sever: Se		Qusemame	varchar(255)	No		odbcuser1
Connection Server: icochost Correction: BABALNAD valueministrator Wexconnection properties Yources Progress Progress Connection properties Progress Progress Connection properties Progress Connection properties Progress Connection properties Progress Connection properties Progress Connection properties Connection propertie		epassword	varcnar(200)	INO		oubcpass
Onnection Server: localinal Connection: BABALAND'administrator Wew connection properties *rogress						
Connection Server: localinest Connection Server: localinest Connection BABALAND'administrator Progress						
Connection Server: icoalist Connection: BABALAND administrator BABALAND administrator BABALAND administrator Wew connection properties if Wew connection properties if We column name) (No column name) (No column name) if We column name) (No column name) (No column name) if We column name) (No column name) (No column name)						
Connection Server: locahoat Connection Server: locahoat Connection: BABALAND'administrator Wew connection properties Progress Ready Co Ready C Cancel C Cancel C						
Connection Server: localinod Server: localinod Server: localinod Server: localinod Server: localinod Server: localinod Server: BABALAND'administrator Progress Progre						
Connection Server: localhost Connection: BABALANDVadministrator Y Vew connection properties Yourcess OK Cancel OK Cancel OK Cancel OK Cancel OK Cancel SetUp: SetU						
Connection Server: localhost Connection: BABALAND/administrator BABALAND/administrator BABALAND/administrator Wew connection properties Progress Co Ready C Cancel OK Cancel OK Cancel OK Cancel SELECT 'Recturn_value int SELECT 'Recturn_value = [dbo].[ISEAuthUserPlainEcturnsRecordset] (Vertur_value = [dbo].[ISEAuthUserPlainEcturnsRecordset] SELECT 'Recturn_value = @return_value GO PECLARE @return_value = @return_value GO						
Connection Server: blocathost Connection BABALANDNadministrator BABALANDNadministrator Mexess Progress						
Connection Server: localhost Connection: Server: localhost Connection: Progress Prog						
Connection Server: localhost Cornection: BABALAND administrator Market Connection properties Progress Connection properties Progress Connection properties Progress Connection properties Connection						
Server: localhost Connection: BRALAND/administrator Wew connection properties Progress Commention properties Progress Commention properties Progress Commention properties Progress Commention properties Progress Commention properties Progress Commention properties Commention properties Commention properties Commention properties Commention properties Commention properties Second Second Commention properties Commention properties C	Connection					
localhost Connection: BABALAND'administrator	Server:					
Connection: BABALAND'administrator BABALAND'administrator Progress	localhost					
Image: State of the commanded of the comman	Connection: BABALAND\administrator					
Progress Progress Ready OK Cancel OK Cancel OK Cancel OK Cancel OK Cancel DSE [ISEDB] GO DECLARE @return_value int EXEC @return_value int EXEC @return_value = [dbo][ISEAuthUserPlainReturnsRecordset] @username = N'odbouser1', @password = N'odbouser1', @password = N'odbouser1', @gassword = N'odbouser1',	View connection properties					
Progress						
OK Cancel OK Cancel OQQuery5.sqlinistrator (57)) BAST-AD-CA.ISdoo.ISE_Users SQLQuery2.sqlistrator (52))* BAST-AD-CA.ISdoo.ISE_Users DSE [ISEDB] GO O DECLARE @return_value int EXEC @return_value = [dbo][ISEAuthUserPlainReturnsRecordset] @username = N'odbcuser!', @password = N'odbcuses!', @password = N'odbcuses!', SELECT 'Return Value' = @return_value GO IResults	Progress					
OK Cancel SQLQuery5.sqlinistrator (57)) BAST-AD-CA.ISdoo.ISE_Users SQLQuery2.sqlistrator (52))* BAST-AD-CA.ISdoo.ISE_Users DECLARE @return_value int EXEC @return_value = [dbo]. [ISEAuthUserPlainReturnsRecordset] @username = N'odbcusser1', @password = N'odbcusser1', @gassword = N'odbcusser1', @password = @return_value GO	Ready					
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					
OK Cancel GQUQuery5.sqlinistrator (57)) BAST-AD-CA.ISdbo.ISE_Users \$QUQuery2.sqlistrator (52))* BAST-AD-CA.ISdbo.ISE_Users GO DECLARE @return_value int EXEC @return_value = [dbol.,[ISEAuthUserPlainReturnsRecordset] @username = N'odbcuser1', @password = N'odbcuser1', @password = N'odbcuser1', @password = @return_value GO		1				
SQLQuery5.sqlinistrator (57)) BAST-AD-CA.ISdbo.ISE_Users SQLQuery2.sqlistrator (52))* BAST-AD-CA.ISdbo.ISE_Users USE [ISEDB] GO DECLARE @return_value int EXEC @return_value = [dbo][ISEAuthUserPlainReturnsRecordset] @username = N'odbcuser1', @password = N'odbcuser1', @password = N'odbcusers' SELECT 'Return Value' = @return_value GO I Results Messages (No column name)					OK	Cancel
SQLQuery5.sqlinistrator (57)) BAST-AD-CA.ISdbo.ISE_Users SQLQuery2.sqlistrator (52))* BAST-AD-CA.ISdbo.ISE_Users USE [ISEDB] GO DECLARE @return_value [Messages] Messages (No column name) (No column name) (No column name) (No column name) (No column name) (No column name) (No column name) (No column name) No Error						
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 🗸 👻
<pre>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) 0 11 This is a very good user, give him all access No Error</pre>	USE [ISEDB] GO					
<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>						
EXEC @return_value = [dbol. [ISEAuthUserPlainReturnsRecordset] @username = N'odbcuser1', @password = N'odbcpass' SELECT 'Return Value' = @return_value GO	DECLARE Greturn_value in	τ				
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]		
SELECT 'Return Value' = @return_value GO Results Messages (No column name) (No column name) (No column name) (No column name) 0 11 This is a very good user, give him all access No Error	- @password = N'od	bcpass'				
GO 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	SELECT 'Return Value' =	@return value				
I Results Messages (No column name) (No column name) 0 11 This is a very good user, give him all access No Error		_				
Results Image: Messages (No column name) (No column name) (No column name) (No column name) 0 11 This is a very good user, give him all access No Error	60					
Results Messages (No column name) (No column name) 0 11 This is a very good user, give him all access No Error						
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						
(No column name) (No column name) (No column name) 0 11 This is a very good user, give him all access No Error	Results Messages					
	(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			

다른 절차를 동일한 방법으로 테스트합니다.

8. ISE에 대한 절차를 구성하고 저장합니다.

ODBC List > **ISE_ODBC**



9. ODBC를 사용하여 단순 인증 규칙을 만들고 테스트합니다.

¥	Aut	hent	tication Policy		
		~	MAB	If Wired_MAB OR Allow Protocols : Default Network Access and Wireless_MAB	Edit 🕶
			Default	:use Internal Endpoints	
		~	Dot1X	If Wired_802.1X OR Allow Protocols : Default Network Access and Wireless_802.1X	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	
autonization i onoj		
Authorization Result	PermitAccess	
Authorization Result	PermitAccess	
Authorization Result	PermitAccess 2016-06-08 11:04:07.004	
Authorization Result Ithentication Details Source Timestamp Received Timestamp	PermitAccess 2016-06-08 11:04:07.004 2016-06-08 11:04:07.005	
Authorization Result Authorization Result Source Timestamp Received Timestamp Policy Server	PermitAccess 2016-06-08 11:04:07.004 2016-06-08 11:04:07.005 bise236	
Authorization Result Authorization 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 - 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 - \ensuremath{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

4단계. 그룹 검색 구성

1. 사용자 그룹 및 다대다 매핑에 사용되는 다른 테이블을 생성합니다.

```
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. ODBCUSER1이 두 그룹에 속하도록 그룹 및 매핑을 추가합니다.

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. 그룹 검색 프로시저를 생성합니다.

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. 가져오기 그룹에 매핑합니다.**

ODBC List > ISE_ODBC

ODBC Identity Source

General	Connection	Stored Procedures	Attributes	Groups
St	ored procedure type	Returns recordset	Ψ	
Plain text pase	sword authentication	ISEAuthUserPlainReturnsRec	cordset	0 🕀
Plain te	xt password fetching	ISEFetchPasswordReturnsRe	cordset	0 🕀
Check usernan	ne or machine exists	ISEUserLookupReturnsRecor	dset	0 🕀
	Fetch groups	ISEGroupsRetrieval		i) 🕀
	Fetch attributes	ISEAttrsRetrieval		i) 🕀
Search for M	AC Address in format	xx-xx-xx-xx-xx	•	(i)

5. 그룹을 가져와 ODBC ID 소스에 추가합니다.

ODBC List > ISE_ODBC **ODBC Identity Source** General Connection Stored Procedures Attributes 🖉 Edit 🕂 Add 👻 🔀 Delete Name Name in ISE No data available х Select Groups from ODBC Sample User or Machine odbcuser1 i Retrieve Groups Name Name in ISE ✓ ODBCGroup1 ODBCGroup1 ✓ ODBCGroup2 ODBCGroup2 OK Cancel

6. 그룹에 속하지 않는 다른 사용자를 추가합니다.

insert into ISE_Users(username,password) values('odbcuser2','odbcpass'); 7. 특정 정책 세트를 생성하고 테스트합니다.

Policy Sets Profiling Posture Client Provision	ing			
Policy Sets Search policy names & descriptions.	Define the Policy Sets by configuring rules For Policy Export go to Administration > Sy	based on conditions. Drag and drop sets o stem > Backup & Restore > Policy Export /	n the left hand side to change the order. Page	
-∰ Eù - ↑ - ↓ 🗶 📭	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 o if ISE_ODBC:ExternalGroups EQU ODBCGroup1	ther conditions) Permissions ALS then PermitAccess	Edit 🕶
	🗹 Default	if no matches, then DenyAccess		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

5단계. 특성 검색 구성

1. 이 예제를 단순화하기 위해 플랫 테이블이 속성에 사용됩니다.

```
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. 사용자 중 하나에 대한 속성을 생성합니다.

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. 저장 프로시저를 생성합니다.

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

4. 가져오기 **속성**에 **매핑합니다.**

ODBC List > ISE_ODBC

ODBC Identity Source

General	Connection	Stored Procedures	Attributes	Groups
	Stored procedure type	Returns recordset	•	
Plain text p	assword authentication	ISEAuthUserPlainReturnsRec	cordset	\oplus
Plain	text password fetching	ISEFetchPasswordReturnsRe	ecordset	\oplus
Check userr	name or machine exists	ISEUserLookupReturnsRecor	rdset	\oplus
	Fetch groups	ISEGroupsRetrieval	<i>i</i>	\oplus
	Fetch attributes	ISEAttrsRetrieval	i	\oplus
Search for	MAC Address in format	xx-xx-xx-xx-xx	• (i)	

5. 속성을 가져옵니다.

Selec	ct Attributes from O	DBC	2					X
Samp	ble User or Machine	odb	ocuser2			i) Retrie	eve Attributes	
	Name		Туре	•	Default Value		Name in ISE	
A	AwsomenessLevel		STRING		100		AwsomenessLevel	
_ ι	JserType		STRING		admin		UserType	



6. ISE 규칙을 조정합니다.

	Status <mark>✓</mark> G	Rule Name roup1Access	if	Conditions (ISE_ODBC:I ODBCGroup	identity grou ExternalGrou 1	ps and other conditions ups EQUALS) then	Permissions PermitAcces	S			I	Edit 🕶
	A	wesomeUser		ISE_ODBC:	Awsomenes	sLevel EQUALS 100		PermitAcces	S			1	Edit 🔻
	D	efault	if no	o matches, th	ien Deny	Access						1	Edit 🔻
${\cal C}$ Refre	esh O	Reset Repeat Counts	🚨 Export To 👻										🔻 Filter 🗸
Т	îme		Status	Details	Repeat	Identity	Endpoint	ID	Endpoint Pr	Authenticat	Authorization Policy		Authorizatio
×			\$			Identity	Endpoint	ID	Endpoint Profi	Authentication	Authorization Policy		Authorization
J	un 08, 201	6 12:21:45.596 PM		ò		odbcuser2				TestAAA >>	TestAAA >> AwesomeUser		PermitAccess

문제 해결

연결에 실패하면 windows 이벤트 로그를 확인하십시오.ISE에서 **연결 시도** 중 show logging application prrt-management.log tail 명령을 사용합니다.

잘못된 인증 모드의 예:

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 o	of events: 29,048 (!) New events available				
Custom Views	Lovel	Date and Time	Source	Event ID	Tack Category	
Windows Logs	Level Information	6/8/2016 11:09:07 AM	MSCOLSERVER	22000	Fask Category	
Application	Information	6/8/2016 11:00:07 AM	MSSQLSERVER	19456	Logon	
Setup	Information	6/8/2016 11:03:39 AM	MSSQLSERVER	18456	Logon	
System	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Forwarded Events	Information	6/8/2016 11:02:23 AM	MSSOLSERVER	5084	Server	
Applications and Services Logs	1 Information	6/8/2016 11:02:23 AM	MSSOL SERVER	5084	Server	
Active Directory Web Services	(1) Information	6/8/2016 11:02:23 AM	MSSOLSERVER	5084	Server	
DFS Replication	1 Information	6/8/2016 11:02:23 AM	MSSOLSERVER	5084	Server	
E Directory Service	1 Information	6/8/2016 11:02:23 AM	MSSOLSERVER	5084	Server	
DNS Server	1 Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Hardware Events	1 Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Internet Explorer	1 Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Key Management Service	1 Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Microsoft Windown	1 Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
API-Tracing	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Application Server-Applications	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Application-Experience	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
🕀 🧮 AppLocker	Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
🕀 🛄 Audio	1 Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
Authentication User Interface	1 Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
🗄 🧮 Bits-Client	1 Information	6/8/2016 11:02:23 AM	MSSQLSERVER	5084	Server	
E CAPI2	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	Information	6/8/2016 11:02:23 AM	MSSOLSED//ED	5084	Server	
	Event 18456, MSSQLSE	RVER				×
	General Details					
DeviceSync						
🕀 🧰 Dhcp-Client	Login failed for use	er 'babaland\administrator'. Reason: An attem	pt to login using SQL authentication f	ailed. Server is configured for	Windows	
🗉 🧮 Dhcp-Nap-Enforcement-Client	authentication only	y. [CLIENT: 10.48.39.236]				
□ □ □						

데이터베이스를 열 수 있는 권한이 없는 사용자의 예:

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 e	vents: 29,048 (!) New events available			Ac
Custom Views					
🖃 🚉 Windows Logs	Level	Date and Time	Source	Event ID Task Category	
Application	Information	6/8/2016 11:13:56 AM	MSSQLSERVER	18456 Logon	Len 👘 👘
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	1 Information	6/8/2016 11:13:21 AM	MSSQLSERVER	9666 Server	
Forwarded Events	1 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 DES Replication	U Information	6/8/2016 11:13:21 AM	MSSQLSERVER	17126 Server	
DFS Replication	(1) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	26059 Server	
DIFECTORY Service	(1) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	26059 Server	04
Hardware Events	(i) Information	6/8/2016 11:13:21 AM	MSSQLSER/VER	17201 Server	
Internet Explorer	(i) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	26022 Server	
Key Management Service	(i) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	26022 Server	
	(i) Information	6/8/2016 11:13:21 AM	MSSQLSERVER	26048 Server	
E Windows	 Information 	6/8/2016 11:13:21 AM	MSSQLSERVER	26048 Server	
F 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	2
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	 Information 	6/8/2016 11:13:20 AM	MSSQLSERVER	17137 Server	
🕀 🧮 CertPolEng	Information	6/8/2016 11:13:20 AM	MSSOL SERVER	19030 Server	
CodeIntegrity	Event 18456, MSSOLSERV	ER			×
CorruptedFileRecovery-Client					
CorruptedFileRecovery-Server	General Details				
DateTimeControlPanel					
DeviceSync	Login failed for user	ISEDBUser', Reason: Failed to open the evolu	citly specified database. [CLIENT: 10.4	8.39.2361	
🖽 🛄 Dhep-Client	cogin talled for user .	isebboser riceson railed to open the expir	enty specifica aatabase. [CEIENT: 10.4	0.03.200]	
Uncp-Nap-Enforcement-Client					
I+I UHUP-Server					

DB 작업 문제를 해결하려면 로깅 구성 요소 odbc-id-store를 Administration(관리) > System(시스템) > Logging(로깅) > Debug Log Configuration(디버그 로그 컨피그레이션)에서 DEBUG 수준으로 활 성화합니다.

로그는 prrt-management.log 파일에 저장됩니다.

odbuser2의 예:

```
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_rJLKsS5QAzuRvluGWzdYe67rIqcG3MMQcpE8yKnw 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