

Description

This PL/SQL script will create a package containing the procedures required to send an event to Dollar Universe. This includes the call to the login API, the logout API and the sending of the request. Attached with this document, you will also find an example of oracle database trigger using the procedures of this package.

Prerequisites

This package can be installed via an Oracle DB client. No other external packages are required. In Oracle 11g, an ACL (Access control List) is needed to allow the http tools to interact with an external host. The following statements will create a new ACL with user JOHN as principal and access to host in domain "orsypgroup.com". For more information, visit: <http://www.oracle-ba...vices-11gr1.php>

```
BEGIN
DBMS_NETWORK_ACL_ADMIN.create_acl (
acl => 'john_acl_file.xml',
description => 'Permission to connect to external hosts',
principal => 'JOHN',
is_grant => TRUE,
privilege => 'connect',
start_date => SYSTIMESTAMP,
end_date => NULL);
COMMIT;
END;
/
BEGIN
DBMS_NETWORK_ACL_ADMIN.ASSIGN_ACL (
acl => 'john_acl_file.xml',
host => '*.orsypgroup.com');
COMMIT;
END;
/
```

How to use

Open a client to the Oracle DB (such as SQL*Plus) and execute the odb_duas_trigger_pkg.sql script to install duas_trigger_pkg. This package contains several procedures.

- The create_trigger_job and create_trigger_job_auth procedures will prepare the procedures that will only run after a commit. It is possible to call these procedures several times and launch all the jobs at once after a commit.
- create_trigger_job takes in parameter the URL of the host, the body in plain text and the authentication key to send an event to Dollar Universe.
- create_trigger_job_auth requires a username and password instead of the authentication key in order to login, send the event and logout.
- send_du_trigger_event: This procedure sends an event to the the Dollar Universe Node. The body is sent as text/plain.
- duas_trigger_job: Calls the login API to retrieve a token, sends an event and destroys the token with the logout API.
- duas_api_login: Given the username and password, it retrieves the token from the Dollar Universe node.
- duas_api_logout: It invalidates the token and logs the user out.

Please refer to the package itself and the procedure prototypes for the inputs and outputs for each procedure.

Explanation of the example provided

This code is executed after a row is inserted in the Contacts table.

`l_body` contains the body of the POST request used to send the event to the Dollar Universe node.

Every property and its value is in a new line. In this case, the type is "NEW_CONTACT", it targets the "X" area and contains 3 properties containing the first name, last name and email of the contact that has just been inserted.

If John Titor (john.titor@mail.com) is inserted, the body will look like this:

```
type=NEW_CONTACT
area=X
firstname=John
lastname=Titor
email=john.titor@mail.com
```

Output

In order to view information, the output is written via the `dbms_output` object which means `serveroutput` must be on in order to get feedback from the trigger.

```
SQL>set serveroutput on;
```

It is possible to redirect the output to a file using the `duas_trigger_pkg.output_to_log` procedure.

```
User john logged in successfully with token:3acd7720-b06b-11e3-b452-
499010183e3c
Status: incomplete
Trigger: AAA
Launch number: 0017087
```

```
Trigger: BBB
Error: 300
Message: Access denied. Cannot launch the task <FORBIDDEN>.
```

```
Logout successful.
```

Uninstall

To remove the package, run 1 SQL statement:

```
SQL> DROP PACKAGE duas_trigger_pkg;
```