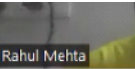


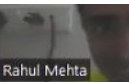
## Sending ALV Output as an E-Mail Attachment



- To send the ALV output as an e-mail attachment, we will make use of the various standard classes of SAP related to BCS( Business Communication Services). The various standard classes are as follows :

- CL\_BCS
- CL\_DOCUMENT\_BCS
- CL\_SAPUSER\_BCS
- CL\_CAM\_ADDRESS\_BCS

## Sending ALV Output as an E-Mail Attachment(Contd.)



- CL\_BCS - This class is used for creating the send request, adding the recipient, sending the document etc.
- CL\_DOCUMENT\_BCS - This class is used for creating the document, adding the attachment etc.
- CL\_SAPUSER\_BCS - This class is used to create SAP users.
- CL\_CAM\_ADDRESS\_BCS - This class is used to create the external recipients

## Steps to Send ALV Output as an E-Mail Attachment

1. Prepare a text format for ALV data.
2. Convert the text format to binary format
3. Create the send request.
4. Create the SAP user/external user( recipient)
5. Add the recipient
6. Create the document.
7. Add the attachment.

## Steps to Send ALV Output as an E-Mail Attachment(Contd.)

8. Set the document
9. Activate/deactivate immediate sending
10. Send
11. Commit

To convert to binary format

```
70/154  
FM : SCMS_TEXT_TO_BINARY
```

```
70/154  
FM : SCMS_TEXT_TO_BINARY  
SOLIX_TAB
```

ZALV\_SEND\_EMAIL1\_640

E-Mail Sending Steps Covered.

- Activate/deactivate immediate sending
- Send
- Commit

- Understanding the Process of Sending the Mail to SAP User in Debugging Mode.
- Checked the Mail in Transaction Code : SBWP.

- Understanding the Flow of Sending the Mail to External Recipient in Debugging Mode.
- The Transaction Code - SOST is Used to Check the Mail at SAP End.

SBWP -> SAP business workPlace

For External Email check

SMTP -> Simple Mail Transfer Protocol.

SOST->

```
*&-----*
*& Report ZALV_SEND_EMAIL1_640
*&-----*
*&
*&-----*
REPORT zalv_send_email1_640.

PARAMETERS : p_erdat TYPE erdat DEFAULT sy-datum.          "'20250207'"
PARAMETERS : p_email AS CHECKBOX DEFAULT 'X'.

TYPES : BEGIN OF lty_vbak,
         vbeln TYPE vbeln_va,
         ernam TYPE ernam,
         netwr TYPE netwr_ak,
       END OF lty_vbak.
TYPES : BEGIN OF lty_data,
         data(100) TYPE c,
       END OF lty_data.

DATA : lt_vbak TYPE TABLE OF lty_vbak.

DATA : lt_data TYPE TABLE OF lty_data,
       ls_data TYPE lty_data.

DATA : lt_binary_data TYPE solix_tab.
DATA : lo_bcs TYPE REF TO cl_bcs.
DATA : lo_sapuser TYPE REF TO cl_sapuser_bcs.
DATA : lo_external_user TYPE REF TO cl_cam_address_bcs.
DATA : lo_external_user1 TYPE REF TO cl_cam_address_bcs.
DATA : lv_subject TYPE so_obj_des.
DATA : lt_text TYPE soli_tab.
DATA : lo_document TYPE REF TO cl_document_bcs,
       lv_attachment_subject TYPE so_obj_des,
       lv_result TYPE boolean.

DATA : lt_fieldcat TYPE slis_t_fieldcat_alv.

SELECT vbeln ernam netwr
FROM vbak
INTO TABLE lt_vbak
WHERE erdat = p_erdat.

IF p_email = 'X'.
```

\* 1) Prepare a text format for ALV Data.

```
CONCATENATE 'Sales Document Number' 'User Name ' 'Amount' INTO ls_data-
data SEPARATED BY ' ! '.
APPEND ls_data TO lt_data.
CLEAR ls_data.

LOOP AT lt_vbak INTO DATA(ls_vbak).
  ls_data-data = |{ ls_vbak-vbeln } ! { ls_vbak-ernam } ! { ls_vbak-
netwr }|.
  APPEND ls_data TO lt_data.
  CLEAR ls_data.
ENDLOOP.
```

\* 2) convert text format to binary format

```
CALL FUNCTION 'SCMS_TEXT_TO_BINARY'
*   EXPORTING
*     FIRST_LINE           = 0
*     LAST_LINE            = 0
*     APPEND_TO_TABLE      = ' '
*     MIMETYPE              = ' '
*     ENCODING              =
*   IMPORTING
*     OUTPUT_LENGTH        =
TABLES
  text_tab   = lt_data
  binary_tab = lt_binary_data
EXCEPTIONS
  failed     = 1
  OTHERS     = 2.
```

\* 3) create a send request

```
TRY.
  CALL METHOD cl_bcs=>create_persistent
    RECEIVING
      result = lo_bcs.
  CATCH cx_send_req_bcs.
ENDTRY.
```

\* 4) create a sap user / external user (recipient).

```
TRY.
  CALL METHOD cl_sapuser_bcs=>create
    EXPORTING
      i_user = 'TECH_54'
    RECEIVING
      result = lo_sapuser.
  CATCH cx_address_bcs.
ENDTRY.
```

\* 5) ADD THE RECIPIENT.

```
TRY.
  CALL METHOD lo_bcs->add_recipient
    EXPORTING
      i_recipient = lo_sapuser
      i_express   =
      i_copy       =
      i_blind_copy =
      i_no_forward =
      .
  CATCH cx_send_req_bcs.
ENDTRY.

TRY.
  CALL METHOD cl_cam_address_bcs=>create_internet_address
    EXPORTING
      i_address_string = 'vinodreddyk@gmail.com'
      i_address_name    =
      i_incl_sapuser    =
    RECEIVING
      result             = lo_external_user.
  CATCH cx_address_bcs.
```

```

ENDTRY.

TRY.
    CALL METHOD lo_bcs->add_recipient
        EXPORTING
            i_recipient = lo_external_user
*           i_express   =
*           i_copy     =
*           i_blind_copy =
*           i_no_forward =
        .
    CATCH cx_send_req_bcs.
ENDTRY.

* for adding more mails in cc and bcc.

TRY.
    CALL METHOD cl_cam_address_bcs=>create_internet_address
        EXPORTING
            i_address_string = 'vinod@gmail.com'
*           i_address_name   =
*           i_incl_sapuser   =
        RECEIVING
            result           = lo_external_user1.
    CATCH cx_address_bcs.
ENDTRY.

TRY.
    CALL METHOD lo_bcs->add_recipient
        EXPORTING
            i_recipient = lo_external_user1
*           i_express   =
            i_copy       = 'X'
            i_blind_copy = 'X'
*           i_no_forward =
        .
    CATCH cx_send_req_bcs.
ENDTRY.

* 6) create the document

DESCRIBE TABLE lt_vbak LINES DATA(lv_lines).
lv_subject = |{ p_erdat+6(2) }:{ p_erdat+4(2) }:{ p_erdat+
0(4) } Number Of Sales Order : { lv_lines }|.

lt_text = VALUE #( ( line = 'Dear Sir, ' )
                   ( line = 'Below is the Attached Document ' )
                   ( line = 'Thanks & Regards' )
                   ( line = 'Vinod' ) ).

TRY.
    CALL METHOD cl_document_bcs=>create_document
        EXPORTING
            i_type      = 'RAW'
            i_subject    = lv_subject
*           i_length    =
*           i_language  = SPACE
*           i_importance =
*           i_sensitivity =
            i_text       = lt_text
*           i_hex        =
*           i_header     =
*           i_sender     =
*           iv_vsi_profile =
*           iv_vsi_scan_off =
        RECEIVING
            result       = lo_document.
    CATCH cx_document_bcs.
ENDTRY.

* 7) Add the attachment.

CONCATENATE 'Sales Orders ' '_' p_erdat+6(2) ':' p_erdat+
4(2) ':' p_erdat+0(4) INTO lv_attachment_subject.

TRY.

```

```

CALL METHOD lo_document->add_attachment
EXPORTING
    i_attachment_type      = 'XLS'
    i_attachment_subject   = lv_attachment_subject
*    i_attachment_size     =
*    i_attachment_language = SPACE
*    i_att_content_text    =
    i_att_content_hex      = lt_binary_data
*    i_attachment_header   =
*    iv_vsi_profile        =
*    iv_vsi_scan_off       =
*    i_attachment_filename =
.
CATCH cx_document_bcs.
ENDTRY.

* 8) set the document.

TRY.
    CALL METHOD lo_bcs->set_document
    EXPORTING
        i_document = lo_document.
    CATCH cx_send_req_bcs.
ENDTRY.

* 9) Activate or Deactivate immediate sending

TRY.
    CALL METHOD lo_bcs->set_send_immediately
    EXPORTING
        i_send_immediately = 'X'.
    CATCH cx_send_req_bcs.
ENDTRY.

* 10) send

TRY.
    CALL METHOD lo_bcs->send
* EXPORTING
*    i_with_error_screen = SPACE
    RECEIVING
        result = lv_result.
    CATCH cx_send_req_bcs.
ENDTRY.

* 11) Commit only for external email not for sap users.( within sap do not
require commit work ).

IF lv_result IS NOT INITIAL.
    COMMIT WORK.
ENDIF.

ENDIF.

lt_fieldcat = VALUE #( ( col_pos = 1 fieldname = 'VBELN' seltext_1 = ' Sales Document Number' )
                        ( col_pos = 2 fieldname = 'ERNAM' seltext_1 = ' User Name' )
                        ( col_pos = 3 fieldname = 'NETWR' seltext_1 = ' Amount' ) ).

CALL FUNCTION 'REUSE_ALV_GRID_DISPLAY'
EXPORTING
    it_fieldcat = lt_fieldcat
TABLES
    t_outtab    = lt_vbak
EXCEPTIONS
    program_error = 1
    OTHERS       = 2.

```

# Send mail 2

26 September 2025 15:40

BADI in me21n

METHOD if\_ex\_me\_process\_po\_cust~process\_item.

```
IF sy-uname = 'TECH_54'.

    DATA : lt_text1 TYPE soli_tab.

    CALL METHOD im_item->get_previous_data
    IMPORTING
        ex_data = DATA(ls_old)
    EXCEPTIONS
        no_data = 1
        OTHERS = 2.
    IF sy-subrc <> 0.
*       Implement suitable error handling here
    ENDIF.

    CALL METHOD im_item->get_data
    RECEIVING
        re_data = DATA(ls_new).

* 1) Prepare a text format for ALV Data.
*     lt_data = VALUE #( ( data = |Material Number ! Plant ! Purchasing Document Number !
    Old Quantity ! New Quantity ! User Name ! UTC Time Stamp | )
*       ( data = |{ ls_new-matnr } ! { ls_new-werks } ! { ls_new-ebeln } ! { ls_old-
menge } ! { ls_new-menge } ! { sy-uname } ! { sy-dATUM }{ sy-uzeit }| ) ).
* 2) convert text format to binary format
*     " Build HTML body with table

    CLEAR lt_text1.
    APPEND '<html><body>' TO lt_text1.
    APPEND '<p>Dear Sir,</p>' TO lt_text1.
    APPEND '<p>Below is the PO change details :</p>' TO lt_text1.

    APPEND '<table border="1" cellpadding="5">' TO lt_text1.
    APPEND '<tr> <th>Purchasing Document</th><th>Material Number</th><th>Plant</th><th>
Old Quantity</th><th>New Quantity</th><th>Unit</th><th>User Name</th><th>Change Date</th>
</tr>' TO lt_text1.

    APPEND '|<tr><td>{ ls_new-ebeln }</td><td>{ ls_new-matnr }</td><td>{ ls_new-werks }
</td><td>{ ls_old-menge }</td><td>{ ls_new-menge }</td><td>{ ls_new-meins }</td><td>{ sy-
uname }</td><td>{ sy-datum+6(2) }:{ sy-datum+4(2) }:{ sy-datum+0(4) } {
        sy-uzeit+0(2) }:{ sy-uzeit+2(2) }:{ sy-uzeit+4(2) }</td>
</tr>| TO lt_text1.

    APPEND '</table>' TO lt_text1.
    APPEND '<br/><p>Thanks & Regards,<br/>Vinod</p>' TO lt_text1.
    APPEND '</body></html>' TO lt_text1.

* 3) create a send request
    TRY.
        CALL METHOD cl_bcs=>create_persistent
        RECEIVING
            result = DATA(lo_bcs).
        CATCH cx_send_req_bcs.
    ENDTRY.

* 4) create a sap user / external user (recipient).
```

```

TRY.
    CALL METHOD cl_sapuser_bcs=>create
    EXPORTING
        i_user = 'TECH_54'
    RECEIVING
        result = DATA(lo_sapuser).
    CATCH cx_address_bcs.
ENDTRY.

* 5) ADD THE RECIPIENT.
TRY.
    CALL METHOD lo_bcs->add_recipient
    EXPORTING
        i_recipient = lo_sapuser.
    CATCH cx_send_req_bcs.
ENDTRY.

* for Exter Mail connect

TRY.
    CALL METHOD cl_cam_address_bcs=>create_internet_address
    EXPORTING
        i_address_string = 'vinod.k@ladera.com'
        i_address_name   = 'K Vinod'
*        i_incl_sapuser   = 'X'
    RECEIVING
        result           = DATA(lo_external_user).
    CATCH cx_address_bcs.
ENDTRY.

TRY.
    CALL METHOD lo_bcs->add_recipient
    EXPORTING
        i_recipient = lo_external_user.
    CATCH cx_send_req_bcs.
ENDTRY.

* 6) create the document
TRY.
    CALL METHOD cl_document_bcs=>create_document
    EXPORTING
        i_type      = 'HTM'
        i_subject    = ' Changed PO Details'
        i_text       = lt_text1
    RECEIVING
        result      = DATA(lo_document).
    CATCH cx_document_bcs.
ENDTRY.

* 7) Add the attachment.
* TRY.
*     CALL METHOD lo_document->add_attachment
*     EXPORTING
*         i_attachment_type      = 'XLS'
*         i_attachment_subject   = |created po on { sy-datum }|
**         i_attachment_size     =
**         i_attachment_language = SPACE
**         i_att_content_text    =
*         i_att_content_hex      = lt_binary
**         i_attachment_header   =
**         iv_vsi_profile        =
**         iv_vsi_scan_off       =
**         i_attachment_filename =
*
*     CATCH cx_document_bcs.
*     ENDTRY.
* 8) set the document.
TRY.
    CALL METHOD lo_bcs->set_document

```



```

        EXPORTING
            i_document = lo_document.
    CATCH cx_send_req_bcs.
ENDTRY.

* 9) Activate or Deactivate immediate sending
    TRY.
        CALL METHOD lo_bcs->set_send_immediately
            EXPORTING
                i_send_immediately = 'X'.
        CATCH cx_send_req_bcs.
    ENDTRY.

* 10) send
    TRY.
        CALL METHOD lo_bcs->send
    * EXPORTING
    *     i_with_error_screen = SPACE
        RECEIVING
            result = DATA(lv_result).
        CATCH cx_send_req_bcs.
    ENDTRY.

* 11) Commit only for external email not for sap users.( within sap do not require commit
work ).
    IF lv_result IS NOT INITIAL.
        COMMIT WORK.
    ENDIF.

ENDIF.

ENDMETHOD.

```

# Send mail 3

26 September 2025 15:41

```
METHOD if_ex_me_process_po_cust~process_item.

IF sy-uname = 'TECH_54'.

    DATA : lt_text1 TYPE soli_tab.

    CALL METHOD im_item->get_previous_data
        IMPORTING
            ex_data = DATA(ls_old)
        EXCEPTIONS
            no_data = 1
            OTHERS = 2.
    IF sy-subrc <> 0.
*       Implement suitable error handling here
    ENDIF.

    CALL METHOD im_item->get_data
        RECEIVING
            re_data = DATA(ls_new).

* 1) Prepare a text format for ALV Data.

* 2) convert text format to binary format

    " Build HTML body with table

    CLEAR lt_text1.
    APPEND '<html><body>' TO lt_text1.
    APPEND '<p>Dear Sir,</p>' TO lt_text1.
    APPEND '<p>Below is the PO change details :</p>' TO lt_text1.

    APPEND '<table border="1" cellspacing="0" cellpadding="5">' TO lt_text1.
    APPEND '<tr> <th>Purchasing Document</th><th>Material Number</th><th>Plant</th><th>Old Quantity</th><th>New Quantity</th><th>Unit</th><th>User Name</th><th>Change Date</th></tr>' TO lt_text1.

    APPEND |<tr><td>{ ls_new-ebeln }</td><td>{ ls_new-matnr }</td><td>{ ls_new-werks }</td><td>{ ls_old-menge }</td><td>{ ls_new-menge }</td><td>{ ls_new-meins }</td><td>{ sy-uname }</td><td>{ sy-datum+6(2) }:{ sy-datum+4(2) }:{ sy-datum+0(4) } { sy-zeit+0(2) }:{ sy-zeit+2(2) }:{ sy-zeit+4(2) }</td></tr>| TO lt_text1.

    APPEND '</table>' TO lt_text1.
    APPEND '<br/><p>Thanks & Regards,<br/>Vinod</p>' TO lt_text1.
    APPEND '</body></html>' TO lt_text1.

* 3) create a send request
    TRY.
        CALL METHOD cl_bcs=>create_persistent
            RECEIVING
                result = DATA(lo_bcs).
        CATCH cx_send_req_bcs.
    ENDTRY.

* 4) create a sap user / external user (recipient).
```

```

* 5) ADD THE RECIPIENT.
*      for Exter Mail connect
      TRY.
        CALL METHOD cl_cam_address_bcs=>create_internet_address
          EXPORTING
            i_address_string = 'vinod.k@ladera.com'
            i_address_name   = 'K Vinod'
            i_incl_sapuser   = 'X'
          RECEIVING
            result           = DATA(lo_external_user).
        CATCH cx_address_bcs.
      ENDTRY.

      TRY.
        CALL METHOD lo_bcs->add_recipient
          EXPORTING
            i_recipient = lo_external_user.
        CATCH cx_send_req_bcs.
      ENDTRY.

* 6) create the document
      TRY.
        CALL METHOD cl_document_bcs=>create_document
          EXPORTING
            i_type      = 'HTM'
            i_subject   = ' Changed PO Details'
            i_text      = lt_text1
          RECEIVING
            result      = DATA(lo_document).
        CATCH cx_document_bcs.
      ENDTRY.

* 7) Add the attachment.

* 8) set the document.
      TRY.
        CALL METHOD lo_bcs->set_document
          EXPORTING
            i_document = lo_document.
        CATCH cx_send_req_bcs.
      ENDTRY.

* 9) Activate or Deactivate immediate sending
      TRY.
        CALL METHOD lo_bcs->set_send_immediately
          EXPORTING
            i_send_immediately = 'X'.
        CATCH cx_send_req_bcs.
      ENDTRY.

* 10) send
      TRY.
        CALL METHOD lo_bcs->send
*      EXPORTING
*      i_with_error_screen = SPACE
          RECEIVING
            result = DATA(lv_result).
        CATCH cx_send_req_bcs.
      ENDTRY.

* 11) Commit only for external email not for sap users.( within sap do not
require commit work ).
      IF lv_result IS NOT INITIAL.
        COMMIT WORK.
      ENDIF.

```

ENDIF.

ENDMETHOD.

# Send Mail 4

08 October 2025 10:24

```
*&-----*
*& Report ZALV_SEND_EMAIL1_640
*&-----*
*&
*&-----*
REPORT zalv_send_email2_640.

PARAMETERS : p_r1 RADIOBUTTON GROUP r1,
              p_r2 RADIOBUTTON GROUP r1.

DATA : lt_text1 TYPE soli_tab,
       lt_text2 TYPE soli_tab.
DATA : lo_document TYPE REF TO cl_document_bcs.

SELECT * FROM zord_h_12 INTO TABLE @DATA(lt_header).
SELECT * FROM zord_i_12 INTO TABLE @DATA(lt_item).

SORT lt_header BY ono.

* 1) Prepare a text format for ALV Data.

* 2) convert text format to binary format

" Build HTML body Header table

CLEAR lt_text1.
APPEND '<html><body>' TO lt_text1.
APPEND '<p>Dear Sir,</p>' TO lt_text1.
APPEND '<p>Below are the Header details :</p>' TO lt_text1.

APPEND '<table border="1" cellspacing="0" cellpadding="5">' TO lt_text1.
APPEND '<tr> <th>Order Number</th><th>Order Date</th><th>Payment Mode</th>' TO lt_text1.
APPEND '<th>Amount</th><th>Currency</th></tr>' TO lt_text1.
LOOP AT lt_header INTO DATA(ls_header).
  APPEND '|<tr><td>{ ls_header-ono }</td><td>{ ls_header-odate }</td><td>' TO lt_text1.
  APPEND '{ ls_header-pm }</td><td>{ ls_header-ta }</td><td>{ ls_header-curr }</td>' TO lt_text1.
  APPEND '</tr>|' TO lt_text1.
ENDLOOP.
APPEND '</table>' TO lt_text1.
APPEND '<br/><p>Thanks & Regards,<br/> Vinod</p>' TO lt_text1.
APPEND '</body></html>' TO lt_text1.

" Build HTML body Item table
CLEAR lt_text2.
APPEND '<html><body>' TO lt_text2.
APPEND '<p>Dear Sir,</p>' TO lt_text2.
APPEND '<p>Below are the Item details :</p>' TO lt_text2.

APPEND '<table border="1" cellspacing="0" cellpadding="5">' TO lt_text2.
APPEND '<tr> <th>Order Number</th><th>Order Item Number</th><th>' TO lt_text2.
APPEND 'Order Description</th><th>Item Cost</th></tr>' TO lt_text2.
LOOP AT lt_item INTO DATA(ls_item).
  APPEND '|<tr><td>{ ls_item-ono }</td><td>{ ls_item-oin }</td><td>' TO lt_text2.
  APPEND '{ ls_item-odesc }</td><td>{ ls_item-icost }</td></tr>|' TO lt_text2.
ENDLOOP.
APPEND '</table>' TO lt_text2.
APPEND '<br/><p>Thanks & Regards,<br/> Vinod</p>' TO lt_text2.
APPEND '</body></html>' TO lt_text2.
```

```

* 3) create a send request
TRY.
    CALL METHOD cl_bcs=>create_persistent
        RECEIVING
            result = DATA(lo_bcs).
    CATCH cx_send_req_bcs.
ENDTRY.

* 4) create a sap user / external user (recipient).

* 5) ADD THE RECIPIENT.
*     for Exter Mail connect
TRY.
    CALL METHOD cl_cam_address_bcs=>create_internet_address
        EXPORTING
            i_address_string = 'vinod.k@ladera.com'
            i_address_name   = 'K Vinod'
            i_incl_sapuser   = 'X'
        RECEIVING
            result           = DATA(lo_external_user).
    CATCH cx_address_bcs.
ENDTRY.

TRY.
    CALL METHOD lo_bcs->add_recipient
        EXPORTING
            i_recipient = lo_external_user.
    CATCH cx_send_req_bcs.
ENDTRY.

* 6) create the document

IF p_r1 = 'X'.
    TRY.
        CALL METHOD cl_document_bcs=>create_document
            EXPORTING
                i_type       = 'HTM'
                i_subject    = 'Header Details'
                i_text       = lt_text1
            RECEIVING
                result       = lo_document.
        CATCH cx_document_bcs.
    ENDTRY.
    MESSAGE 'Header Sent Mail' TYPE 'I'.
ELSE.
    TRY.
        CALL METHOD cl_document_bcs=>create_document
            EXPORTING
                i_type       = 'HTM'
                i_subject    = 'Item Details'
                i_text       = lt_text2
            RECEIVING
                result       = lo_document.
        CATCH cx_document_bcs.
    ENDTRY.
    MESSAGE 'Items Sent Mail' TYPE 'I'.
ENDIF.

* 7) Add the attachment.

* 8) set the document.
TRY.
    CALL METHOD lo_bcs->set_document

```

```

        EXPORTING
            i_document = lo_document.
    CATCH cx_send_req_bcs.
ENDTRY.

* 9) Activate or Deactivate immediate sending
TRY.
    CALL METHOD lo_bcs->set_send_immediately
        EXPORTING
            i_send_immediately = 'X'.
    CATCH cx_send_req_bcs.
ENDTRY.

* 10) send
TRY.
    CALL METHOD lo_bcs->send
*   EXPORTING
*       i_with_error_screen = SPACE
        RECEIVING
            result = DATA(lv_result).
    CATCH cx_send_req_bcs.
ENDTRY.

* 11) Commit only for external email not for sap users.( within sap do not
require commit work ).
IF lv_result IS NOT INITIAL.
    COMMIT WORK.
ENDIF.

```