



ORDS RESTful Services Basic Authentication with Oracle APEX user

By Oracle Support Services

24-Jun-2022



How to Create APEX Group and User, assign user with the group.

Prerequisites

We assume you are using the latest version of Oracle APEX and ORDS or the APEX Service available in Autonomous database.

This demonstration do not require any tables, so no pre authorization or pre hook required.

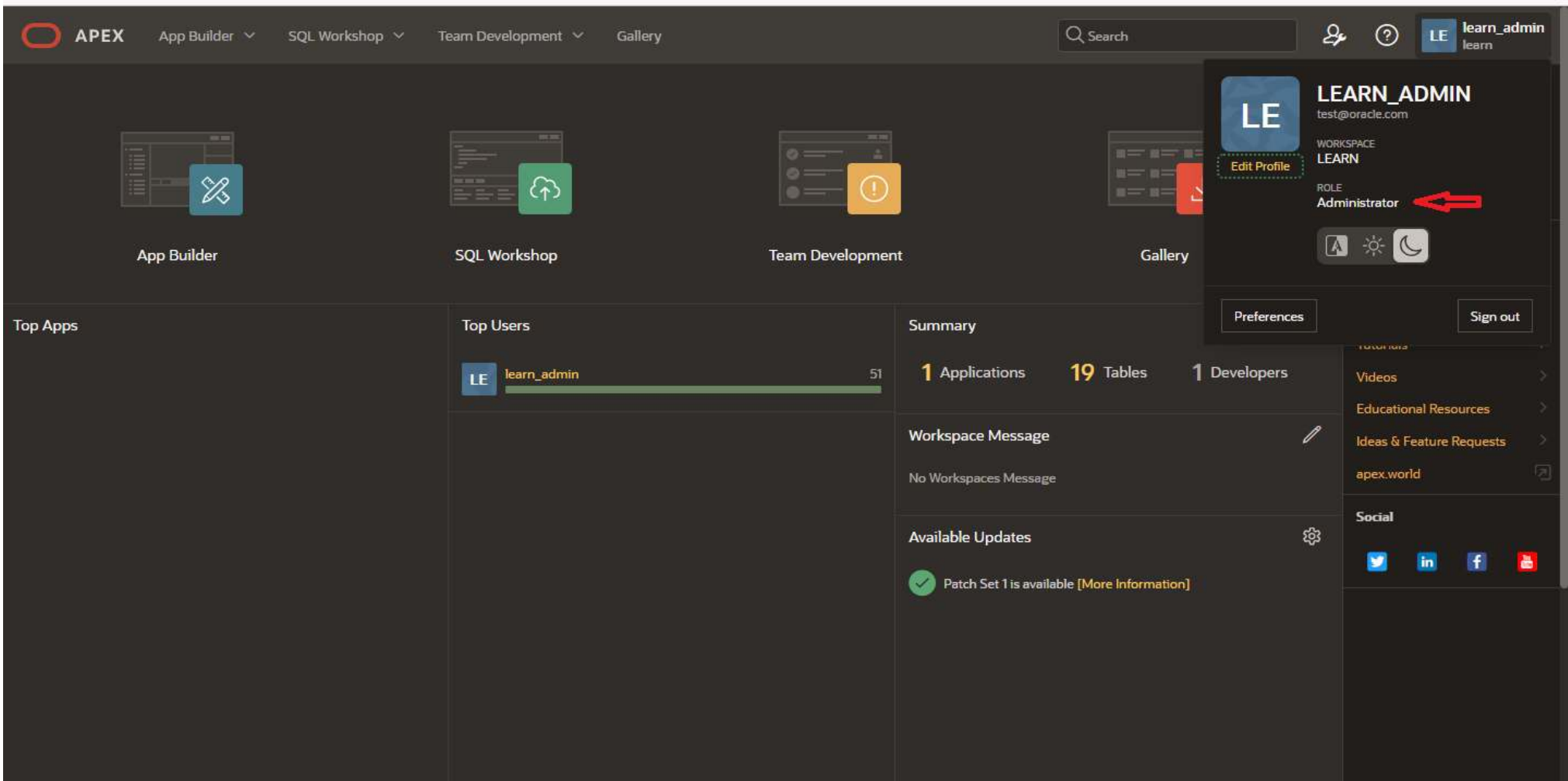
Disclaimer:

The example(s) provided are for demonstration purposes only and represents fictitious sample (based upon made up data used in the Oracle Demo instance).

Assumptions:

This demo uses Apex Workspace name: ***learn*** and Apex Workspace User Name: ***learn_admin***





 **APEX**

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  **LE** learn_admin learn


App Builder


SQL Workshop


Team Development


Gallery

Top Apps

Top Users

LE learn_admin 51

Summary

1 Applications 19 Tables 1 Developers

Workspace Message

No Workspaces Message

Available Updates

 Patch Set 1 is available [\[More Information\]](#)

Blog

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Videos

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Social

- Administration
- Manage Service >
- Manage Users and Groups
- Monitor Activity
- Dashboards
- Change My Password



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SQL Workshop

Team Development

Gallery

Search

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learn

Manage Users and Groups

User Group

User Groups

Cancel

Create Group

Show All

Group Details

Group Grants

Group Details

Group Name

REST_API_USER_GROUP

Description

Group Grants

Groups

OAuth2 Client Developer

RESTful Services

SQL Developer

User Groups

You can create user groups to restrict access to various parts of an application. However, user groups are not portable over different authentication schemes. User groups are primarily useful when using Oracle APEX workspace authentication.

To create a new user group, identify the group name and an optional description.



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SQL Workshop

Team Development

Gallery

Search

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Manage Users and Groups

Create User

Create User

Cancel

Create and Create Another

Create User

Show All

User Identification

Account Privileges

Password

Group Assignments

User Identification

Username

RESTAPIUSER

Email Address

test@orade.com

First Name

Last Name

Description

Default Date Format

Account Privileges

Default Schema

HR

Accessible Schemas (null for all)

User is a workspace administrator:

User is a developer:

App Builder Access

SQL Workshop Access

Team Development Access

Set Account Availability

Unlocked

Users

Use this page to control access for Oracle APEX application developers, workspace administrators and end users.

Developers can create and edit applications as well as create and modify database objects.

Workspace administrators can additionally create and edit user accounts, manage groups, manage development services.

End users have no development privileges and are defined to provide access control to applications that do not use an external authentication scheme.



Create User

[Cancel](#)[Create and Create Another](#)[Create User](#)[Show All](#)[User Identification](#)[Account Privileges](#)[Password](#)[Group Assignments](#)

Accessible Schemas (null for all)



User is a workspace administrator:



User is a developer:



App Builder Access



SQL Workshop Access



Team Development Access



Set Account Availability



Password

Password

Passwords are case sensitive



Confirm Password



Require Change of Password on First Use



Group Assignments

Group Assignments:

OAuth2 Client Developer
RESTful Services
SQL Developer

REST_API_USER_GROUP



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App Builder

SQL Workshop

Team Development

Gallery

Search

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Manage Users and Groups

Users

Groups

Group Assignments

Go

Actions

View Dashboard

Grantee	Group	Type
LEARN_ADMIN	RESTful Services	User
RESTAPIUSER	REST_API_USER_GROUP	User
REST_API_USER_GROUP	RESTful Services	Group
REST_API_USER_GROUP	SQL Developer	Group

1 - 4

Group Assignments

This report lists groups assigned to users and other groups. You can use groups for categorization and to manage privileges.





Create a RESTFul API and protect with APEX user as Basic Authentication.



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Object Browser
SQL Commands
SQL Scripts
Utilities
RESTful Services

App Builder SQL Workshop Team Development Gallery

Top Apps

Top Users

LE learn_admin 32

Summary

1 Applications 19 Tables 2 Developers

Workspace Message

No Workspaces Message

Available Updates

Patch Set 1 is available [More Information]

About

Oracle APEX is a low-code development platform that enables you to build scalable, secure enterprise apps, with world-class features, that can be deployed anywhere.

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RESTful Services Roles Role Definition

Schema HR

Cancel Create Role

ORDS Role Definition

Owner HR

Role Name REST_API_USER_GROUP

RESTful Data Services

- Enabled Objects
- Modules
- Privileges
- Roles
 - OAuth Client Developer
 - OAuth2 Client Developer
 - orade.dbtools.autorest.any.schema
 - RESTful Services
 - Schema Administrator
 - SODA Developer
 - SQL Developer



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App Builder

SQL Workshop

Team Development

Gallery

Search

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learn

RESTful Services

Modules

Module Definition

Schema: HR

Cancel

Create Module

RESTful Data Services

Enabled Objects

Modules

orade.example.hr

Privileges

Roles

OAuth Client Developer

OAuth2 Client Developer

orade.dbtools.autorest.any.schema

RESTful Services

REST_API_USER_GROUP

Schema Administrator

SODA Developer

SQL Developer

ORDS Module Definition

Module Name

mresttest

Base Path

mresttest

Is Published

☒

Pagination Size

25

Origins Allowed

Comments

Legend:

☒ Template fully protected by a privilege

☐ Template not protected by any privilege



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RESTful Services Modules Module Definition

Schema HR

RESTful Data Services

- Enabled Objects
- Modules
 - mresttest
 - oracle.example.hr
- Privileges
- Roles
 - OAuth Client Developer
 - OAuth2 Client Developer
 - oracle.dbtools.autorest.any.schema
 - RESTful Services
 - REST_API_USER_GROUP
 - Schema Administrator
 - SODA Developer
 - SQL Developer

Module Created

ORDS Module Definition

Module Name mresttest

Base Path /mresttest/

Full URL http://localhost:8080/ords/learn/mresttest/

Is Published ☒

Pagination Size 25

Origins Allowed

Comments

Generate Swagger Doc

Resource Templates

Create Template >

No Templates are currently defined for the selected module.

Legend: ☒ Template fully protected by a privilege ☒ Template not protected by any privilege



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RESTful Services Modules Module Definition Resource Template Schema HR

RESTful Data Services

- Enabled Objects
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 - SODA Developer
 - SQL Developer

ORDS Template Definition

RESTful Service Module: mresttest

Module Base Path: /mresttest/

URI Template: uresttest

Priority: 0

HTTP Entity Tag Type: Secure Hash

Comments

Cancel Create Template



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RESTful Services Modules Module Definition Resource Template

Schema HR

RESTful Data Services

- Enabled Objects
- Modules
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 - uresttest
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Template Created

ORDS Template Definition

RESTful Service Module mresttest

Module Base Path /mresttest/

URI Template uresttest

Full URL http://localhost:8080/ords/learn/mresttest/uresttest

Priority 0

HTTP Entity Tag Type Secure Hash

Comments

Resource Handlers

Create Handler >

No Templates are currently defined for the selected module.



RESTful Services

Modules

Module Definition

Resource Template

Resource Handler

SchemaHR

CancelCreate Handler

RESTful Data Services

Enabled Objects

Modules

- mresttest
 - uresstest
 - oracle.example.hr

Privileges

Roles

- OAuth Client Developer
- OAuth2 Client Developer
- oracle.dbtools.autores.tany.schema
- RESTful Services
- REST_API_USER_GROUP
- Schema Administrator
- SODA Developer
- SQL Developer

ORDS Handler Definition

RESTful Service Modulemresttest

Module Base Path/mresttest/

URI Templateuresstest

MethodGET

Source TypeCollection Query

FormatJSON

Pagination Size

Comments

Source

1select :current_user from dual



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Search

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RESTful ServicesPrivileges

SchemaHR

Create Privilege >

RESTful Data Services

Enabled Objects

Modules

- mresttest
 - uresttest
 - GET
- oracle.example.hr

Privileges

- oracle.dbtools.sqldev
- oracle.soda.privilege.developer

Roles

- OAuth Client Developer
- OAuth2 Client Developer
- oracle.dbtools.autoreset.any.schema
- RESTful Services
- REST_API_USER_GROUP
- Schema Administrator
- SODA Developer
- SQL Developer

ORDS Privileges

GoActions

Name	Label	Description	Owner	Comments	Created On	Updated On
oracle.dbtools.sqldev	RESTful Service Editing	Provides access to edit RESTful Service definitions	ORDS	-	4 weeks ago	4 weeks ago
oracle.soda.privilege.developer	-	-	HR	-	4 weeks ago	4 weeks ago

1 - 2

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RESTful Services

Privileges

Privilege Definition

SchemaHR

Cancel

Create Privilege

RESTful Data Services

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mresttest

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GET

orade.example.hr

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Roles

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RESTful Services

REST_API_USER_GROUP

Schema Administrator

SODA Developer

SQL Developer

ORDS Privileges Definition

OwnerHR

NameREST_API_USER_PRIVS

TitleREST_API_USER_PRIVS

Description

Comments

Roles

OAuth2 Client Developer

SQL Developer

RESTful Services

Schema Administrator

orade.dbtools.autorest.any.schema

SODA Developer

OAuth Client Developer

Protected Modules

Modules

orade.example.hr

mresttest

Protected Resources

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RESTful Services Privileges Privilege Definition

Schema HR

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 - SQL Developer

ORDS Privileges Definition

Owner HR

Name REST_API_USER_PRIVS

Title REST_API_USER_PRIVS

Description

Comments

Roles

- OAuth2 Client Developer
- SQL Developer
- RESTful Services
- Schema Administrator
- oracle.dbtools.autorest.any.schema
- SODA Developer
- OAuth Client Developer

REST_API_USER_GROUP

Protected Modules

Modules

- getusername
- oracle.example.hr

mresttest

Protected Resources

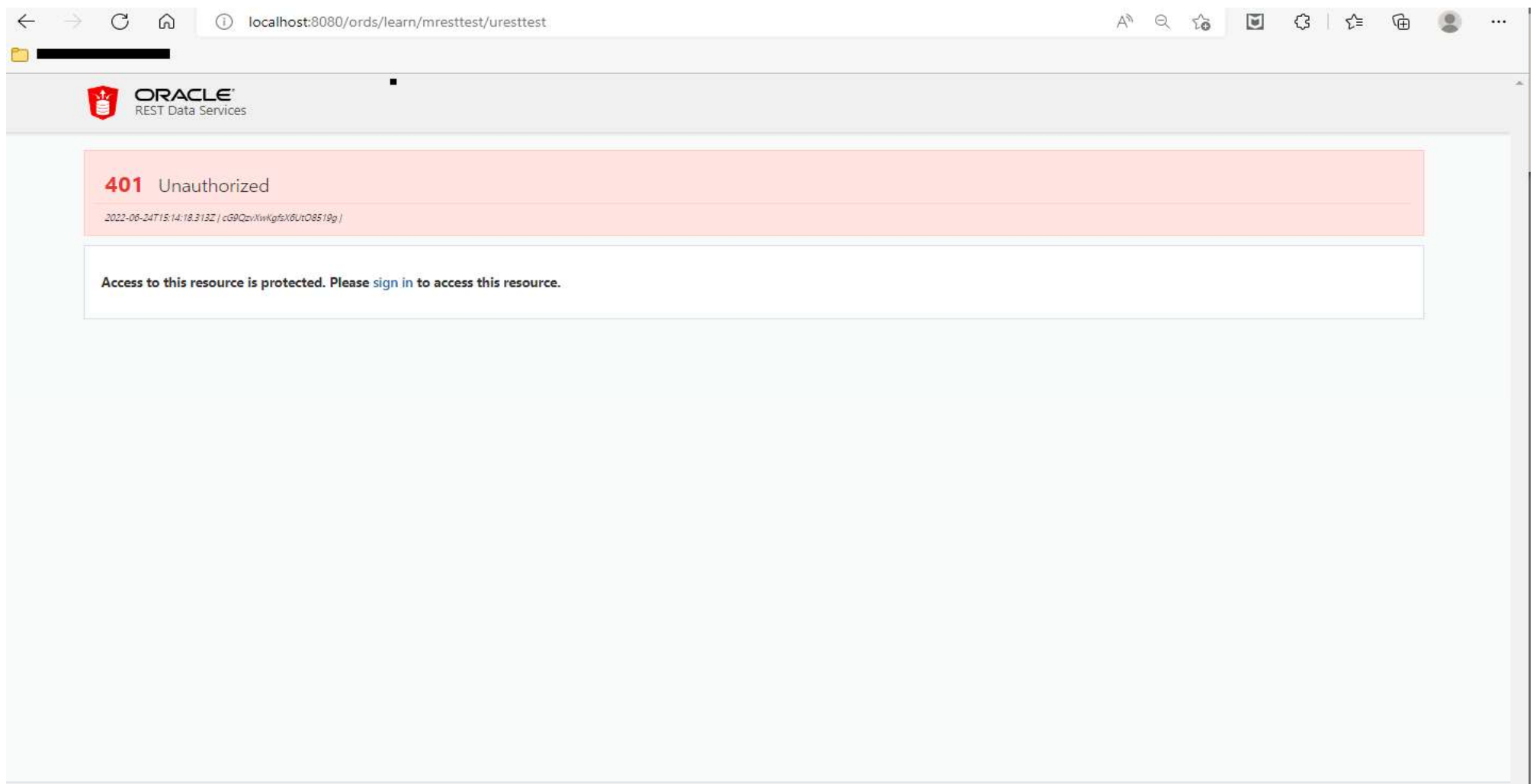
Search: All Text Columns Go Actions Edit Add Row

Reset

Pattern

/mresttest/*







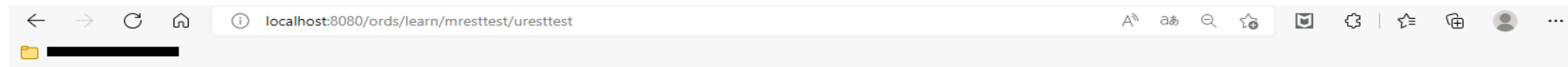
Username

RESTAPIUSER

Password

••••

Sign in



```
{
  "items": [
    {
      "id": "RESTAPIUSER",
      "hasMore": false,
      "limit": 25,
      "offset": 0,
      "count": 1,
      "links": [
        {
          "rel": "self",
          "href": "http://localhost:8080/ords/learn/mresttest/uresttest"
        },
        {
          "rel": "describedby",
          "href": "http://localhost:8080/ords/learn/metadata-catalog/mresttest/item"
        },
        {
          "rel": "first",
          "href": "http://localhost:8080/ords/learn/mresttest/uresttest"
        }
      ]
    }
  ]
}
```



Further Reading

About Oracle Application Express Users and Oracle REST Data Services Roles

<https://docs.oracle.com/en/database/oracle/oracle-rest-data-services/22.1/orddg/developing-REST-applications.html#GUID-F7AF6D0C-0972-40CE-9BD7-4375F87851C9>

