在ISE 2.3上使用Oracle数据库配置ODBC

目录

简介

本文档介绍如何使用Oracle数据库配置身份服务引擎(ISE)，以使用开放数据库连接(ODBC)进行ISE身份验证。

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：

- 思科身份服务引擎2.3
- 数据库和ODBC概念
- Oracle

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2.3.0.298
- 琴托斯7
- Oracle数据库12.2.0.1.0
- Oracle SQL Developer 4.1.5

配置

> **注意：**将本文档中介绍的SQL过程视为示例。这不是Oracle DB配置的官方和推荐方式。确保了解提交的每个SQL查询的结果和影响。

步骤1. Oracle Basic Configuration

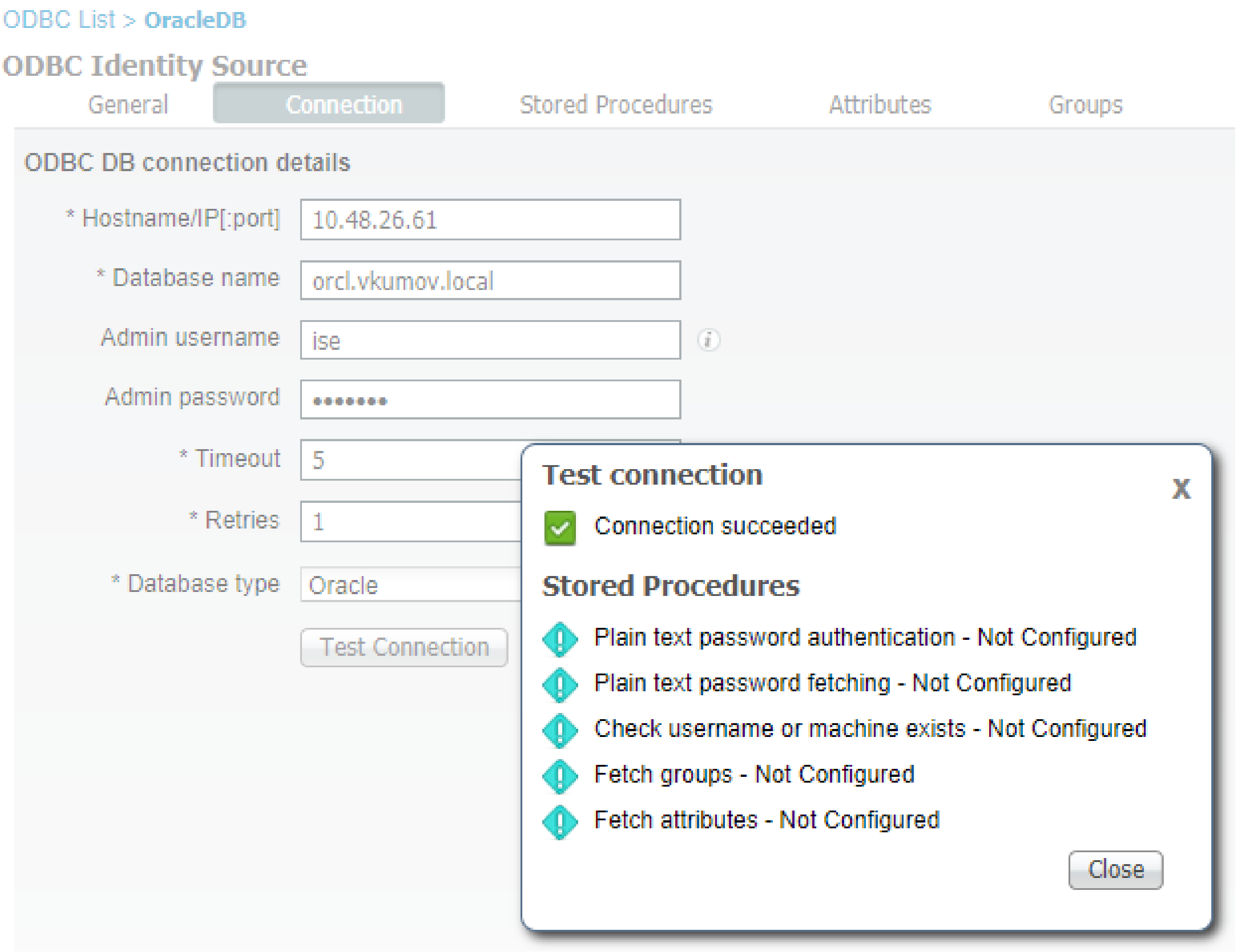
在本示例中，Oracle配置了以下参数：

- 数据库名称：**ORCL**
- 服务名称:**orcl.vkumov.local**
- 端口：**1521 (default)**
- 已为ISE创建用户名为ise的帐**户**

在继续之前，请配置Oracle数据库。

步骤2. ISE基本配置

在“管理”>“外部身份源”*>“ODBC”中创建ODBC身份源*并测试连接：



ODBC List > OracleDB

ODBC Identity Source

ODBC DB connection details

* Hostname/IP[:port] 10.48.26.61

* Database name orcl.vkumov.local

Admin username ise

Admin password •••••••

* Timeout 5

* Retries 1

* Database type Oracle

Test connection

✓ 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

注意： ISE使用服务名连接到Oracle，因此[数据库名]字段应填入Oracle中存在的服务名，而不是SID（或数据库名）。 由于Bug CSCvf06497 dots(.)不能在[Database name]字段中使用。此Bug在ISE 2.3中已修复。

步骤3.配置用户身份验证

对ODBC的ISE身份验证使用存储过程。可以选择过程类型。在本例中，我们使用记录集作为返回。

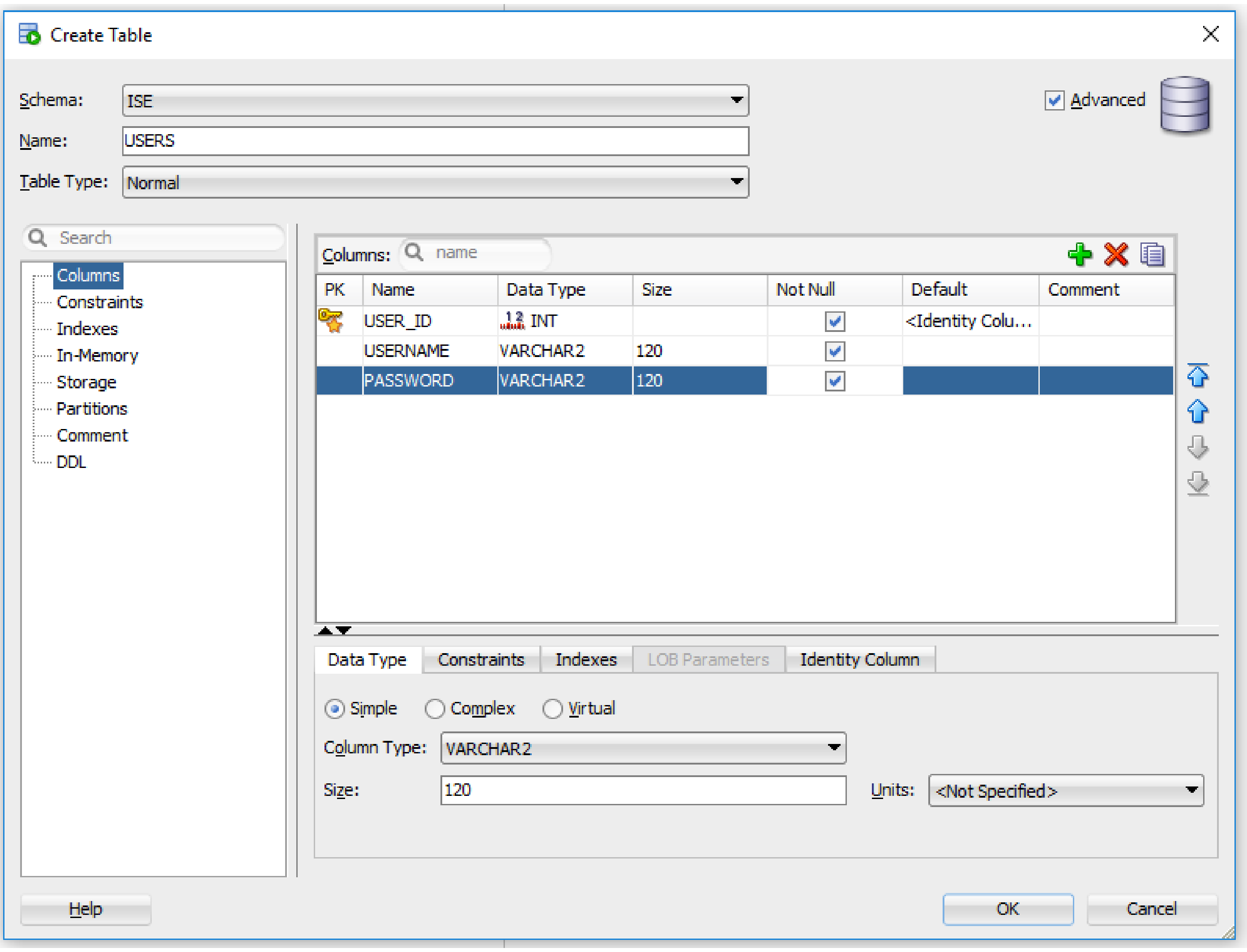
有关其他步骤，请参阅《思科身份服务引擎管理员指南，版本2.3》

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

1.使用用户凭据创建表。确保在主键上设置身**份设置。**

```
--------------------------------------------------------
--  DDL for Table USERS
--------------------------------------------------------

  CREATE TABLE "ISE"."USERS"
   ("USER_ID" NUMBER(*,0) GENERATED ALWAYS AS IDENTITY MINVALUE 1 MAXVALUE
9999999999999999999999999999 INCREMENT BY 1 START WITH 1 CACHE 20 NOORDER  NOCYCLE  NOKEEP
NOSCALE ,
"USERNAME" VARCHAR2(120 BYTE),
"PASSWORD" VARCHAR2(120 BYTE)
   ) SEGMENT CREATION IMMEDIATE
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
--------------------------------------------------------
--  DDL for Index USERS_PK
--------------------------------------------------------

  CREATE UNIQUE INDEX "ISE"."USERS_PK" ON "ISE"."USERS" ("USER_ID")
  PCTFREE 10 INITRANS 2 MAXTRANS 255
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
--------------------------------------------------------
--  Constraints for Table USERS
--------------------------------------------------------

  ALTER TABLE "ISE"."USERS" MODIFY ("USER_ID" NOT NULL ENABLE);
  ALTER TABLE "ISE"."USERS" MODIFY ("USERNAME" NOT NULL ENABLE);
  ALTER TABLE "ISE"."USERS" MODIFY ("PASSWORD" NOT NULL ENABLE);
  ALTER TABLE "ISE"."USERS" ADD CONSTRAINT "USERS_PK" PRIMARY KEY ("USER_ID")
  USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS"  ENABLE;
```

或从SQL Developer GUI:



Create Table

Schema: ISE

Name: USERS

Table Type: Normal

☑ Advanced

Columns: name

PK	Name	Data Type	Size	Not Null	Default	Comment
🔑	USER_ID	INT		☑	<Identity Colu...	
	USERNAME	VARCHAR2	120	☑		
	PASSWORD	VARCHAR2	120	☑		

● Simple ○ Complex ○ Virtual

Column Type: VARCHAR2

Size: 120

Units: <Not Specified>

2.添加用户

```
INSERT INTO "ISE"."USERS" (USERNAME, PASSWORD) VALUES ('alice', 'password1')
INSERT INTO "ISE"."USERS" (USERNAME, PASSWORD) VALUES ('bob', 'password1')
INSERT INTO "ISE"."USERS" (USERNAME, PASSWORD) VALUES ('admin', 'password1')
```

3.创建纯文本密码身份验证过程（用于PAP、EAP-GTC内部方法、TACACS）

```
create or replace function ISEAUTH_R
(
  ise_username IN VARCHAR2,
  ise_userpassword IN VARCHAR2
) return sys_refcursor AS
BEGIN
  declare
    c integer;
    resultSet SYS_REFCURSOR;
  begin
    select count(*) into c from USERS where USERS.USERNAME = ise_username and USERS.PASSWORD =
ise_userpassword;
    if c > 0 then
      open resultSet for select 0 as code, 11, 'good user', 'no error' from dual;
    ELSE
      open resultSet for select 3, 0, 'odbc','ODBC Authen Error' from dual;
    END IF;
    return resultSet;
  end;
END ISEAUTH_R;
```

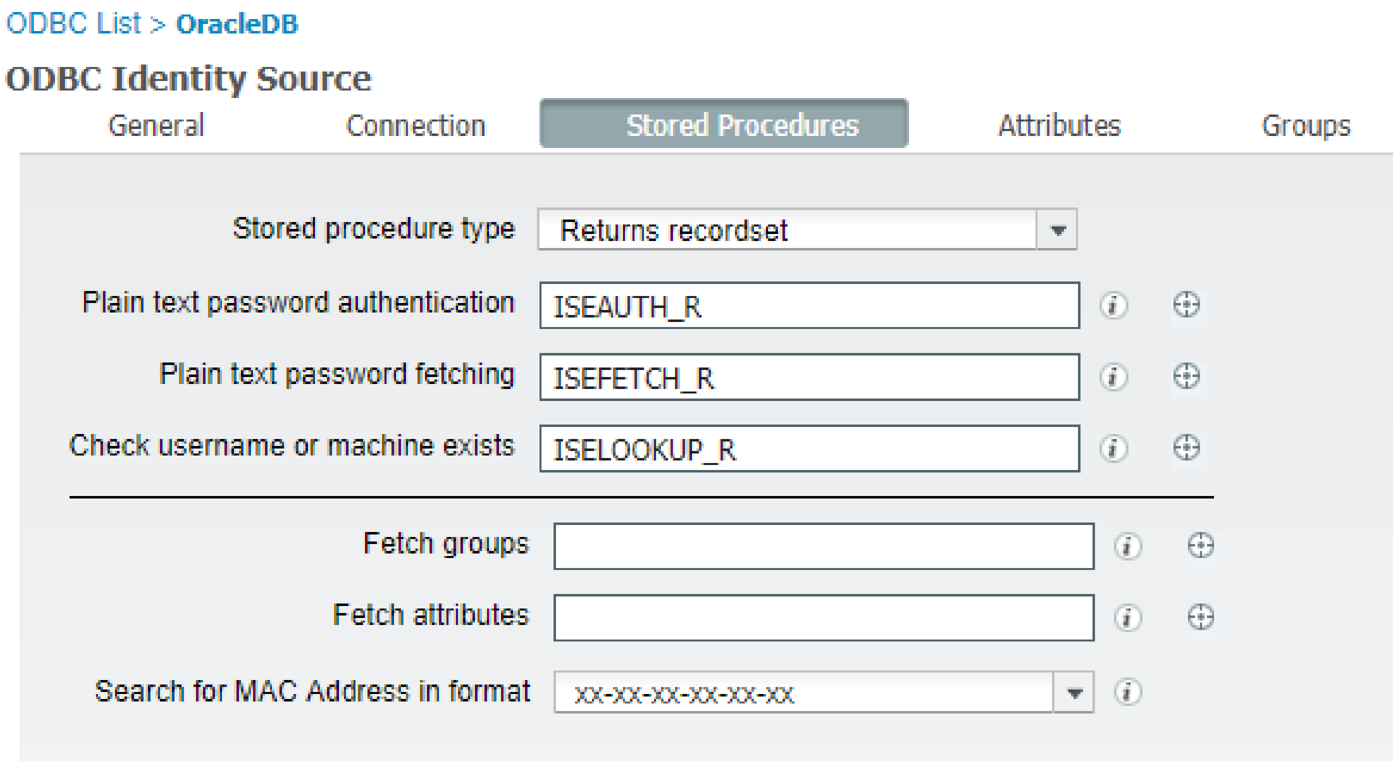
4.创建明文密码获取过程（用于CHAP、MSCHAPv1/v2、EAP-MD5、LEAP、EAP-MSCHAPv2内部方法、TACACS）

```
create or replace function ISEFETCH_R
(
  ise_username IN VARCHAR2
) return sys_refcursor AS
BEGIN
  declare
    c integer;
    resultSet SYS_REFCURSOR;
  begin
    select count(*) into c from USERS where USERS.USERNAME = ise_username;
    if c > 0 then
      open resultSet for select 0, 11, 'good user', 'no error', password from USERS where
USERS.USERNAME = ise_username;
      DBMS_OUTPUT.PUT_LINE('found');
    ELSE
      open resultSet for select 3, 0, 'odbc','ODBC Authen Error' from dual;
      DBMS_OUTPUT.PUT_LINE('not found');
    END IF;
    return resultSet;
  end;
END;
```

5.创建过程以检查用户名或计算机是否存在（用于MAB、快速重新连接PEAP、EAP-FAST和EAP-TTLS）

```
create or replace function ISELOOKUP_R
(
  ise_username IN VARCHAR2
) return sys_refcursor AS
BEGIN
  declare
    c integer;
    resultSet SYS_REFCURSOR;
  begin
    select count(*) into c from USERS where USERS.USERNAME = ise_username;
    if c > 0 then
      open resultSet for select 0, 11, 'good user', 'no error' from USERS where USERS.USERNAME =
ise_username;
    ELSE
      open resultSet for select 3, 0, 'odbc','ODBC Authen Error' from dual;
    END IF;
    return resultSet;
  end;
END;
```

6.在ISE上配置步骤并保存



ODBC List > OracleDB

ODBC Identity Source

Stored procedure type: Returns recordset

Plain text password authentication: ISEAUTH_R

Plain text password fetching: ISEFETCH_R

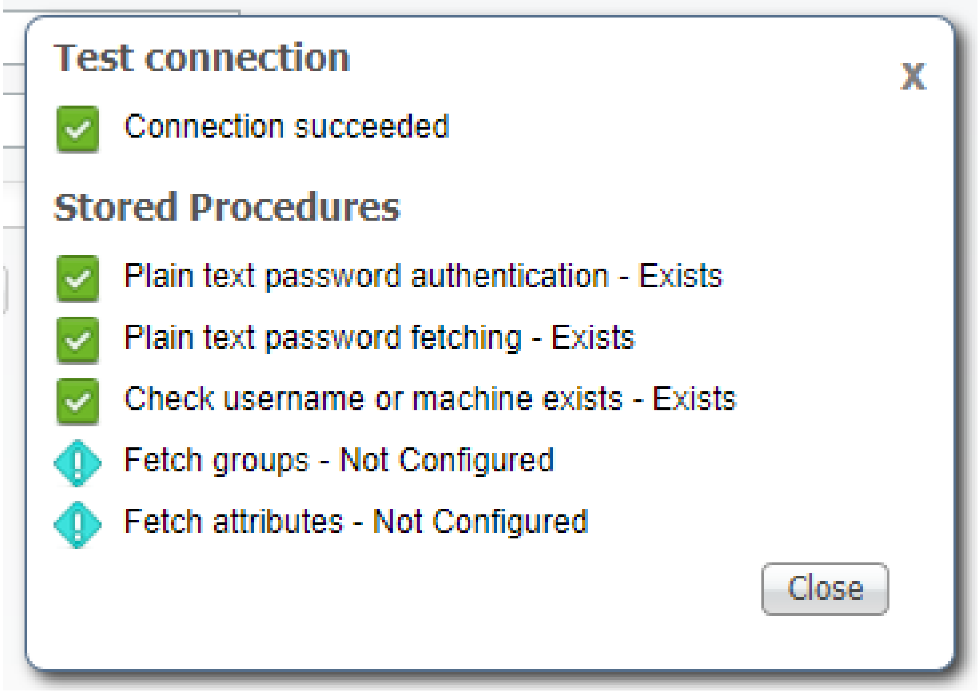
Check username or machine exists: ISELOOKUP_R

Fetch groups:

Fetch attributes:

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

7.返回“连接”选项卡，然后单击“测试连接”按钮



Test connection

✓ Connection succeeded

Stored Procedures

✓ Plain text password authentication - Exists

✓ Plain text password fetching - Exists

✓ Check username or machine exists - Exists

! Fetch groups - Not Configured

! Fetch attributes - Not Configured

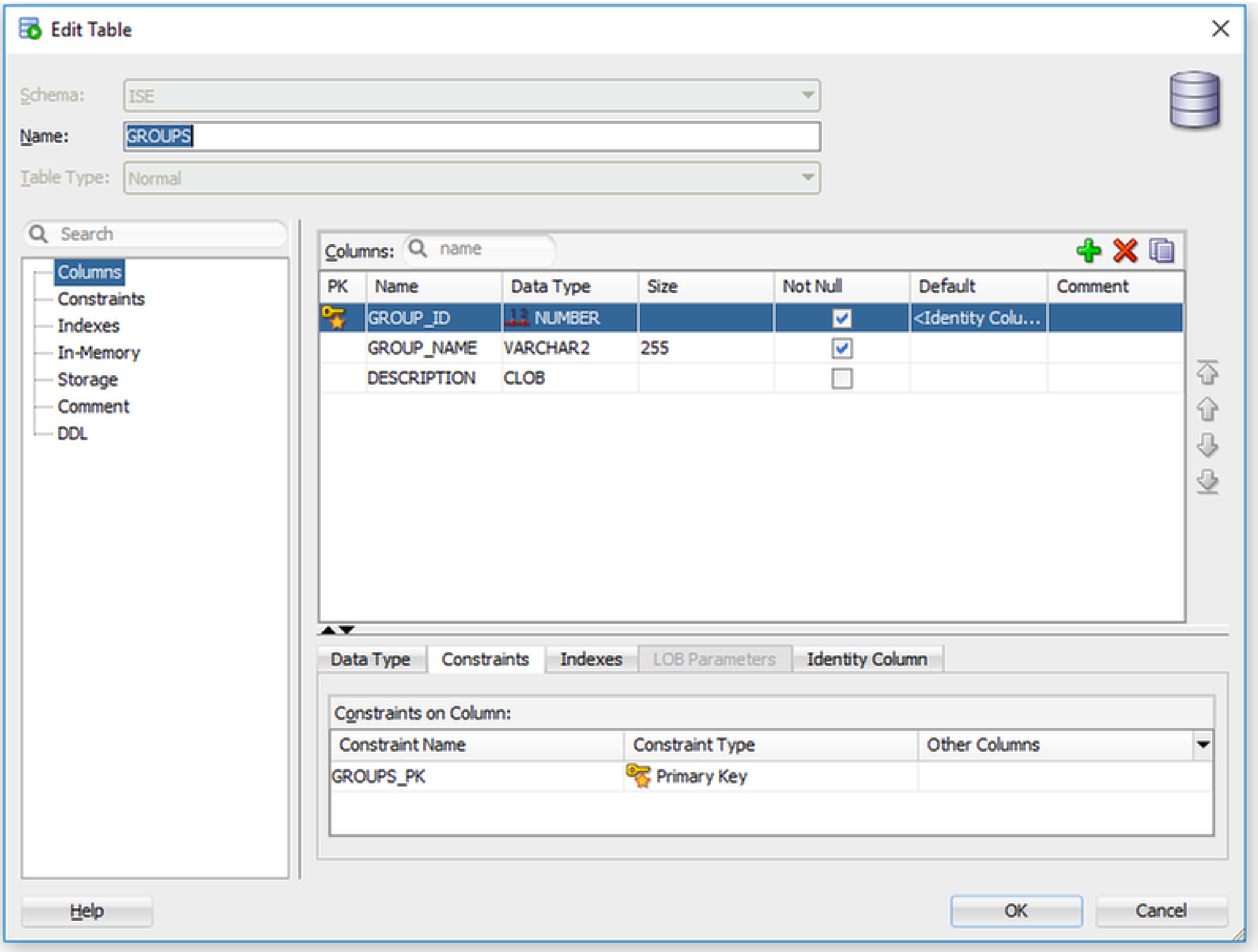
步骤4.配置组检索

1.创建包含用户组和用于多对多映射的另一个表

```
--------------------------------------------------------
--  DDL for Table GROUPS
--------------------------------------------------------

  CREATE TABLE "ISE"."GROUPS"
   ("GROUP_ID" NUMBER(*,0) GENERATED ALWAYS AS IDENTITY MINVALUE 1 MAXVALUE
9999999999999999999999999999 INCREMENT BY 1 START WITH 1 CACHE 20 NOORDER  NOCYCLE  NOKEEP
NOSCALE ,
"GROUP_NAME" VARCHAR2(255 BYTE),
"DESCRIPTION" CLOB
   ) SEGMENT CREATION IMMEDIATE
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS"
 LOB ("DESCRIPTION") STORE AS SECUREFILE (
  TABLESPACE "USERS" ENABLE STORAGE IN ROW CHUNK 8192
  NOCACHE LOGGING  NOCOMPRESS  KEEP_DUPLICATES
  STORAGE(INITIAL 106496 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)) ;
--------------------------------------------------------
--  DDL for Table USER_GROUPS_MAPPING
--------------------------------------------------------

  CREATE TABLE "ISE"."USER_GROUPS_MAPPING"
   ("USER_ID" NUMBER(*,0),
"GROUP_ID" NUMBER(*,0)
   ) SEGMENT CREATION IMMEDIATE
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
--------------------------------------------------------
--  DDL for Index GROUPS_PK
--------------------------------------------------------

  CREATE UNIQUE INDEX "ISE"."GROUPS_PK" ON "ISE"."GROUPS" ("GROUP_ID")
  PCTFREE 10 INITRANS 2 MAXTRANS 255
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
--------------------------------------------------------
--  DDL for Index USER_GROUPS_MAPPING_UK1
--------------------------------------------------------

  CREATE UNIQUE INDEX "ISE"."USER_GROUPS_MAPPING_UK1" ON "ISE"."USER_GROUPS_MAPPING" ("USER_ID",
"GROUP_ID")
  PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
--------------------------------------------------------
--  Constraints for Table GROUPS
--------------------------------------------------------

  ALTER TABLE "ISE"."GROUPS" MODIFY ("GROUP_ID" NOT NULL ENABLE);
  ALTER TABLE "ISE"."GROUPS" MODIFY ("GROUP_NAME" NOT NULL ENABLE);
  ALTER TABLE "ISE"."GROUPS" ADD CONSTRAINT "GROUPS_PK" PRIMARY KEY ("GROUP_ID")
  USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS"  ENABLE;
--------------------------------------------------------
```

```
--  Constraints for Table USER_GROUPS_MAPPING
--------------------------------------------------------

  ALTER TABLE "ISE"."USER_GROUPS_MAPPING" MODIFY ("USER_ID" NOT NULL ENABLE);
  ALTER TABLE "ISE"."USER_GROUPS_MAPPING" MODIFY ("GROUP_ID" NOT NULL ENABLE);
  ALTER TABLE "ISE"."USER_GROUPS_MAPPING" ADD CONSTRAINT "USER_GROUPS_MAPPING_UK1" UNIQUE
("USER_ID", "GROUP_ID")
  USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS"  ENABLE;
```

从GUI:



Schema: ISE

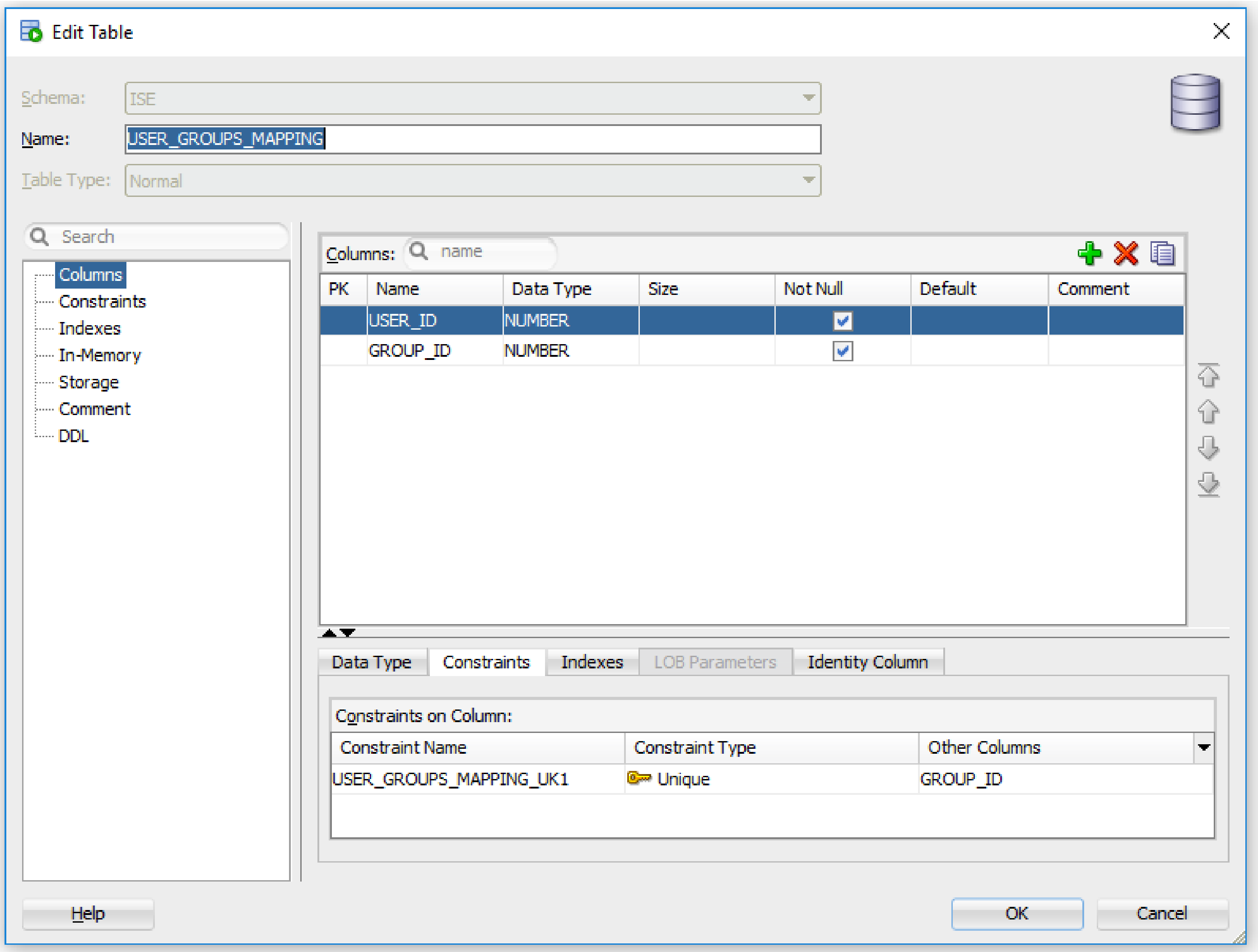
Name: GROUPS

Table Type: Normal

PK	Name	Data Type	Size	Not Null	Default	Comment
🔑	GROUP_ID	NUMBER		☑	<Identity Colu...	
	GROUP_NAME	VARCHAR2	255	☑		
	DESCRIPTION	CLOB		□		

Constraints on Column:

Constraint Name	Constraint Type	Other Columns
GROUPS_PK	Primary Key	



Schema: ISE

Name: USER_GROUPS_MAPPING

Table Type: Normal

Columns:

PK	Name	Data Type	Size	Not Null	Default	Comment
	USER_ID	NUMBER		☑		
	GROUP_ID	NUMBER		☑		

Constraints on Column:

Constraint Name	Constraint Type	Other Columns
USER_GROUPS_MAPPING_UK1	Unique	GROUP_ID

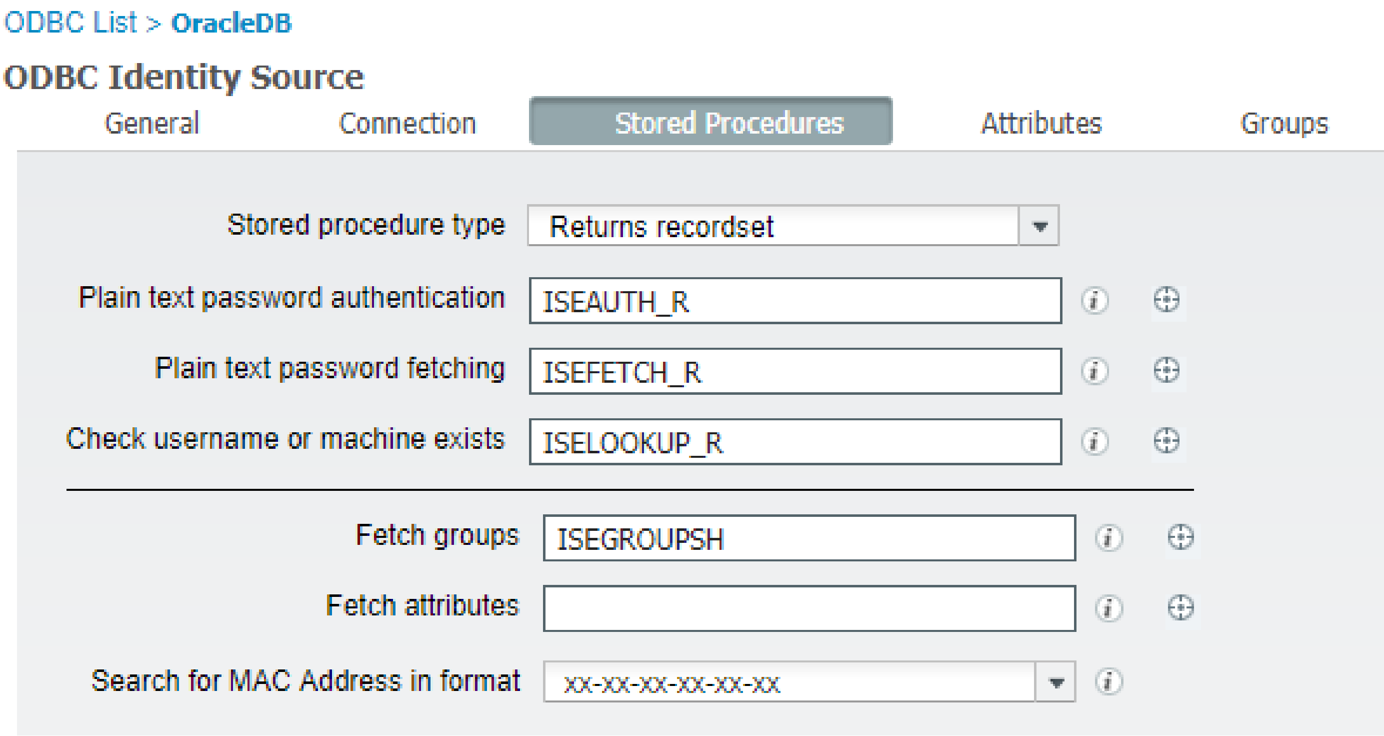
2.添加组和映射，以便**alice和**bob属于**组Users**，而admin属于组Admin

```
-- Adding groups
INSERT INTO "ISE"."GROUPS" (GROUP_NAME, DESCRIPTION) VALUES ('Admins', 'Group for
administrators')
INSERT INTO "ISE"."GROUPS" (GROUP_NAME, DESCRIPTION) VALUES ('Users', 'Corporate users')

-- Alice and Bob are users
INSERT INTO "ISE"."USER_GROUPS_MAPPING" (USER_ID, GROUP_ID) VALUES ('1', '2')
INSERT INTO "ISE"."USER_GROUPS_MAPPING" (USER_ID, GROUP_ID) VALUES ('2', '2')

-- Admin is in Admins group
INSERT INTO "ISE"."USER_GROUPS_MAPPING" (USER_ID, GROUP_ID) VALUES ('3', '1')
```

3.创建组检索过程。如果用户名为“*”，则返回所有组

```
create or replace function ISEGROUPSH
(
  ise_username IN VARCHAR2,
  ise_result OUT int
) return sys_refcursor as
BEGIN
  declare
    c integer;
    userid integer;
    resultSet SYS_REFCURSOR;
  begin
    IF ise_username = '*' then
      ise_result := 0;
      open resultSet for select GROUP_NAME from GROUPS;
    ELSE
      select count(*) into c from USERS where USERS.USERNAME = ise_username;
      select USER_ID into userid from USERS where USERS.USERNAME = ise_username;
      IF c > 0 then
          ise_result := 0;
          open resultSet for select GROUP_NAME from GROUPS where GROUP_ID IN ( SELECT m.GROUP_ID
from USER_GROUPS_MAPPING m where m.USER_ID = userid );
      ELSE
          ise_result := 3;
          open resultSet for select 0 from dual where 1=2;
      END IF;
    END IF;
    return resultSet;
  end;
END ;
```

4.将其映射到**获取组**



Stored procedure type: Returns recordset

Plain text password authentication: ISEAUTH_R

Plain text password fetching: ISEFETCH_R

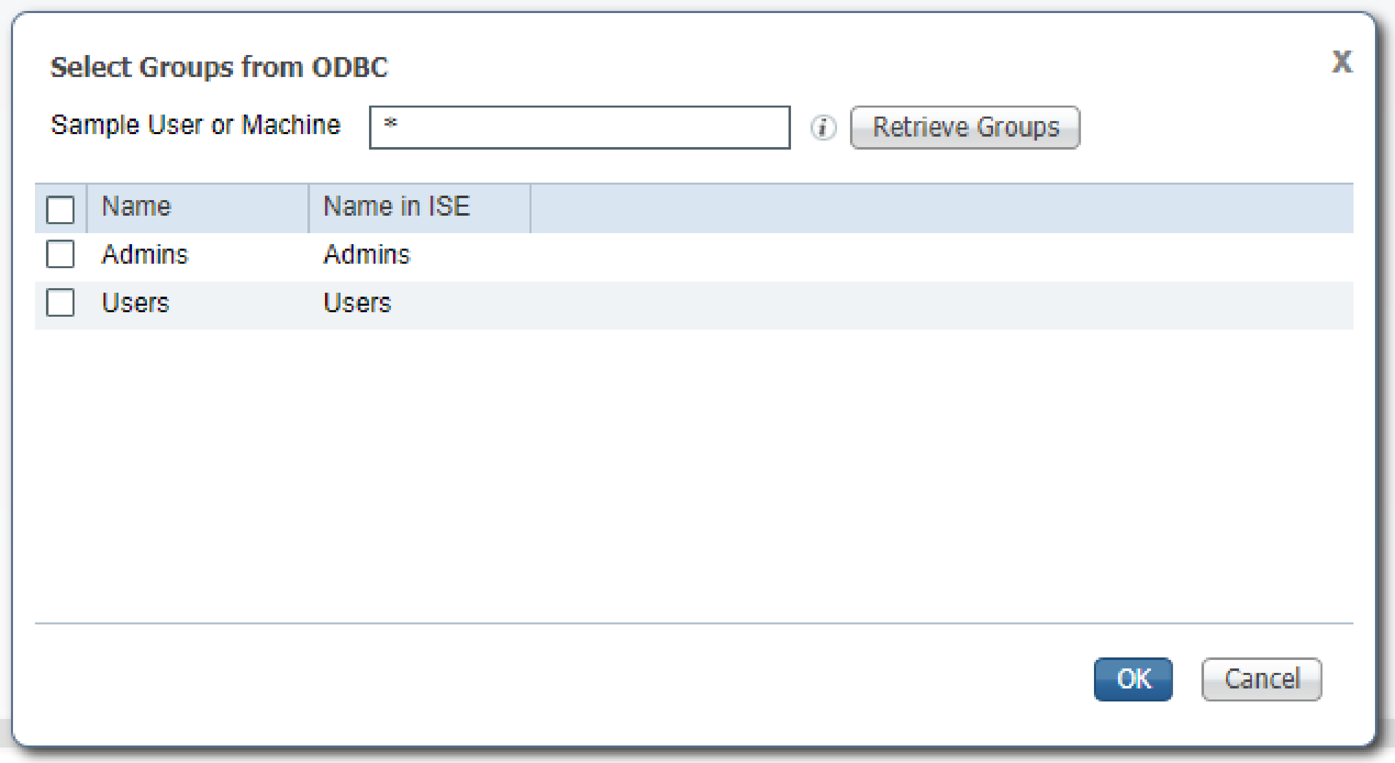
Check username or machine exists: ISELOOKUP_R

Fetch groups: ISEGROUPSH

Fetch attributes:

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

5.获取组并将其添加到ODBC身**份源**

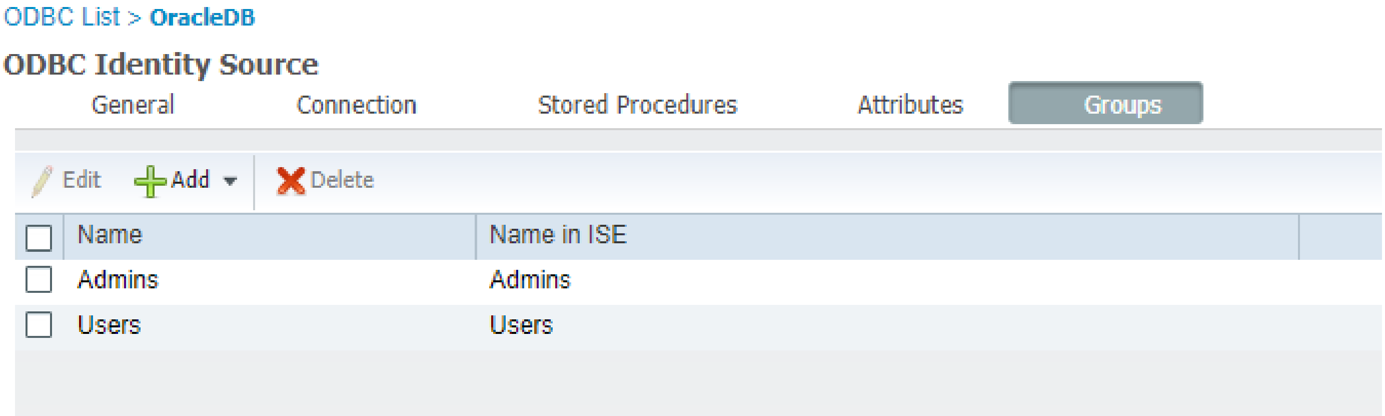


Select Groups from ODBC

Sample User or Machine: *

□	Name	Name in ISE
□	Admins	Admins
□	Users	Users

选择所需的组并单击确定，这些组将显示在“组”**选项卡**上



ODBC List > **OracleDB**

ODBC Identity Source

□	Name	Name in ISE
□	Admins	Admins
□	Users	Users

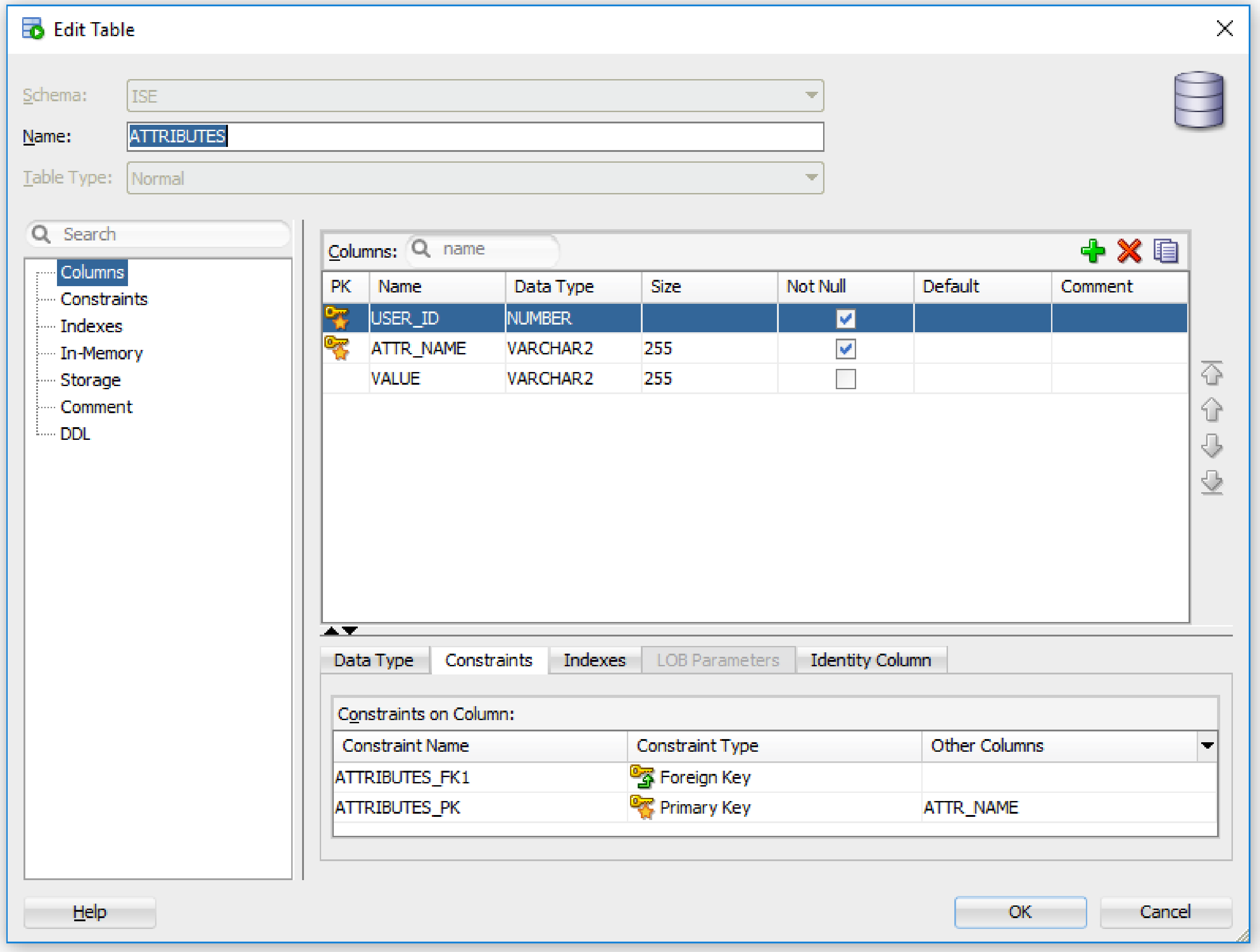
步骤5.配置属性检索

1.为简化此示例，属性使用平面表

```
--------------------------------------------------------
--  DDL for Table ATTRIBUTES
--------------------------------------------------------

  CREATE TABLE "ISE"."ATTRIBUTES"
   ("USER_ID" NUMBER(*,0),
"ATTR_NAME" VARCHAR2(255 BYTE),
"VALUE" VARCHAR2(255 BYTE)
   ) SEGMENT CREATION IMMEDIATE
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
```

```
--------------------------------------------------------
--  DDL for Index ATTRIBUTES_PK
--------------------------------------------------------

  CREATE UNIQUE INDEX "ISE"."ATTRIBUTES_PK" ON "ISE"."ATTRIBUTES" ("ATTR_NAME", "USER_ID")
  PCTFREE 10 INITRANS 2 MAXTRANS 255
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
--------------------------------------------------------
--  Constraints for Table ATTRIBUTES
--------------------------------------------------------

  ALTER TABLE "ISE"."ATTRIBUTES" MODIFY ("USER_ID" NOT NULL ENABLE);
  ALTER TABLE "ISE"."ATTRIBUTES" MODIFY ("ATTR_NAME" NOT NULL ENABLE);
  ALTER TABLE "ISE"."ATTRIBUTES" ADD CONSTRAINT "ATTRIBUTES_PK" PRIMARY KEY ("ATTR_NAME",
"USER_ID")
  USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS"  ENABLE;
```

从GUI:



Schema: ISE

Name: ATTRIBUTES

Table Type: Normal

Columns: name

PK	Name	Data Type	Size	Not Null	Default	Comment
🔑	USER_ID	NUMBER		☑		
🔑	ATTR_NAME	VARCHAR2	255	☑		
	VALUE	VARCHAR2	255	□		

Constraints on Column:

Constraint Name	Constraint Type	Other Columns
ATTRIBUTES_FK1	Foreign Key	
ATTRIBUTES_PK	Primary Key	ATTR_NAME

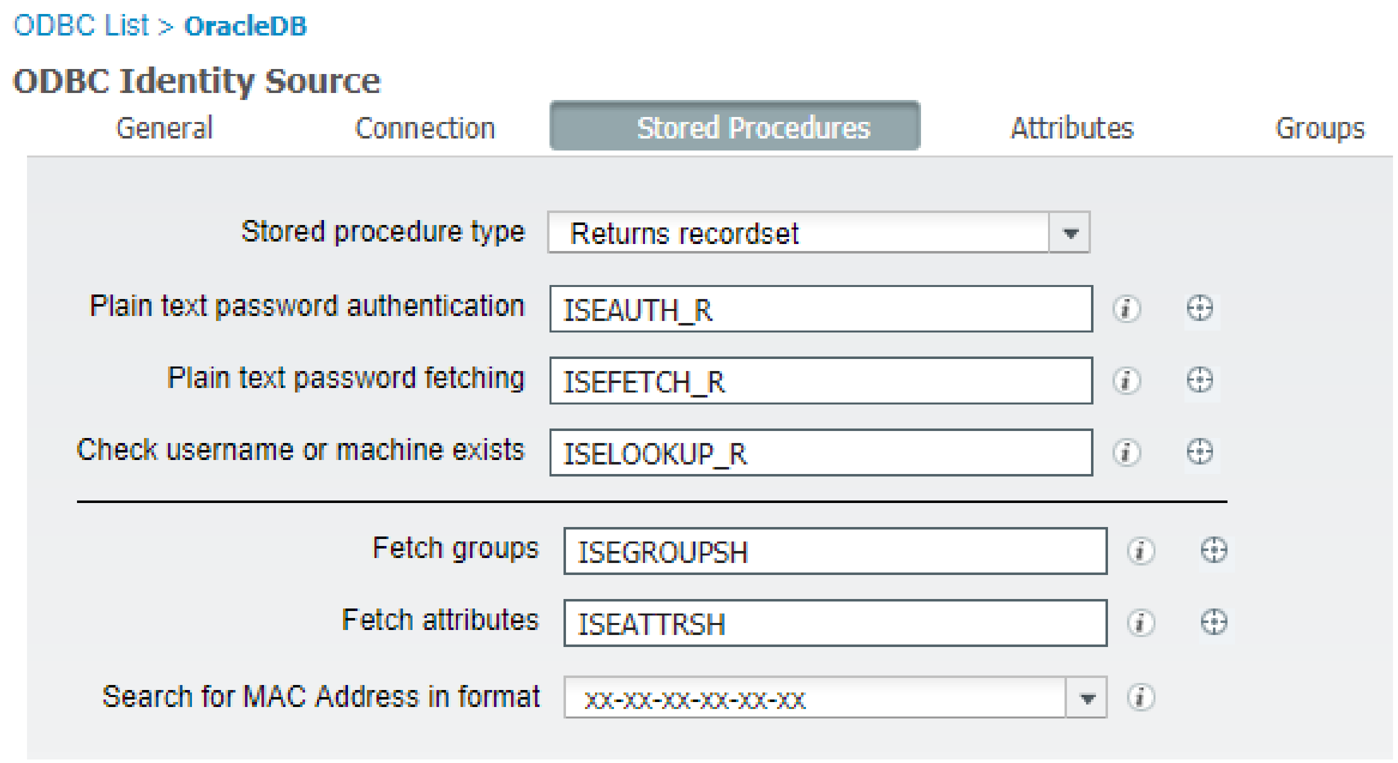
2.为用户创建一些属性

```
INSERT INTO "ISE"."ATTRIBUTES" (USER_ID, ATTR_NAME, VALUE) VALUES ('3', 'SecurityLevel', '15')
INSERT INTO "ISE"."ATTRIBUTES" (USER_ID, ATTR_NAME, VALUE) VALUES ('1', 'SecurityLevel', '5')
INSERT INTO "ISE"."ATTRIBUTES" (USER_ID, ATTR_NAME, VALUE) VALUES ('2', 'SecurityLevel', '10')
```

3.创建过程。与组检索相同，如果用户名为“*”，它将返回所有不同的属性

```
create or replace function ISEATTRSH
(
  ise_username IN VARCHAR2,
  ise_result OUT int
) return sys_refcursor as
BEGIN
  declare
    c integer;
    userid integer;
    resultSet SYS_REFCURSOR;
  begin
    IF ise_username = '*' then
      ise_result := 0;
      open resultSet for select DISTINCT ATTR_NAME, '0' as "VAL" from ATTRIBUTES;
    ELSE
      select count(*) into c from USERS where USERS.USERNAME = ise_username;
      select USER_ID into userid from USERS where USERS.USERNAME = ise_username;
      if c > 0 then
          ise_result := 0;
          open resultSet for select ATTR_NAME, VALUE from ATTRIBUTES where USER_ID = userid;
      ELSE
          ise_result := 3;
          open resultSet for select 0 from dual where 1=2;
      END IF;
    END IF;
    return resultSet;
  end;
END ;
```

4.将其映射到Fetch属性


ODBC List > OracleDB

ODBC Identity Source

Stored procedure type: Returns recordset

Plain text password authentication: ISEAUTH_R

Plain text password fetching: ISEFETCH_R

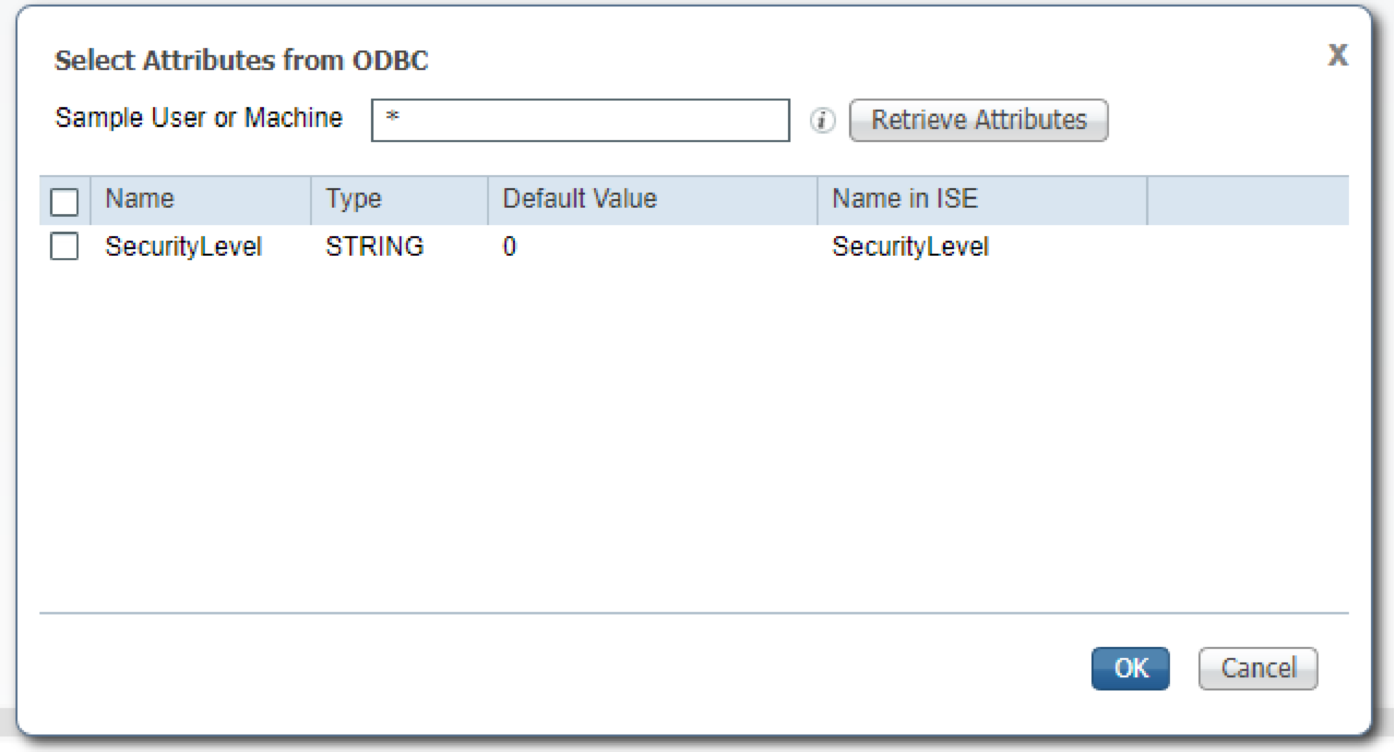
Check username or machine exists: ISELOOKUP_R

Fetch groups: ISEGROUPSH

Fetch attributes: ISEATTRSH

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

5.获取属性



Select Attributes from ODBC

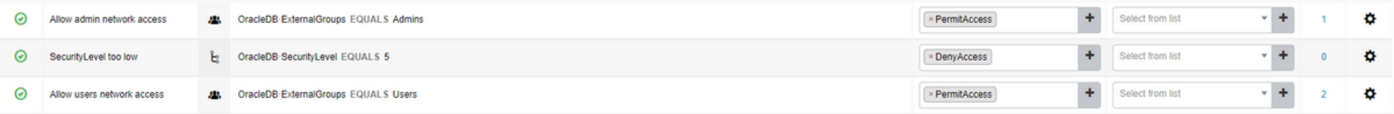
Sample User or Machine: *

□	Name	Type	Default Value	Name in ISE
□	SecurityLevel	STRING	0	SecurityLevel

选择属性并点击确定。

步骤6.配置身份验证/授权策略

在本示例中，配置了以下简单授权策略：

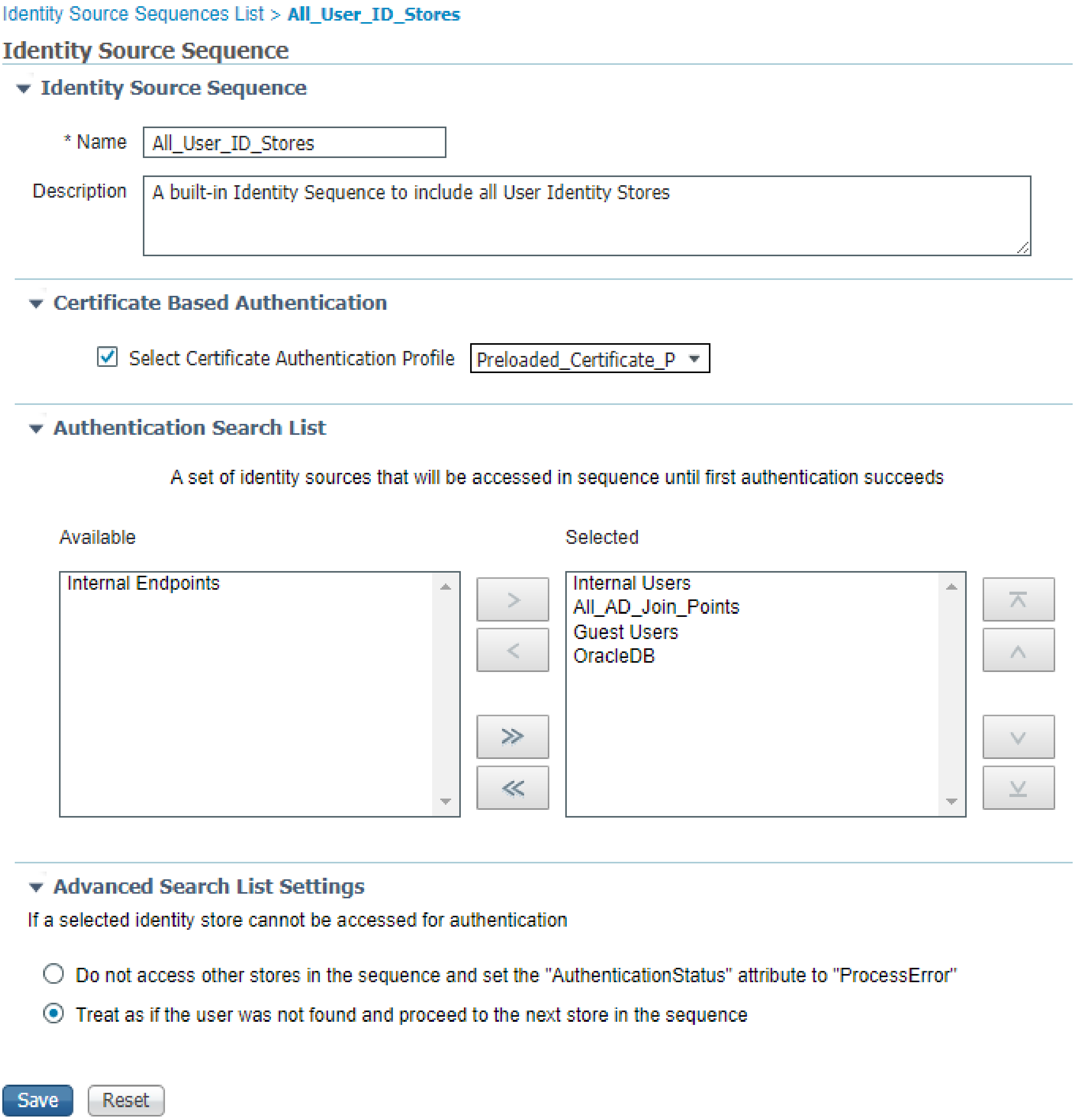


✓	Allow admin network access	OracleDB·ExternalGroups EQUALS Admins	× PermitAccess	Select from list	1
✓	SecurityLevel too low	OracleDB·SecurityLevel EQUALS 5	× DenyAccess	Select from list	0
✓	Allow users network access	OracleDB·ExternalGroups EQUALS Users	× PermitAccess	Select from list	2

SecurityLevel = **5的用**户将被拒绝。

步骤7.将Oracle ODBC添加到身份源序列

导航至*管理>身份管理>身份源序列*，选择序列并将ODBC添加到序列：



Identity Source Sequences List > All_User_ID_Stores

Identity Source Sequence

Identity Source Sequence

* Name: All_User_ID_Stores

Description: A built-in Identity Sequence to include all User Identity Stores

Certificate Based Authentication

☑ Select Certificate Authentication Profile: Preloaded_Certificate_P

Authentication Search List

A set of identity sources that will be accessed in sequence until first authentication succeeds

Available: Internal Endpoints

Selected: Internal Users, All_AD_Join_Points, Guest Users, OracleDB

Advanced Search List Settings

If a selected identity store cannot be accessed for authentication

○ Do not access other stores in the sequence and set the "AuthenticationStatus" attribute to "ProcessError"

● Treat as if the user was not found and proceed to the next store in the sequence

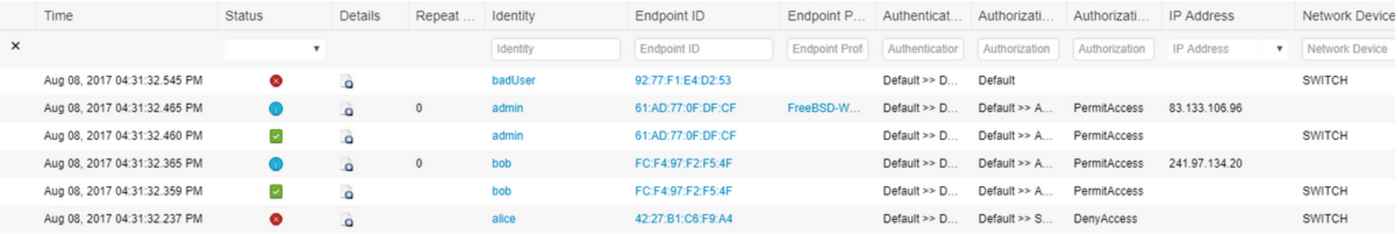
保存。

验证

现在，您应该能够根据ODBC对用户进行身份验证并检索其组和属性。

RADIUS实时日志

执行一些身份验证并导航*到操作> RADIUS >实时日志*



	Time	Status	Details	Repeat ...	Identity	Endpoint ID	Endpoint P...	Authenticat...	Authorizati...	Authorizati...	IP Address	Network Device
×		▾			Identity	Endpoint ID	Endpoint Prof	Authenticatior	Authorization	Authorization	IP Address ▾	Network Device
	Aug 08, 2017 04:31:32.545 PM	⊗	🔍		badUser	92:77:F1:E4:D2:53		Default >> D...	Default			SWITCH
	Aug 08, 2017 04:31:32.465 PM	ⓘ	🔍	0	admin	61:AD:77:0F:DF:CF	FreeBSD-W...	Default >> D...	Default >> A...	PermitAccess	83.133.106.96	
	Aug 08, 2017 04:31:32.460 PM	☑	🔍		admin	61:AD:77:0F:DF:CF		Default >> D...	Default >> A...	PermitAccess		SWITCH
	Aug 08, 2017 04:31:32.365 PM	ⓘ	🔍	0	bob	FC:F4:97:F2:F5:4F		Default >> D...	Default >> A...	PermitAccess	241.97.134.20	
	Aug 08, 2017 04:31:32.359 PM	☑	🔍		bob	FC:F4:97:F2:F5:4F		Default >> D...	Default >> A...	PermitAccess		SWITCH
	Aug 08, 2017 04:31:32.237 PM	⊗	🔍		alice	42:27:B1:C6:F9:A4		Default >> D...	Default >> S...	DenyAccess		SWITCH

如您所见，用户Alice的SecurityLevel **= 5，因**此访问被拒绝。

详细报告

单击“详**细信息”**列中**的“详细**信息”报告以检查流。

用户Alice的详细报告（由于安全级别低而被拒绝）：