

Connect to SAP

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*&-----*
*& Report Z_API_CALL
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*&-----*
REPORT Z_API_CALL.

DATA: lv_url TYPE string VALUE 'http://fastmanut.pt/fastManut_Request_Token_Url',
      * or your localhost or remote fastManut instalation

      lv_api_url TYPE string VALUE 'http://fastmanut.pt/fastManut_Request_Url',
      * or your localhost or remote fastManut instalation

      lt_data TYPE string value '{"grant_type":"client_credentials","client_id":"your_Client_Id","client_secret":"Your_Client_Secret","scope":""}',

      lo_http_client TYPE REF TO if_http_client,
      lv_response TYPE string,
      lv_token TYPE string.

* Step 1: Obtain the access token
CALL METHOD cl_http_client=>create_by_url
  EXPORTING
    url = lv_url
  IMPORTING
    client = lo_http_client
  EXCEPTIONS
    others = 1.

IF sy-subrc = 0.
  lo_http_client->request-
>set_method( if_http_request=>co_request_method_post ).
  lo_http_client->request->set_header_field( name = 'Content-

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Type' value = 'application/json' ).

lo_http_client->request->set_cdata( lt_data ).

CALL METHOD lo_http_client->send
EXCEPTIONS
    http_communication_failure = 1
    http_invalid_state         = 2
    http_processing_failed     = 3
    others                     = 4.

IF sy-subrc = 0.
    CALL METHOD lo_http_client->receive
    EXCEPTIONS
        http_communication_failure = 1
        http_invalid_state         = 2
        http_processing_failed     = 3
        others                     = 4.

IF sy-subrc = 0.
    lv_response = lo_http_client->response->get_cdata( ).

    TYPES: BEGIN OF ty_token,
            access_token TYPE string,
            token_type   TYPE string,
            expires_in   TYPE string,
            END OF ty_token.

    DATA: ls_token TYPE ty_token.

*   Deserialize JSON to the ABAP framework
    /ui2/cl_json=>deserialize(
        EXPORTING
            json = lv_response
        CHANGING
            data = ls_token
    ).
ELSE.
    WRITE: / 'Error receiving token response'.
    EXIT.
ENDIF.
ELSE.
    WRITE: / 'Error sending token request'.
    EXIT.
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ENDIF.
ELSE.
  WRITE: / 'Error creating HTTP client for token'.
  EXIT.
ENDIF.

* Step 2: Make the API call with the access token
CLEAR: lo_http_client, lv_response.
CALL METHOD cl_http_client=>create_by_url
  EXPORTING
    url      = lv_api_url
  IMPORTING
    client   = lo_http_client
  EXCEPTIONS
    others   = 1.

IF sy-subrc = 0.
  lo_http_client->request-
>set_method( if_http_request=>co_request_method_get ).
  lo_http_client->request-
>set_header_field( name = 'Authorization' value = |Bearer { ls_token-
access_token }| ).

  CALL METHOD lo_http_client->send
    EXCEPTIONS
      http_communication_failure = 1
      http_invalid_state         = 2
      http_processing_failed     = 3
      others                     = 4.

  IF sy-subrc = 0.
    CALL METHOD lo_http_client->receive
      EXCEPTIONS
        http_communication_failure = 1
        http_invalid_state         = 2
        http_processing_failed     = 3
        others                     = 4.

    IF sy-subrc = 0.
      lv_response = lo_http_client->response->get_cdata( ).
      WRITE: / 'API Response JSON:', lv_response.

      TYPES: BEGIN OF TY_RESPONSE,
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SIGNALSCOUNT          TYPE INTEGER,  
SIGNALSRECEIVED       TYPE INTEGER,  
DISCONNECTED         TYPE INTEGER,  
CONNECTED             TYPE INTEGER,  
MACHINESCOUNT       TYPE INTEGER,  
SIGNALSMACHINERECEIVED TYPE INTEGER,  
RUN                  TYPE INTEGER,  
STOP                  TYPE INTEGER,  
ALARM                 TYPE INTEGER,  
SIGNALDISCONNECTED   TYPE INTEGER,  
SIGNALCONNECTED      TYPE INTEGER,  
END OF TY_RESPONSE.
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DATA: LS_RESPONSE_REQUEST_API_TABLE TYPE TY_RESPONSE.
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*      Deserialize to table format  
/UI2/CL_JSON=>DESERIALIZE(  
    EXPORTING  
        JSON = LV_RESPONSE  
    CHANGING  
        DATA = LT_TABLE  
*      DATA = LS_RESPONSE_REQUEST_API_TABLE  
    ).  
  
    cl_demo_output=>display( LS_RESPONSE_REQUEST_API_TABLE ).  
  
ELSE.  
    WRITE: / 'Error receiving API response'.  
ENDIF.  
ELSE.  
    WRITE: / 'Error sending request to API'.  
ENDIF.  
ELSE.  
    WRITE: / 'Error creating HTTP client for API'.  
ENDIF.
```